UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

Title: Discussion/Possible Vote on Rancho Seco Restart (Public Meeting)

Location: Washington, D. C.

Date: Tuesday, March 22, 1988

Pages: 1 - 113

Ann Riley & Associates
Court Reporters
1625 I Street, N.W., Suite 921
Washington, D.C. 20006
(202) 293-3950

D I S C L A I M E R

This is an unofficial transcript of a meeting of the United States Nuclear Regulatory Commission held on 3/22/88 . in the Commission's office at 1717 H Street, N.W., Washington, D.C. The meeting was open to public attendance and observation. This transcript has not been reviewed, corrected, or edited, and it may contain inaccuracies.

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

UNITED STATES OF AMERICA

NUCLEAR REGULATORY COMMISSION

DISCUSSION/POSSIBLE VOTE ON RANCHO SECO RESTART

* * *

Public Meeting

* * *

Nuclear Regulatory Commission

1717 H Street, N.W.

Washington, D.C.

Tuesday, March 22, 1988

The Commission met, pursuant to Notice, at 10:00 a.m.

COMMISSIONERS PRESENT:

LANDO W. ZECH, JR., Chairman of the Commission

THOMAS M. ROBERTS, Commissioner

FREDERICK M. BERNTHAL, Commissioner

KENNETH M. CARR, Commissioner

KENNETH C. ROGERS, Commissioner

NRC STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

S. Chilk	W. Parler
C. Wilcox	C. Andognini
A. Taylor	E. Smeloff
R. Byrne	J. Kehoe
J. Firlit	D. Keuter
J. Vinquist	J. Shetler
J. Taylor	T. Murley
F. Miraglia	J. Martin
T. DiAngelo	G. Kalman

AUDIENCE SPEAKERS:

G. Holahan

* * * * *

P R O C E E D I N G S

CHAIRMAN ZECH: Good morning, ladies and gentlemen. Today the Commission will hear from the Sacramento Municipal Utility District and from the NRC Staff about the Rancho Seco Nuclear Generating Station which has been shut down since December 26, 1985. Depending on what we hear today, we may or may not authorize restart. In other words, we may or may not vote today depending on what we hear today.

The plant remains shut down under two confirmatory action letters. The investigation of the over-cooling event which preceded the extended shutdown identified significant weaknesses in both the plant physical condition and the management of the plant. The Licensee has upgraded the Rancho Seco plant significantly and has made numerous changes in plant management and staff.

At the last Commission meeting on Rancho Seco, we heard of the Board of Directors' commitment to doing things right and to support Mr. Andognini in preparing the plant for restart. We understand that the SMUD Board has been weighing its long-term options for Rancho Seco, deciding whether the plant should operate or not. We want to make clear that while the Board's decision whether to operate Rancho Seco stresses economic factors, our concern is safety, not economics. If Rancho Seco operates at all, it's imperative that it operate safely. There can be no compromise in that principle either by

the utility or by the NRC. Safe operation must take priority over utility economic objectives. If safety requires a shutdown, the NRC will require that the plant be shut down. We would hope you would do so, too, if necessary.

However, in my view, high safety performance goes hand in hand with long-run economic plant operations. A safe plant is a reliable plant; a reliable plant is an economic plant. But from our point of view as regulators, safety must take precedence. Our concern is safety, and we expect safety to be our first concern, but of course not the only concern. And we expect you to feel the same. This must extend from the boardroom to the control room throughout your organization.

So we're looking forward to hearing from the Sacramento Municipal Utility District Board of Directors on its commitment to safe operations and to hearing the NRC Staff's evaluation of the Licensee's commitment and readiness to operate Rancho Seco safely.

Do my fellow Commissioners have any comments to make before we begin?

COMMISSIONER BERNTHAL: Well, I would just make the comment, Mr. Chairman, that I'm certainly going to be listening with great interest to, as I'm sure you and the rest of my colleagues will, to see if we can try and gain an understanding here as to just how the governance of this facility is going to be running and working in the months and particularly the

projected 18 months ahead. And that has been a major concern of mine over the years and I cannot say that those concerns have been alleviated based on what has been occurring in the last several weeks and months.

So that remains a major concern of mine, and I would like to have some focus here on that issue, if we may.

CHAIRMAN ZECH: Any other comments?

[No response.]

All right, Mr. Wilcox, you may begin.

COMMISSIONER ROGERS: Mr. Chairman, if I could, I'd like to make sure that we do hear about how you are going to come to a uniform view of what you really feel should happen and will happen, and I think our big concern, certainly my concern, is that I seem to be hearing different voices representing parts of the organization as to the commitment to the future. And I hope you will address those questions which Commissioner Bernthal has talked about as organizational or managerial divisions within the entire SMUD organization, as to what you really want to accomplish and how you will guarantee that it is accomplished.

CHAIRMAN ZECH: Mr. Wilcox, you may begin.

MR. WILCOX: Thank you, Chairman Zech, and fellow Commissioners. Good morning, my name is Cliff Wilcox, I appear as the President of the Board of Directors of the Sacramento Municipal Utility District. Please let me introduce my fellow

colleagues on the Board and the staff that have joined us at the table.

To my left is Director Smeloff; to Director Smeloff's left is the General Manager, Mr. Byrne; and to Mr. Byrne's left is Director Kehoe. And to my right is Mr. Andognini, the CEO/Nuclear whom I believe you are all familiar with; and to his right is Director Ann Taylor.

Mr. Chairman, each of us earnestly appreciates your invitation to come back here today as a full Board to address these concerns that you've just brought forward. As President of the Board, I speak for the majority of the Board, and our opening comments will be for the majority of the Board. But my colleagues can and will speak for themselves today.

The District has been in existence for about 40 years and provides electric service to almost all of Sacramento County's 900 residents. Sacramento is growing dramatically, and as a consequence the District is the fifth largest publicly-owned utility in the country. Rancho Seco constitutes about one-half of our generating resource and as our largest single investment, about one-half of the District's total assets.

Therefore, the Board has good reason to devote significant attention to every aspect of its operations. Let me share with you some of my perceptions respecting the Board's approach to Rancho Seco. None of us Board members are

technically qualified to run a nuclear power plant, but each of us recognizes our responsibility to engage qualified people who can safely manage, operate and maintain a highly complex facility. Each of us also recognizes that we must provide those qualified people with the tools and resources necessary for them to accomplish their tasks. At the same time, each of us has a responsibility to the community that has elected us to provide reliable and economic service. It is this dual role that can put the most pressure on a board of directors.

The Board has faced some significant challenges during the last three years. With respect to Rancho Seco, we were forced to take a hard look at our operations assess our position and devote the resources and time needed to correct our problems. Our commitment to do this has resulted in a plant with many new people, new attitudes, new enhanced programs, technical upgrades and a positive commitment to operate the plant safely.

We now feel, as do numerous select qualified, independent review committees, that Rancho Seco is ready for restart.

It is my understanding that the reason that the reason you have invited the full Board here today is in respect to some of the wording in the measure which this Board put on the June ballot. The wording was not put in as an operating mandate or even a guideline, but rather as a commitment to the

customer/owners of the SMUD that when we restart and run Rancho Seco, it will not be without regard to cost. There are points at which, if the plant cannot be operated over time above a certain level, that it would not be economically wise to continue to operate it. The wording is not a mandate to the operators to operate the plant above 50 percent; it is a commitment to the community that if it is proven that the plant cannot be operated economically it will not be run.

This test presumes that the cost of safe operation shall be part of the economic consequence. This approach is similar to incentive programs adopted by the Public Utilities Commission both inside and outside the state of California.

To reconfirm publicly our commitment to safety, at the March 17th Board meeting the full Board unanimously adopted the following resolution: "Safety has been and will continue to be the first and foremost consideration in the operation of Rancho Seco. We direct the General Manager and the CEO/Nuclear to take all necessary steps and precautions to insure that Rancho Seco will not be brought to operation or continue to operate if it is not safe to do so." That is the Board's operating orders for Rancho Seco. That is not a commitment directed to the customer/owners, but rather to the management team that we will not tolerate any operation of Rancho Seco that could jeopardize public health or safety. Anything less than safe operations poses absolutely

unacceptable economic risk to the District and the community.

The achievement of a 70 percent capacity factor is a goal; that is not a mandate. In my view, if a goal is to be effective in improving performance, it must represent a challenge and it must be reasonably achievable. The Rancho Seco Improvement Program has been directed at that goal, and a number of plants have demonstrated that this is achievable.

I believe very strongly that the only way that our goal will be reached is if we are able to set an outstanding safety record first. Safe plants are reliable and productive. The one thing that I have learned clearly during this process is the importarce of safety. We will never achieve a 70 percent capacity factor if we do not first set outstanding safety records.

We have done a lot to make Rancho Seco a quality plant. We have provided a team to provide strong leadership to our people. My belief is that by focusing on safety and reliability, good performance and fiscal viability will follow. Quality, safety and reliability are attributes of excellence.

Mr. Chairman, at our meeting last October you and Commissioner Bernthal inquired about the reporting relationship between the Board and the new General Manager and the Chief Executive of Nuclear. Carl is and will remain the CEO/Nuclear with primary responsibility to operate Rancho Seco, to protect the public health and safety. There are, however, many other

important facilities and responsibilities outside the Rancho Seco, for which the Board is held accountable by the District. The Board must make decisions that consider the implications of each of these decisions on all our responsibilities.

Mr. Byrne was hired as the General Manager to be the full-time individual the Board will hold accountable to execute and protect all of its interests. Consequently, Carl will start reporting to the Board through the General Manager in June of 1988. It is obvious that Carl and Dick must work together closely so each can fulfill their respective roles. However, this relationship will not prevent either of them equal access to the Board if they feel it's necessary.

At this time, I would like to allow my colleagues to introduce any comments they have, and I know Director Smeloff, for one, has some comments he would like to make.

CHAIRMAN ZECH: Fine, thank you very much. You may proceed.

MR. SMELOFF: Good morning, Chairman Zech and members of the Commission, my name is Ed Smeloff, I'm the SMUD Board Director representing the third SMUD ward, and I am prepared to make a statement this morning regarding the Rancho Seco Utilization Ordinance proposed by the SMUD Board of directors to be placed on the ballot in the upcoming June election.

The ordinance was drafted by the Board on March 4th and adopted by the Board of Directors on March 9th, 1988.

Gentlemen, in my opinion, this ordinance is poorly written and I'd like to point out to you four problems related to this ordinance.

First, the ordinance contains a serious misrepresentation of fact; second, it raises the question whether SMUD is capable of making a long-term commitment to the safe operation of Rancho Seco; third, it subordinates safety to economics; fourth, it demonstrates a misunderstanding of the proper relationship between SMUD and the Nuclear Regulatory Commission.

The misrepresentation contained in the ordinance is the statement that, quote, "In recent years, modifications that have been made to Rancho Seco Nuclear Generation Station amount to $400 million." This statement is not true, and its inaccuracy can be verified by looking at the financial statements for SMUD for 1985, 1986 and 1987. It over-estimates the value of capital additions to the plant by twofold.

This misrepresentation of fact in a measure that is to be submitted directly to the voters could result in continued damage to the credibility of the SMUD Board of directors and further undermine the trust of the public that is essential for the operation of a nuclear plant.

With respect to the question of whether the SMUD is capable of making a long-term commitment to the plant, the ordinance states that it is the policy of the SMUD Board to

transfer responsibility for the operation and licensing of Rancho Seco to a holding company or other legal entity. The motivation for this policy is the belief that an elected Board of Directors cannot provide stable, long-term policy direction for a nuclear facility. This belief was articulated by the SMUD Board President, Cliff Wilcox, and Vice President, Cort Koehler, most recently on March 9, 1988.

President Wilcox said: "I believe the biggest safety hazard for Rancho Seco over the long-term operation does not lay at Rancho Seco, does not lay at the employees, but lays in the fact that elected bodies are elected to set policy, but they are not elected to be long-term managers of very technical facilities.

"And because of the way this scenario is set up in the Municipal Utility District Act, you have a Board of Directors who changes philosophies every two years. In trying to somehow set long-term policy directions for a facility that is very technical, requires long-term stability and long-term management skill ability and long-term direction stability, and I don't believe that can be given from a solely political body that has to reflect the interests of the ratepayers and the customer owners."

This opinion is also held by SMUD's Chief Executive Officer, Nuclear, Carl Andognini.

Clearly the SMUD Board is putting forward two

fundamentally contradictory positions. On the one hand, the SMUD Board is asking you, the Nuclear Regulatory Commission, for permission to restart the nuclear plant and asking the voters to support the operation of the plant for 18 months. On the other hand, the SMUD Board leadership is asserting that SMUD, as an organization, is by its very nature not properly constituted to provide long-term direction for the nuclear plant. And for that reason, the Board has directed its General Manager to try to transfer the license to operate the plant to another entity as soon as possible.

It should be self-evident that an organization which at its top levels does not have the confidence that it can take long-term responsibility for the operation of a nuclear plant should not be given that responsibility. Certainly these statements by the Board's President should raise the concern whether SMUD has the capability of providing long-term policy direction for the safe operation of the plant.

The Rancho Seco utilization ordinance goes on to state that if the performance level of Rancho Seco falls below a 50 percent monthly capacity factor for four consecutive months, then the plant will be permanently closed. The purpose of this part of the ordinance, according to its author, Director John Kehoe is, quote, "to offer true, secure stopping points from any reckless expenditure of monies," unquote.

Prior to the adoption of this ordinance, the Board of

Directors had been warned by its General Manager, Richard Byrne, that a decision to operate Rancho Seco for 18 months and then to close the facility would result in rate increases of 30 percent over the next three years. In addition, capital expenditures on the plant during those 18 months would result in a half a cent per kilowatt hour higher debt burden on the ratepayers over the next 20 years.

In order to reassure the voters of Sacramento that these economic consequences would be minimized, the 50 percent capacity factor criterion was added to the ordinance. It was clear to me at that time that economic criteria were being given priority in determining how much additional resources would be devoted to the nuclear plant.

Furthermore, no discussion occurred at the time as to what effects giving such a priority to economics would have on the performance of workers at Rancho Seco. There can be no doubt that the language of the ordinance places additional pressure on the workers to keep the plant running in the short run at the expense of long-run safety. The existence of that pressure has been conceded by Mr. Andognini.

In my opinion, this clause of the ordinance places undue pressure on the Rancho Seco management and workers to meet economic criteria and could jeopardize the safe operation of the facility.

Finally, the most flawed part of the Rancho Seco

utilization ordinance is the statement that, quote, "the Rancho Seco Nuclear Generating Station shall not be closed prior to its first refueling unless (a) the Nuclear Regulatory Commission orders such closure on the grounds that its continued operation places the public health or safety at risk or (b) the Sacramento Municipal Utility District determines by a four-fifths vote that continued operation is not in the best economic interests of the District."

The basic premise contained in this statement is that the Nuclear Regulatory Commission has sole responsibility for determining whether the operation of Rancho Seco places the public health or safety at risk. By proposing a ballot referendum with this language, the SMUD Board of Directors shows a profound misunderstanding of where responsibility for safety at Rancho Seco resides. In fact, a literal reading of this clause would lead to the conclusion that SMUD could not on its own close the plant for safety reasons.

In conclusion, it should be clear from reading this ordinance that the SMUD Board has acted hastily and without guidance from nuclear experts in developing policy guidelines for the future operation of Rancho Seco. In reality, this ordinance is nothing more than a political strategy to convince the voters of Sacramento that SMUD can operate the plant economically, and if not, it will shut the plant down at little additional cost to the ratepayers.

The majority of the SMUD Board has demonstrated to you with this ordinance that political expedience is more important to them than developing sensible, long-term policy guidelines for the operation of Rancho Seco. In my opinion, this ordinance potentially jeopardizes the safe operation of the nuclear plant over the next 18 months.

Frankly, the Nuclear Regulatory Commission should not be a party to consenting to this ill-conceived action taken by the SMUD Board. The Commission should require SMUD to remove the ordinance from the ballot and to make a long-term commitment -- make a commitment to the long-term safe operation of the plant before it issues approval for restart.

Thank you.

MR. X: Chairman Zech, at this time, I would like to ask Director Kehoe for his comments.

CHAIRMAN ZECH: Thank you very much. You may proceed.

MR. KEHOE: Mr. Chairman, members of the Commission, I thank you very much for the time for us to come and explain our position and our support for Rancho Seco.

As I look to my colleagues on the right, I guess Ann Taylor and I represent the most senior members. We were first elected to the Board in 1980, and I think Cliff has said it very well; we're not experts in nuclear technology and have a major distribution plant that I think we're very proud of from

the standpoint of Rancho Seco and its role both in the past and in the future in power production for the Sacramento Valley.

Now when I first went on the Board, I thought the resources of the District were being properly applied with respect to the nuclear power plant, and along the way I joined a committee that had been established by the Board called the Rancho Seco Implementation Committee. Mr. Wilcox and I formed that committee. And that led me to my first meeting with Mr. Martin -- I don't know if he's here today or not -- your Regional Administrator at Walnut Creek.

CHAIRMAN ZECH: Yes, he is here. I see him in the audience.

MR. KEHOE: And he gave me a speech that Admiral Rickover had made at one time about the pursuit of excellence, and it had some major points in it, and that was an eye-opener to me that we had been given the thoughts from previous Boards and previous Administrations that we had been pursuing excellence, and indeed we had not. The pursuit of excellence left much to be desired.

And I think from that 1983 meeting to the present time, I have never lost sight of that commitment to excellence that I think that the Board of Directors and Rancho Seco and the whole Utility District have to apply to that particular plant, and I think that what we're doing now, through the efforts of Carl Andognini and his staff, is truly in the spirit

of that commitment to excellence.

Ed has indicated that I was indeed the author of the controversial ordinance. We're not here to debate the ordinance. I don't think any of you can vote in Sacramento on June 6th. But I think the major premise that you must bear in mind is that at the time that I accumulated together all of the thoughts, and what we haven't told you is that public workshops preceded the deliberations on this ordinance. We had over three weeks of public workshops on various options that the Board could take on the future of the District, and one of the options, of course, was to continue the restart and to continue the support for Rancho Seco. And along with these workshops came a constant plea from many different directions -- labor, business, the public. I know a retired state employee wrote a very profound letter on how he thought the District should put perhaps all of the options on the ballot to be considered.

But underlying this response at the time that I drafted the referendum which the Board elected to support was the premise that safety had to be number one. We had been pursuing the enhancements to this plant on the premise it would be the safest operating plant that human resources could possibly give to the country and to the NRC. So safety was an underlying factor, and I think that the Chairman both of the Nuclear Regulatory Commission and the President of our Board states it very well very early. You cannot have an economical

plant that isn't safe, because the reliability of that plant and its safety is fundamental to any economic principle that could possibly exist.

And I think that in the course of the future direction, those who want to close the plant have an initiative on the ballot which is either one way or the other. And from what the Board has presented to the people and the ratepayers is sort of a corral, if you will -- Ann raises horses, Ann Taylor -- and I think the word "corral" is very good, by corralling the thoughts and ideas in the fuel recycling period that lies ahead, the 18 months that lies ahead, that we can prove that Rancho Seco truly operates and assure the ratepayers that it's operating (a) safely and (b) reliably, which is economically beneficial to those ratepayers.

So that basically is the position that I would like to leave with you, that I think I would totally subscribe to the views of Mr. Wilcox that he gave you in his opening statement. I think they present very well the viewpoints that I have as a Board member and certainly would be committed to continue in the days ahead.

CHAIRMAN ZECH: Thank you very much.

MR. WILCOX: Chairman Zech, at this time, I would like to ask Director Taylor for her comments.

CHAIRMAN ZECH: Yes, please.

MS. TAYLOR: Chairman Zech and Commissioners, the

recognition of safety first has been emphasized by the Operational Readiness Review Committee on the first page of their report. Their first requirement is to, and I quote, "ensure plant safety during and following restart."

The report continues on page 3 with the following: "Rancho Seco's process did not allow inconsistencies with safety impact to get through."

Mr. Solomon Levy, a distinguished member of the American Nuclear Society, a member of the oversight committee for four nuclear power plants and who has published more than 50 technical papers, was assigned the review of the following areas of safety: cable separation, engineering action plan, and quality vertical audit. As a member of the Operational Readiness Review Committee, Mr. Levy joined his fellow committee members in concluding that Rancho Seco is ready for a safe restart.

Reliability is the key to safety. If you will refer to the report, "Future Plant Capacity Factor Engineering Assessments," dated February 24, 1988, I am sure you will concur that the corrective action should ensure better capacity, and with these plant improvements, capacity could conceivably attain 72 to 84 percent. With that in mind, your 50 percent lower level is not an unattainable or exorbitant figure.

Preventative maintenance program verification has

been made, and programs and procedures are in place to provide new policy and direction for the maintenance organization. The voluntary shutdown during testing by Mr. Andognini further points out the emphasis on safety first by management. There is no Board comment on his shutdowns. They were accepted willingly.

A management systems control program has been initiated to place an emphasis on operating the plant safely and providing it with the necessary support to run efficiently and reliably.

I have continually supported the safe operation of Rancho Seco, and on a personal note, when I thanked the Rancho Seco employees for their participation in the Rancho Seco efforts, I wrote, and I quote: "Please continue your efforts to ensure a safe, reliable, and timely restart."

The Board will welcome any questions from this Commission that will assure them that the Board is solidly behind safety first, and the other issues are in a secondary position.

CHAIRMAN ZECH: Thank you.

MR. WILCOX: Mr. Chairman, at this time I'd like to apologize. One Board member was unable to attend; the Vice President, Director Koehler, was unable to be here. I believe he has called to express his opinions to you.

CHAIRMAN ZECH: He has indeed and I appreciate the

call. I know he had another commitment. We're sorry he couldn't be with us but I appreciated his calling me.

MR. WILCOX: Thank you. At this time, Mr. Byrne, our General Manager, has a couple of comments and then we'll take questions.

CHAIRMAN ZECH: Thank you very much, you may proceed.

MR. BYRNE: Mr. Chairman and Commissioners, in November of 1987, the SMUD General Manager assembled a team of professionals from across this country with expertise in business, finance, law, engineering, economics, environment and legislation to study the power supply alternatives available to the District. That team was known as QUEST, which stands for Quality Energy for Sacramento's Tomorrow.

That team was charged with making a recommendation to the Board which it concluded would reduce the financial risk of operating Rancho Seco and offer the lowest long-term cost of electricity with high reliability to SMUD's customer/owners. On February 24, 1988, the team unanimously recommended that Rancho Seco be closed. The recommendation was based on the conclusion that the potential downside financial risks of operating the plant were greater than the potential downside risks of purchasing power at rates which are quantifiable, and expediting a program to develop improved transmission service to, and other generation sources for, the District.

I want to point out strongly that the QUEST report

also clearly states that if Rancho Seco was operated at capacity factor levels well above its historic levels that such continued operation would be in the best financial interest of the District's consumers.

COMMISSIONER BERNTHAL: Excuse me, what exactly is the historic level now? Anybody know?

MR. BYRNE: Mr. Andognini, can you give us the historic levels?

MR. ANDOGNINI: Prior to the shutdown it was about 47 percent in December; since then it has obviously gone down and it's in the low 40's.

COMMISSIONER BERNTHAL: Thank you.

MR. BYRNE: The SMUD Board of Directors, after listening to its Advisory Cabinet, public interest groups, public bodies, Rancho Seco employees and interested individuals, has made the policy decision to restart Rancho Seco, if given the NRC approval, and to run the facility in accordance with the Rancho Seco Utilization Ordinance.

I think it's important that this Commission understand that the General Manager does not find this decision unreasonable. I can support this decision and I will support it, and I will work diligently to accomplish safe and economic operation of Rancho Seco and to carry out the actions contemplated in the Rancho Seco Utilization Ordinance.

It was mentioned earlier by President Wilcox that the

CEO/Nuclear will report through the General Manager as of June. I want you to know that I believe that information from the CEO/Nuclear and his staff must flow directly to the Board during that time as well as today. Boards cannot manage nuclear power plants without firsthand information. I will insure and I will insist that Carl has direct communication with the Board at all times and a complete flow of any information which he wants to bring to the Board. I would expect that under any circumstance and any other condition.

I can also tell you that I don't care what the issue is or whether it's a nuclear plant or anything else, safety comes first to me. And it is in my power, and it will be in my power, to operate this ranch safely, and I will under no conditions permit anything to continue in operation, regardless of what any ordinance says, if I believe that the public safety is threatened.

That concludes my remarks.

CHAIRMAN ZECH: All right, thank you very much.

MR. WILCOX: Mr. Chairman, that concludes our prepared remarks. We would be happy to answer any questions that the Commission may have.

CHAIRMAN ZECH: Are we going to hear from Mr. Andognini on the plant itself?

MR. WILCOX: Yes, sir.

CHAIRMAN ZECH: All right, fine. Before we do that,

are there questions from my fellow Commissioners of the Board?

COMMISSIONER CARR: Yes, I'd like to ask one question of the Board. You know in order to have a plant that runs reliably and to give Mr. Andognini his chance to make whatever quota you give him, the plant has got to be well maintained to be reliable. My concern is that you're not going to give the operators a full deck to play with.

What I would like to hear from you is your commitment to provide all the funds required over the next 18 months to maintain the plant in a first class condition.

COMMISSIONER CARR: Sir, that commitment basically was made not for the full 18 months. We adopt a budget a year at a time. The 1988 budget has all been adopted. The monies in that budget were all of the monies that Mr. Andognini asked for; Mr. Andognini, the CEO/Nuclear, came to the Board with his budget which encompassed not only the restart monies but also the monies to operate for the entire year which encompassed a great many modifications that he was going to start on. He has that full budget; that was authorized in December of last year and it's still authorized all the way through this year.

MR. KEHOE: It was a five to nothing vote, wasn't it?

MR. WILCOX: That's correct. So the funds are there, and they were there at his request. It's his budget.

MS. TAYLOR: I think you've also seen with the placing of the proposal on the ballot where we're suggesting

that we go to the next refueling outage with a 4 to 1 vote, that commitment to continuing all funding until that time and no ability to pull any funds back from that has been made, if not in resolution, certainly in spirit by four Board members.

CHAIRMAN ZECH: Commissioner Bernthal?

COMMISSIONER BERNTHAL: Well, I'm just wondering. Perhaps you can clarify for me then how this financial commitment comports with -- I haven't been able to put my fingers on it here, but the allegation, shall we say, that we've received in the last day or two here by letter. And I'm not going to say where because if I can find it here and quote it I will. That somehow there will be a deferral of necessary maintenance work for some period of time. Can you assure us that is not the case? And, Mr. Andognini, are you satisfied that all necessary safety, maintenance and modifications as well will be performed, as they would under any circumstance, during this proposed 18-month period?

MR. ANDOGNINI: I can commit to you, Commissioner, that the funds are there, and I can commit to you that we will do what we intended to do whether it's an 18-month cycle or an 18-year cycle -- put safety first and put in the modifications that we have intended to do, regardless of how long the plant operates.

COMMISSIONER BERNTHAL: And in your judgment there is no modification, no maintenance work, that you would prefer to

do in the next 18 months that has been deferred at this point?

MR. ANDOGNINI: Nothing has been deferred, sir. There has been no work activities at all been deferred and no expenditures have been deferred. I have gotten no direction from the Board to attempt to do that, either.

MS. TAYLOR: I would like to comment on that letter because I, too, have read it. And there was no comment made with that figure or that maintenance deferment at all; that is complete fabrication.

COMMISSIONER BERNTHAL: Will you remind me which letter it was? As I say, I can't quite --

MS. TAYLOR: If you don't care to mention the name of it I'll be happy to show you the letter.

COMMISSIONER BERNTHAL: Okay.

Well, in any case, I would like the staff as well, and particularly Mr. Martin, to address that question.

Getting back to the governance and the institutional elements here, let me just ask a very simple question. Is the Board unanimous in believing that this plant should now be prepared for startup and that you would like this plant to start up?

MR. WILCOX: Sir, I believe you can tell by the comments made by the different Board members -- I believe the majority of the Board clearly supports the startup of this plant.

COMMISSIONER BERNTHAL: I take it that at least there is one dissenting member of the Board, then.

MR. SMELOFF: Let me explain my position.

COMMISSIONER BERNTHAL: Your position was not clear from your statement.

MR. SMELOFF: My position is that I followed -- I would recommend that the Board follow the recommendation of the General Manager. Rancho Seco represents a substantial financial risk for a utility the size of SMUD. In any individual year it represents a $200 million risk; that's the difference between it running well and it not running at all. We are not a large enough utility to bear that kind of risk. Witness what has happened to this District over the past two years where the plant has not been in operation and we have been forced to raise ratepayers' rates by 84 percent.

I supported the General Manager in his recommendation for economic reasons. My recommendation to you was that the voters of Sacramento will make a policy decision in June on whether or not they want to rely on the Rancho Seco plant. That was put on the ballot by the voters. We have now put on an alternative proposal which sort of makes a month-by-month commitment to the plant, and if it doesn't meet certain criteria it will be shut down automatically, and I think that is not the kind of commitment that a nuclear plant requires. It requires a long-term commitment.

I do believe that it can be operated safely. I do believe it can be governed by an elected board of directors. I do believe that a municipal utility is qualified to run a nuclear plant. I don't think running Rancho Seco is in the best economic interest of Sacramento.

COMMISSIONER BERNTHAL: But if you had your druthers I take it then that you would prefer to see not an 18-month commitment, but if it came to that, an indefinite commitment to run the plant.

MR. SMELOFF: We should have made a commitment one way or the other; a full commitment for the operation of the plant throughout its license or until it's no longer economic, or made the decision to close the plant. I think an 18-month commitment with sort of a month-by-month possibility that it might be shut down is not the proper way to give direction to a nuclear plant.

COMMISSIONER BERNTHAL: One other question. There have been two separate study groups, advisory groups if you will, that have rendered opinions, again not so much on the safety element, but of course on the economic considerations, which are only the concern of the Commission here insofar as they may affect the safe operation of the plant.

Nevertheless, it concerns me that there have been two separate advisory groups -- one, the so-called QUEST group; another, as I understand it, a standing advisory cabinet -- an

advisory group for the purposes and uses of the board. Unless I am reading inaccurate accounts, these two groups have come in with recommendations that are diametrically opposed, as nearly as I can tell, and I guess I'm curious to know whether the real advisory group will stand up and if you can advise me which group at this point represents the opinion of the board -- presumably the advisory group to the board represents the opinion of the board.

But how does it happen that then there is another advisory group that apparently without the knowledge and sanction of the board comes in with an entirely different set of recommendations?

MR. WILCOX: Mr. Commissioner, I don't believe either one of them totally represents the board.

What we were attempting to do was to get as many opinions and as many experts assembled as possible to give us information, because we had to look at a great many differing facts before we could make a decision.

In the past, the one thing that I believe not only this board but previous boards have been guilty of is taking actions and sort of rubber stamping things, to simply take the option and then saying well, yes, we'll accept it, or the only other alternative is no. This time we clearly wanted to sure that we had measured every aspect of it as possible.

Both advisory committees were fully authorized by the

board. One worked through another general manager and his team -- it was his team. He was authorized to put a team together and go out and research this.

The other advisory cabinet was also put together and appointed by the board to look at it, but from a little different point of view -- from the direct, at home point of view, the community point of view, and that angle. Both of them did that and both of them came back with somewhat different opinions.

The general manager's team was full of financial experts and the utility experts. The other team was made up of either former justices or justices and former legislators. They were looking at what happens as a community, because we have got to assess this not just as a nuclear power plant that is operated in a vacuum but a nuclear plant that belongs to a community and a nuclear power plant that is potentially an asset or, depending on how you look at it, potentially a liability to that community.

So we wanted to weigh all of those points of view and weigh the impact of jobs and the potential impact of losing jobs, the financial impact and the energy future of this community.

After listening to all that testimony, that is when the board had to make a policy decision and that is the reason we came down to the policy decision that was made. Director

Kehoe brought in an ordinance that has basically allowed us to give some options to the community through this ordinance and that is all we were attempting to do.

Our commitment, though, is once we decided to move forward, our commitment, as it always has been, to operate the plant very safely -- this was not something that was a safety issue -- this was -- we all of the time realized that safety is the first-most priority in the operation of this facility. We were not trying to pair one of these advisory cabinets against another. We were simply trying to gather as much information as possible, so that when we made a decision, we would be able to make a decision based on a great deal of facts, not a decision based on one opinion by one group of people that may have missed something.

COMMISSIONER BERNTHAL: So the board was comfortable with the project, even though your advisory cabinet clearly was not very comfortable with the process? Is that a fair statement?

MS. TAYLOR: The advisory cabinet came at it from a completely different perspective than the QUEST group and I think that, one, you are looking at from one side of the coin and the other, as Mr. Wilcox, from the other. How does it affect our community itself and what do the loss of jobs and what's really the public opinion? And I don't think the public opinion has yet to even come forward, but to judge by the

hearings and the meetings that we had, there is tremendous support out there for the plant in the community.

I think it was the board's intention, one, that that resource not be lost, and two, that we assure the community that we would be a safe plant, because certainly from the perspectives of all of those that spoke against the plant, their concern was safety and our concern always has been safety.

I mean, I live there; my children live there; my grandchildren are going to live there. I am certainly not going to do anything that is unsafe for that community. But I think you have a lot of other things to weigh in -- just whether or not we rate well with Standard & Poor's and Moody's.

I think you have got to look at the jobs and the attendant multipliers that go into the community and a loss of a valuable resource, and there were other things that surfaced after the QUEST report had been presented to us that I think were very important in how I made up my mind.

One was the figure used on escalation of fossil fuel, all of which the MOU's are based on. So from an economic standpoint, the QUEST report was not the best economic decision. Starting the plant up was the most economic decision, and even by Mr. Byrne's discussion that if the plant runs well, it is a far better economic decision for the community and for SMUD.

What their concern was is how the plant was going to run. The engineering report showing the increased capacity availability projected figures was not available until after the QUEST report was made, had no part of that QUEST report, and I think that was something Mr. Andognini had ordered done at the Rancho and when it came out it convinced me that, where the QUEST report looked at a 42 percent capacity and the engineering study shows that there are other, much higher attainable figures, that it would be foolish not to try to refuel it.

The other thing, from a safety impact, I think, is the ability to use up that fuel in the 18 months instead of having it sit out there until we could decommission in 2110 or later. There is no surety when we can decommission that plant and that fuel sitting out there would be more of a safety risk not used up than it would be used up.

And I think a couple of the other things that -- the depletion of the excess power that is available in Northern California presently on which these MOUs were based is going to be gone in ten years, and then what kind of a position economic is the utility going to be in?

Mr. Byrne's assessment was purely on an economic basis and if those economics are a changing target, then we need to look at how those figures change and how great an impact that we have on us for the future, and that is what I

based my decision on.

MR. SMELOFF: Commissioner Bernthal, perhaps let me clarify a misperception. The advisory cabinet was a temporary committee as well. Both of them were limited in term and appointed for specific purposes. The QUEST team was authorized for the board of directors. The board last October decided last October decided it wanted to seriously evaluate the alternatives available to the district, so we commissioned and paid some very top-notch people in resource planning, engineering, transmission planning and took a hard economic look at the alternatives to SMUD.

The recommendation was that the non-Rancho Seco alternatives were roughly equivalent to a Rancho Seco running at about a 62 percent capacity factor.

There were other qualitative criteria, including the downside risk, which led the QUEST team to recommend to us that the low risk approach for the economics of the community was to close the plant, and that is what led me to be the one remaining director to support the recommendation of the professional advisory group, the QUEST team, and the recommendation of the general manager.

COMMISSIONER BERNTHAL: Thank you very much.

MR. KEHOE: Let me add to the confusion by one more point, and is to say that I did not think the two advisory groups are conflicting in their final conclusions, because, as

has been pointed out, the QUEST team that the general manager articulated their viewpoint on, was based strongly on economics and it is like a glass that is half full or half empty as to how you look at the call that they made. It is a judgment call that was very close and right now Mother Nature is screwing up the judgment call tremendously by the hydro situation in the Northwest and a bullet in the Mid East could well foul up the fossil fuel cost factors in the QUEST report itself. These are the economic considerations that at least caused me as board member to come down on the side that we must restart as the basis of the strongest position for the ratepayers in the long run.

COMMISSIONER BERNTHAL: Well, I appreciate that.

I am not so concerned about what economic judgments you have made. Those are your judgments to make, provided you supply adequate funding for safe operation. I was just somewhat concerned about the -- and unfortunately we have to rely too much on press accounts, and those sometimes are accurate and sometimes aren't, as we all know, but was concerned about the process and the governance that seemed to be reflected in a certain dissonance between the two advisory panels. But let's leave that subject. I appreciate your comments.

I just want to make one comment, and that is with respect to the capacity factor requirement, which I, I must

say, would have to read as something of a requirement. You have explained that it is not exactly that; nevertheless, there is a bit of a threshold there which the plant operators, plant managers will be required to meet or something happens -- and that something I gather is that it would a vote of the board then that would finally determine the continued operation of the plant.

I have never objected personally, nor do I think that the Commission has objected -- I am not sure the Commission has ever considered it as a formal matter -- but I have never objected to setting down certain guidelines of performance for nuclear power plants over relatively long periods of time, and I think a number of state utility commissions and others are doing that.

By a relatively long period of time, I do not mean 18 months, however. I think that we talked 3-5 years perhaps as reasonable periods of time and as far as I am concerned, five years is a bit longer and a bit better, because the you do not get in a situation where you have people and managers with their jobs depending on meeting a certain level of operation, a certain capacity factor. That is the thing that concerns me about what you have done here, and I would suggest that the board in its directives to the extent that you are able now, consistent with the action you have taken, get on the record and make it very clear to the managers of the plant and to Mr.

Andognini and others that they are to run that plant in a way they feel is consistent with public health and safety and in no other way.

I don't quite know how you undo the fact that that proposition is now on the ballot, but I do want to make it very clear that short term capacity factor goals I think by and large are not a good idea.

MR. ANDOGNINI: I think I can address that for you, Commissioner.

At a public meeting on March 17th, I indicated whether it was insubordination or not that I would not run Rancho Seco any other way but safety and if I got direction from the board to do that, I would not do it. Safety was number one and there was no other way Rancho Seco was going to run unless it ran safely.

That may be a perception that it is not in a positive direction, but it is four consecutive months at a capacity less than 50 percent. With the modifications that we've made, with the programs that we have in place, with the training that we've done, there is no doubt in my mind that we'll not even approach that.

MS. TAYLOR: And if there were some outside --

CHAIRMAN ZECH: You mean you think you'll do better?

MS. TAYLOR: Yes. If there were some outside circumstances like, say, we have to --

MR. WILCOX: I hope so.

MS. TAYLOR: -- where we would be required, say, by your Commission to hold at a certain power level, that would be the time that the board would say that there are extenuating circumstances and we would then step and say, "This month doesn't count," so to speak. And I think that is important, that it takes four-fifths of the board to do that, not just a simple majority. I think that is important. It is important for you all to know that the safety requirements will be met.

MR. SMELOFF: It takes four-fifths of the board to overrule the permanent shutdown of the plant; that means two board members could close the plant down permanently if it did not achieve a 50 percent capacity factor.

COMMISSIONER BERNTHAL: That is my understanding and I gather that's the case. Well, okay, I would also be interested and we will hear from our staff as to the physical condition of the plant.

Having articulated my misgivings about this sort of short term capacity factor goal, I will also say that my understanding is that you have done quite an extraordinary job there, Mr. Andognini, in updating, maintaining, repairing the hardware and bring the plant's physical condition at least up to the point where it is not unreasonable to expect that you will exceed your historic performance there if the Commission should choose to grant you permission to operate.

But I would certainly be interested in hearing the comments from our Staff on that score.

I thank you very much.

MR. WILCOX: Mr. Commissioner, before we leave this, the QUEST report, since you've had some concerns about it and since there's a lot of concerns about this ordinance, I think the main points in both the QUEST report and the ordinance and even the independent review committees, as a consequence, I want to also emphasize, we did adopt the QUEST report, and we did take major portions of it. You know, we signed the MOUs. It's not a question that we chose the Nuclear over the QUEST or vice versa. We're actually adopting both of them.

But the main thrust of both the QUEST effort and this ordinance is to get us a timeframe to do what we really need to do, and as Director Smeloff points out, I am very much in support of, and that is to get this plant into a position where it will have tremendously stable, long-term management direction, and the best way to do that, in my opinion, is to move it into the hands of a more stable operating scenario. And that's really where the thrust of -- there's a majority of this Board that supports this. Director Byrne -- or General Manager Byrne was working on this in the QUEST effort. He's still working on it. They are making progress, and I think that's, you know, that's ulitmately where we need to be, because then you can have five-year goals.

We have a five-year goal now. Mr. Andognini has prepared a five-year performance plan. And as you know, you've seen them, I'm sure, all of the modification work that will continue to go on over the next five years to get the plant up to the levels of excellence that we want it to obtain. But that can best be done if it's done uninterrupted, and the best way you can obtain that uninterrupted scenario is to move this facility into some other operation, and that's really the language that is so important in Director Kehoe's ordinance, because it will give us the ability to continue that effort and get it done.

In the interim, we don't -- you know, if the community had the money, then obviously the nicest thing to do would be to shut down and stay shut down until we got that completed. But we don't have the financial resources to continue a horrendously long shutdown with a plant that is operationally ready to go, and we would like to be able to, you know, take advantage of the best of all worlds. That's what we're attempting to do.

And in the democratic process, there are certain members of the Board that have every right and should object to that, and I believe that's where Director Smeloff is coming from. And a lot of his objections are very worthwhile.

But this is a democratic process. We do represent a community, and the one thing that all of us want, whether it be

Director Smeloff or any other of my colleagues, we will not operate that plant unless it is safe. That is just not something we are going to do.

Perhaps some of the wording in the ordinance is not what it should be, but the main wording in that ordinance gives us the ability to move that plant into a long-term, viable, stable management scenario, and I think that is the important feature that I think we must proceed with.

MS. TAYLOR: Thank you very much for inviting us to come, though. We appreciate the ability to talk to you on a one-to-one basis and to give you our assurances. I think that it's been helpful to us, and I hope it's been helpful to you.

COMMISSIONER CARR: Could I ask one more questions, Mr. Chairman?

CHAIRMAN ZECH: Yes, please. Go ahead.

COMMISSIONER CARR: I may have misunderstood, but it sounded like there are two initiatives on the ballot; is that right?

MR. WILCOX: That's correct.

COMMISSIONER CARR: What happens if they come out with a different vote?

MR. WILCOX: You mean one votes to shut down and one --

COMMISSIONER CARR: Well, one is reworded a little. One is a yes-or-no, and the other one is with qualifications.

MR. WILCOX: My understanding from the Legal Counsel is that if both initiatives were to get a yes vote, then the one that the District put on the ballot has the precedence.

COMMISSIONER CARR: All right. I'll figure out what that means later.

[Laughter.]

MR. KEHOE: Under California law, one is a referendum, and one is an initiative. The referendum would prevail on the highest vote.

CHAIRMAN ZECH: All right. Commissioner Rogers, do you have any comments?

COMMISSIONER ROGERS: Well, just really not to go over ground many, many times, but I think that it is terribly important that the Board understand that the primary responsibility for the safety of that plant is yours, not the NRC's. We're here to do the very best we can and to oversee what you do, but if there is a decision required to shut the plant down, it should come from you rather than from us. It will come from us if necessary, but it should come from you. And you have to be in that state of mind continually, and if you are and if you pursue it, then perhaps -- pursue that fully -- then perhaps you won't have to shut it down. But you must accept that responsibility. That's the key to the whole thing, that everything that we're trying to achieve here through NRC can only occur if the licensee really accepts the

responsibility. That's where it has to be. We are here to blow the whistle if it doesn't seem asif you are doing that, and we will. But the primary responsibility for running that plant and deciding, making a tough decision that, you know, we've really go to shut it down.

Now that doesn't necessarily mean shut it down permanently, but you must be prepared to make that decision: We will shut down tonight and fix something immediately. That has to be very clearly something that you're ready to do at a moment's notice, if necessary. And if you are, I think you will probably not have to exercise that and demonstrate it to often. But you must clearly accept that. You have to pick that ball up.

And we all feel that very strongly, and the only reason I'm saying that again right now is that you will be hearing more from Mr. Andognini on this matter of your condition, but I want to make sure that you as Board members understand that you're ready to make that kind of a policy decision. It really is a policy decision. It has to be based on the technical input that comes from your technical experts, of course, but it still is a policy decision, that we will make that decision immediately if we have to.

CHAIRMAN ZECH: All right. Anything else?

COMMISSIONER ROBERTS: Let me just ask a quick question. I'm not sure how germane, but I just want to

understand.

You have five directors, and you're elected every two years?

MS. TAYLOR: No, sir.

MR. WILCOX: Five directors. Two of us are elected -- they're broken into two-year -- one group is elected -- two of us are elected on one set of four-year terms, and the other three are elected on another set of four-year terms. So it's staggered.

COMMISSIONER ROBERTS: It is staggered.

MS. TAYLOR: Yes, sir.

COMMISSIONER ROBERTS: All five of you do not come up for reelection at the same time.

MS. TAYLOR: No, sir.

COMMISSIONER ROBERTS: Thank you.

CHAIRMAN ZECH: I'd just like to ask a question first of Mr. Smeloff.

Do you believe that the plant is safe to operate now?

MR. SMELOFF: From everything that I have heard from the CEO/Nuclear, assuming that we complete the work on the TDI diesels, it would be safe.

CHAIRMAN ZECH: All right. Thank you.

Well, let me just say, not to go on because I've had a chance in my opening remarks to give you the thrust of my thoughts, and my colleagues have also given you their views,

which I think you'll see is rather a consensus of our concern about your ordinance and ballot issue, I would have preferred that you at least would have emphasized safety on that ballot issue. My feeling is that frankly the wording was perhaps not as well thought out as it might have been.

Hearing your commitment to safety, all of you here today, it seems to me that on that ballot issue you certainly might have said something about safety and emphasizing that as a primary thought. I think your community would understand that, accept that, and frankly expect that.

You didn't do that. That gives this Commission a bit of a concern about the judgment of the Board. That's why we wanted all of you to come here today, to see you, to talk to you, eyeball you, and let you know that this Commission treats safety first, and we expect you to do the same.

Now you're told us that. I can't help but wonder why you didn't put that on the ballot. I think it would have made a stronger ordinance myself. You didn't do that.

We've heard your commitment to safety, and we accept that. I just would say in summary that I hope you really believe that a safe plant is a reliable plant, is an economic plant. I hope you believe that.

With that, let's go on. Mr. Andognini, are you next?

MR. ANDOGNINI: I have my staff prepared.

CHAIRMAN ZECH: All right. I thank the Board very

much. I appreciate your being with us today.

CHAIRMAN ZECH: You may proceed.

MR. ANDOGNINI: Good morning, Mr. Chairman and Commissioners. My name is Carl Andognini. I am Chief Executive Officer, Nuclear, for the Sacramento Municipal Utility District.

I am pleased to be here to today to tell you that Rancho Seco is ready for safe restart, subject to the resolution of some remaining problems with the new emergency diesel generators.

I have already committed to the NRC staff, to Region V, and I commit to you that we will not start Rancho Seco until we are completely satisfied that the diesels are ready to support safe plant operation.

Seated to my right is Joe Firlit, Assistant General Manager, Nuclear Power Production. Joe is the site director at Rancho Seco and will brief you on our major accomplishments during our restart program and other matters bearing on the current operational readiness of Rancho Seco.

To Joe's right is Dan Keuter, Director of Nuclear Operations and Maintenance. Dan will discuss the readiness of our operation and maintenance department.

On the far left is Jim Shetler, Director of Systems Review and Test Program. Jim will cover our extensive startup and power ascension test programs that have been established as

the final verification of the readiness of the plant, programs, and people.

To the left of Mr. Wilcox is John Vinquist, Director of Nuclear Quality. John is charged with the implementation of our quality programs to support operation at Rancho Seco, and he will discuss those programs.

(Slide.)

While I have the SMUD organization chart before us, I would like you to know the positions of the manager of maintenance and the manager of radiation protection are still filled by contract employees. We are actively recruiting to fill these key positions. However, because the functions are so critical, we are determined that the managers ultimately hired shall have demonstrated their qualifications and managerial skills.

(Slide.)

We have personal commitments from Dave Brock, our current maintenance manager, and Bob Harris, our current radiation projection manager, that they will stay at Rancho Seco for a sufficient amount of time to permit a smooth transition to the new managers.

I stated in October that Rancho Seco had progressed to the point of knowing the actions required for a safe and successful return to operation. I had four reservations that I shared with you: (1) the closure of a significant amount of

paperwork. This has been accomplished; (2) the timely submittal of information to the NRC. All requisite information has been submitted and we are not aware of any other open items affecting restart the data from the emergency diesel generators; (3) unknown problems that have been discovered during our test program. At this stage, the only unknowns are those that may arise during our power ascension program; (4) needed attention towards our material management and storage problems. These programs have been developed and are now being implemented.

Today the Rancho Seco plant, the organization, the procedures, the management systems and the people are ready to return to criticality and we are fully prepared to accept the responsibilities and challenges inherent with restart. I say this with the utmost confidence, because I have been intimately involved with the many things that have been accomplished over the past two years. I would like Joe Firlit, Assistant General Manager, Nuclear Power Production and the Site Director to briefly summarize those accomplishments and the operational readiness of Rancho Seco.

Joe?

MR. FIRLIT: Thank you, Carl, Commissioner Zech and fellow Commissioners.

What I would like to do is talk about some major accomplishments at Rancho Seco.

The Rancho Seco team has completed a comprehensive review and upgrade of the plant systems, program and of its people.

Let's start out with the plant. We have completed an extensive SSFI-type review of the 33 key systems. We feel that we are the leaders in the nuclear plant field in terms of self-evaluation of our systems.

We have completed over 600 modifications to our plants since December 26, 1985. Some of these were for safety enhancements and others were for improvement to the reliability of our plant. We feel that we are in better shape today than when the plant was commercial back in 1975.

We have developed and implemented a comprehensive integrated functional test program. In fact, it received an INPO Good Practice here recently.

We have completed 209 special tests that we designed to assure ourselves that our systems would operate as designed before we would ask for permission to go critical.

(Slide.)

We have completely refurbished 170 of our motor operated valves. We have reduced our corrective maintenance backlog from about 5000 back in April of 1987 to less than 1000 to day. Now that represents a quantity, but I want to also emphasize to you that our maintenance people are doing a quality job as well.

The next three items deal with our radiological program. We feel that we have significantly improved our radiological operations in the plant. In fact, we have reduced the contaminated area in the auxiliary building by 5000 square feet. This represents a 40 percent reduction in the total contaminated area of our plant.

We have installed state of the art equipment for personnel radiation monitoring and we have maintained the volume of low-level radioactive waste below our plant goal. In fact in 1987, we only generated 4200 cubic feet. The industry average for PWR's during that year was approximately 7000 and you have to recall that we're doing this during an outage.

(Slide.)

Let's talk about programs. We have developed departmental action plans for continuing plant improvements. This provides a focused direction for our team and our goal of achieving excellence. We have used the INPO Management Observation Program. We have trained all the management team all the way down to the first line supervisor on INPO's Observation Program. The key issue here is it gets our people, our managers out in the plant to observe the workers, to see what they are doing and also to establish high standards of performance.

We have developed site-wide integrated management system programs. There are a lot of long term benefits

associated with this. It provides the managers with additional tools by which to manage, but it also allows the managers to monitor the performance of their organization.

The next three statements deal with our QA program. As a line manager, I feel that there has been a significant improvement in our quality assurance program. Mr. Vinquist, who you'll hear from shortly, has staffed his organization with multi-disciplines. He has people in his organization today that have experience in operations, maintenance, health physics, chemistry -- the whole works.

We feel that our audits today for the management team are much more in depth. They are not paper audits. They are valuable tools for the management team. We have completed over 170 quality surveillances in 1988 alone. Some of these were initiated by QA. A good portion of those were initiated by the management team. This is a significant improvement over our past record.

We have initiated a quality control field inspection program. We took your recommendation, Commissioner Bernthal, and we visited the Clinton station.

(Slide.)

We have tailored this program after the Clinton station and I can assure you that the program is well accepted by our workers. The one thing it does -- it provides instant feedback to our workers out in the field, and it is working.

We have implemented a plant improvement program to upgrade the plant material condition. Our plant is starting to look like a first class nuclear power plant. When Commissioner Rogers visited us recently, he walked through the turbine building. He saw the turbine deck that was completely finished. The mezzanine portion was partially complete at that time. Today we have the turbine deck completed, the mezzanine floor completed, and we are now working at the ground level of the turbine building.

In addition to that, we are starting to steam clean the ceilings, the walls, the floors and the equipment in the auxiliary building and we will completely paint the ceilings, the walls and upgrade our equipment in terms of painting.

This has marked improvements in personnel morale. It has also been an improvement in housekeeping. Workers are now taking pride in working at Rancho Seco. We have developed and implemented a preventative m intenance program. Today, of all the work that we do, 25 percent of our work in the maintenance area is on PMs. Our goal is to have that somewhere around 50 percent.

We have developed and implemented a computerized surveillance scheduling program to assure ourselves that we have zero missed surveillances.

(Slide.)

The next two bullets deal with our procedures. We

have upgraded all of our surveillance procedures for power operations. We have also upgraded our emergency operating and casualty procedures. We have added the human factors and we have also colored enhanced them for ease of the operator.

We have also made a commitment that we will complete and upgrade all of our procedures by the end of 1989.

We have implemented a hazardous material waste program and this concludes the implementation of a chemical control program at our plant.

(Slide.)

We have strengthened our industrial safety program. We now require hard hats and safety glasses in our power block. In addition to that, there is no smoking allowed in the power block whatsoever.

We have maintained personnel radiation exposure below our plant goal. Last year, in 1987, we had cumulatively 299 man rems of exposure. The industry average was around 385 man rems. Again, let me remind you we did this during an outage, when we had a lot of the systems open.

(Slide.)

We have developed an extensive power escalation program for testing and enhancement of personnel training. I feel that this demonstrates our commitment to safety. The program is about six months. It provides adequate time for the management team to evaluate the plant, the programs, and the

people, and we will minimize errors.

Let's take a look at planning. We have developed a forced outage schedule process, so we are thinking ahead. If, after our plant comes on line, we trip off for a day, a week or a month, we already have in place preplanned work that needs to be done. In addition to that, we want to look ahead five years, so we have developed and initiated implementation of a long range schedule plan. This provides focused direction for the team of what we have to do and also it puts it on a priority basis. It also provides useful information for the board of directors in making their decisions.

Let's take a look at the B&W owners' group safety and performance improvement program, and I would like to go into an additional slide that is not in your package.

(Slide.)

With the latest information that we have, there are 215 items that have been issued by the B&W owners' group for consideration. After careful review, we figured out that there are 169 items that are applicable to Rancho Seco. Seventy-one of these items are already implemented; 29 items are partially complete; and 69 items are being further evaluated for implementation after restart.

I want to make it very clear that we went through a very methodic process by our management team to determine that there are no items that were identified by the B&W owners'

group that are critical to the safety of our plant.

CHAIRMAN ZECH: Wait a minute. Can you go back there just a minute? How many have you completed there?

MR. FIRLIT: 71 have been totally completed by Rancho Seco.

CHAIRMAN ZECH: And 36 of those are considered key items?

MR. FIRLIT: And 35 are non-key.

CHAIRMAN ZECH: Well, key items by who -- by the owners' group or by you or by who?

MR. ANDOGNINI: The owners' group classifies them into two classes.

CHAIRMAN ZECH: Right, but that's what you are talking about here.

MR. ANDOGNINI: There are a total of 74, I believe, of the 215 that are key items.

CHAIRMAN ZECH: By the owners' group.

MR. ANDOGNINI: By the owners' group. What we have done, we have our independent review process that goes through to determine whether they are safety-related or not.

CHAIRMAN ZECH: Right.

MR. ANDOGNINI: And put them on our long range schedule. If they are safety-related we do them prior to restart.

CHAIRMAN ZECH: You have completed 36, really, of

those 71 items --

MR. ANDOGNINI: Right.

CHAIRMAN ZECH: -- that the owners' group puts in the 74 category up above, but you have completed 36 of those items that are considered key items.

MR. FIRLIT: Yes, sir, that's correct.

COMMISSIONER ROBERTS: Are you familiar with the letter to us of March 17 from the Union of Concerned Scientists?

MR. FIRLIT: Yes, sir -- where they indicated we have only completed two?

COMMISSIONER ROBERTS: Yes. Would you make a response to that, even though there is another one in the record for you?

MR. ANDOGNINI: Yes, we will.

COMMISSIONER ROBERTS: Thank you.

MR. ANDOGNINI: We will provide the data in detail that's here.

CHAIRMAN ZECH: I think that's good and I think it should be done.

MR. ANDOGNINI: We will do and we will send copies of that to you so you can see that we have responded.

CHAIRMAN ZECH: Fine. Thank you very much. Proceed.

MR. FIRLIT: We had also had a B&W owners' group audit of what we have implemented to date and the results are

favorable.

We have reviewed NUREG 1275 as you suggested, and we have implemented both the management and the equipment issues that apply to Rancho Seco. What you hear today will reinforce that we have implemented those recommendations that assure a safe and reliable plant.

In fact, recently we were visited by the NRC AEOD and their evaluation was favorable.

We have taken a look at independent evaluations for readiness of our plant. Two of these are self-initiated by us. One was conducted by Dr. Sol Levy -- that is the operational readiness review -- and the other one was chaired by Mr. Dick DeYoung, and that was the nuclear advisory committee. Both of these organizations say that Rancho Seco is operationally ready for restart.

We have also had some external agencies, such as ANI, INPO, and your NRC, and I believe you will hear today that your staff supports the operational readiness of Rancho Seco.

That completes my presentation, and now I would like to introduce Jim Shetler, who will talk about the integrated test program.

COMMISSIONER CARR: Is that B&W Owners Group audit a written paper?

MR. ANDOGNINI: Yes, sir.

COMMISSIONER CARR: Can you send us that, too?

MR. ANDOGNINI: What happens is the executive committee, which I am a member of, decided internally to set up an audit team to go around to the utilities to determine how effectively the utilities were implementing the B&W recommendation, and a senior executive from a different utility attended the audit while it was being conducted. For instance, Mr. Campbell from Arkansas came to Rancho Seco while the audit was going on. The audit is in writing, and we'd be happy to share a copy with you. Would you like a copy?

COMMISSIONER CARR: Please.

MR. FIRLIT: Mr. Shetler.

MR. SHETLER: Thank you, Joe.

Good morning, Mr. Chairman and Commissioners.

CHAIRMAN ZECH: Good morning.

MR. SHETLER: This morning I would like to review for you the test program conducted at Rancho Seco. As we have discussed before, we have formulated an integrated test program on our 33 select systems. The goals of this test program were to perform component level testing, to verify hardware performance, system level testing to verify functionality, and plant level testing to verify proper system integration and response.

In laying our out test program, three main phases of testing were identified at cold, hot and power ascension conditions. To date, all of our 163 special tests for cold

shutdown and our 46 special tests for hot shutdown have been performed and results approved.

We currently have 18 tests left to complete during the power ascension program. These are above and beyond our routine scheduled tests. As a result of this effort, component and system operability has been verified.

The Rancho Seco team has outlined a very extensive power ascension program. We currently intend to stay near zero power for one week, to allow plant operators time to become familiar with the approach to criticality. The plant power level will then be raised to 25 percent for another one-week hold to allow plant operator familiarity with low level power operation.

At the end of this week, we will perform a planned trip of the plant to verify post-trip response. We will also perform the remote shutdown capability test at this time.

From this point the plant will be raised to 40 percent power for an eight-week hold to perform testing and evaluation of plant and personnel performance. During this hold we have also asked INPO to perform an assist visit to help in this evaluation.

The power ascension program will then continue at a minimum of five weeks at the various power levels noted on the slide, with evaluation at each plateau.

In addition, another planned trip is scheduled for

the 80 percent power plateau to verify plant response with decay heat on the core.

Also, throughout this program, various other tests will be performed, such as tuning of the integrated control system. One area of concern that we have had was the fact that the test group was a transition organization whose knowledge from the test program needs to be retained for the long term.

To assure this transition of knowledge, we have established a permanent group of system engineers. This organization is being staffed with key engineers rolled over from the test group to the plant performance department. This will assure that the knowledge from the test program will be transitioned to the long term Rancho Seco organization.

In summary, the Rancho Seco test program has achieved its requirements and goals of assuring that the plant hardware and systems function as designed and are ready to support safe power operation.

Beyond that, the program has challenged the people, procedures and programs. This has sometimes been painful, in that we have had to stop testing to resolve issues and implement corrective action before continuing.

However, this has provided us a better organization and improved programs for operation. As a result, we have implemented what we believe is one of the most extensive industry restart test programs. It has gained us an INPO Good

Practice.

Lastly, we have assured that the knowledge gained from this test program will be transitioned to the long term organization.

That concludes my formal remarks.

CHAIRMAN ZECH: Thank you very much.

MR. SHETLER: I would like now to introduce Dan Keuter, the Director of Nuclear Operations and Maintenance, who will discuss the operations and maintenance readiness for restart.

CHAIRMAN ZECH: Thank you. You may proceed.

MR. KEUTER: Good morning, Chairman and Commissioners.

First I would like to discuss the operations area and start with operations organization and resource improvements. The operations department is a stable organization with an extremely low turnover. All positions are filled with permanent SMUD employees, except for a few temporary positions filled by contractor personnel, mainly in the areas of B&W experienced operations advisors and operations procedure writers.

We are staffed for six-crew rotation, but are currently on a five-crew rotation until we complete additional operation -- get additional operating experience. I'd like to point out that due to operator performance problems we have had

in the field, we have placed two assistant shift supervisors on each crew. One is dedicated to the control room, and one is dedicated to the plant. This is unique for a single unit utility, and it vastly improves our supervision in the field.

Additionally, we have increased the operational staff support size, including on-shift clerks, in order to reduce the administrative workload on our operating crews.

Next, in the area of operator training improvements, I would like to point out that all of our operator training programs, including our STA program, have been accredited by INPO. We have completed 240 hours of simulator training per licensed operator over the last two years.

This is about two to three times the industry average. This simulator training has been evaluated personally by management, including Joe Firlit, myself, and operations manager Bill Kemper.

Additionally, it was independently evaluated by INPO, who had very positive comments about the operator performance at the simulator.

We have also conducted over 400 hours of modifications training per licensed operator. To ensure we have hands-on experience for the new equipment, we have repeated several important tests strictly for operator training. These include such tests as hot functional testing of our new emergency feedwater initiation control, and loss of

power to our non-nuclear instruments and integrated control systems.

I would like to point out that all of our licensed operators have been successfully examined by the NRC in the last two years, either through initial licensing classes or retraining qualification programs.

Next I would like to cover the operations involvement in special testing. We wanted to ensure that we not only checked and tested the equipment, but that we also checked out and tested our people, procedures and programs. To ensure this was accomplished, we developed detailed testing action plans to address areas such as operator command and control of testing, detailed tests and operating procedure reviews, detailed crew briefings before tests and critiques of problems afterwards.

We did find problems, not only with equipment, but also with the people and procedures. When we did, we stopped, we evaluated the problem, whether it be hardware or software, and implemented corrective actions before we continued.

Our operators gained valuable experience from their involvement in the test program.

Next I would like to talk about improvements we have made in the operator personnel themselves. In order to address not only the short range people problems identified in the test program, but also the generic and long range concerns that we developed in operations action plan specific to personnel

concerns. Our goal was to reduce personnel errors.

To ensure ownership of this plan by our first line supervision, it was developed by the shift supervisors and assistant shift supervisors themselves and reviewed by management. It addresses the root causes of problems, both specifically and generically, and implements actions to correct them.

This plan is a long-range living document. It will be used to address people problems we identify in the future. In order to address people and program problems before they happen, we have also conducted a detailed operations department self-evaluation. This evaluation was based on INPO performance objectives and criteria. The results of this program have been incorporated into our operating programs.

We have also gone through an extensive program to improve our operating procedures. We have upgraded all our emergency operating and casualty procedures to ensure they include all the latest technical information, plant modifications, and human factor elements.

We have revised all of our operating -- system operating and plant operating procedures to incorporate all the plant modifications that we have completed. All the operators have been trained on the procedure changes and revisions.

Additionally, after start-up, we will continue to upgrade our system and plant operating procedures to make them

easier to use. This is part of a long-range program sitewide that has been launched, a comprehensive sitewide program to upgrade all procedures and programs and ensure that they are integrated together.

Next we have developed a special administrative procedure to control the plant heat-up and power escalation. It is an overall control and procedure that integrates all of the normal operating procedures and test procedures.

It also has special hold points to ensure that we take a slow and careful approach to power operation. It requires special management reviews and approvals at specific hold points to ensure the plant, the people, and the procedures are ready for the next level.

The management approvals are shown on this slide, along with the hold points.

Finally, I would like to assure you personally the operators would not and will not hesitate to shut down the plant, no matter what type of initiative is passed. Their first concern, and the basis for their license, is safety is first.

Next I would ike to address the maintenance area. I would like to start with maintenance organization and resources. We have organized the department not only by the disciplines of mechanical, electrical, and instrument and control, but have also added a centralized planning and

programs organization that is matrixed across the three disciplines. This allows the discipline organization to concentrate on supervising the workers and less on administrative workloads.

It also helps to ensure that the administrative responsibility, such as work plans, procedures, preventive maintenance, are consistent across all disciplines.

Additionally, it supplies a level of checks and balances within the maintenance department to ensure quality.

We have also reorganized and minimized layers of management and therefore improved communications and accountabilities of workers.

Lastly, we have added resources to ensure we have enough people to support our new programs.

Next, I would like to review improvements in maintenance personnel themselves.

We have put together a maintenance personnel action plan similar to the one developed in operations. It also is a living document and is owned by the first line supervisors. Some of the areas we have concentrated on are procedure adherence, which we have made a condition of continued employment. It includes pre-job briefings, crew turnovers, and post-job critiques.

Also to ensure people are actually implementing management expectations, we have implemented a formal

management observation program that Joe talked about, which is based on INPO observation program.

Additionally, we have developed a formal restart qualification program to ensure personnel demonstrate that they can conduct specific tasks as we heat up and go into power operation.

As an added level of independence, quality control not only reviews QC hold points when they are in the field, but also observes and comments on work practices such as radiation protection and safety as part of the quality field inspection check list program.

As in other departments, we have made great improvement in our training program and maintenance, both in quality and quantity.

As shown on this slide, we have made significant improvements in our programs, maintenance programs. I would like to only discuss a few of these.

All the maintenance programs have been totally revised and upgraded based on INPO maintenance guidelines. We have implemented a state-of-the-art computerized work control program. We have significantly improved the quality department involvement in maintenance work, including review of work requests before starting work, during the work, and after work is completed.

And finally, I would like to point out that we have

conducted a maintenance self-evaluation. A special team of plant, INPO, and industry personnel will be conducting a two-week review of our plant starting the end of this month, starting the end of April.

Next we have gone through an extensive program to improve our preventive and predictive maintenance. Currently 20 percent of our total maintenance workload is preventive maintenance. Our goal is to increase this to 50 percent.

Our program is based on INPO and EPRI guidelines. It prioritizes equipment based -- and therefore the PMs on the equipment, based on its effect on plant safety and plant reliability. PMs on equipment important to safety are currently on schedule and none of these are overdue.

As a final area, I would like to talk about corrective maintenance and corrective maintenance backlog. Our goal is to reduce and keep the corrective maintenance backlog as low as possible. Currently we are working off approximately 250 work requests per week, and receiving approximately 200.

Today our current backlog, as of today, is 963. Therefore, if we work off 250 per week, our backlog is less than four weeks.

All the backlog remaining has been reviewed and justified as not being needed for restart. None of these work requests affect plant safety.

Also to ensure a full support of the operations

department, and to ensure we can immediately address corrective maintenance concerns as they come up, we have implemented a full around-the-clock maintenance coverage.

(Slide.)

I'd like to note that we have completed over 30,000 work requests over the last two years.

That concludes my presentation. I would like to introduce John Vinquist, Director of Nuclear Quality.

CHAIRMAN ZECH: Thank you very much.

You may proceed.

MR. VINQUIST: Good morning, Mr. Chairman and Commissioners. My name is John Vinquist. I am the Director of Nuclear Quality at Rancho Seco and I will discuss Quality at the site and readiness of the nuclear quality organization to support plant operations.

(Slide.)

Quality at Rancho Seco has been significantly enhanced over the past two years. I am able to say that quality is prevalent in the workplace at Rancho Seco, and hand in hand with safety is top priority.

This quality has been created as a result of numerous enhancements to the Quality program, but the major influence has been the commitment to Quality that begins with Mr. Andognini and carries down through to all Rancho Seco personnel.

The nuclear Quality organization necessary to support plant operation is in place, independent and fully staffed with qualified personnel representing many diverse and multi-disciplined backgrounds, including health physics, maintenance, engineering, chemistry and former SROs.

These backgrounds have enabled us to greatly enhance the quality of our audits, surveillances, inspections and engineering interfaces.

The Quality Assurance program for Rancho Seco was thoroughly reviewed and totally rewritten by the district and submitted to NRC staff. This program has been improved by the staff and is now implemented at Rancho Seco.

Consistent with our Quality Assurance program, we have developed and are implementing a Quality action plan that provides for continued enhancements of nuclear Quality activities over the next few years.

Like the other action plans you have heard about today, the quality plan is a living document designed to ensure continued improvement to the quality program. The extent and quality of our audits, surveillances and verifications have improved significantly. Lessons learned from visits to other plants such as Clinton station in Illinois were valuable in achieving these improvements.

For example, we have established specific criteria to define observations and findings similar to NRC deviations and

violations. Responses to these must include specific identification of the root cause and corrective action to fix the problem and preclude recurrence.

Corrective actions are later verified by Quality to be complete and effective. To assist in our efforts to verify effectiveness and to ensure proper root cause determination, we have implemented a trends analysis program to identify conditions adverse of quality and as a result direct corrective action requests to senior management for resolution. Corrective action requests require a ten day response from the assigned department and the resulting corrective actions are again verified.

We have significantly increased the number of Quality surveillances. By the end of this month, in keeping with our action plan goals of 60 surveillance per month, we will have completed as many surveillances in 1988 as were completed during the entire year of 1987. The significance of this increase is that we are more involved in plant operations and are no longer waiting for outside organizations to find problems. We are finding the problems ourselves and ensuring timely resolution.

Our vendor audit program has been significantly strengthened by requiring all vendors on the improved suppliers list to have an up-to-date programmatic and implementation audit by the District prior to order placement, or source

inspection performed during verification.

The Nuclear Quality organization at Rancho Seco is involved in essentially all of the activities supporting testing, startup and operation. This involvement has even been expanded to include non-QA Class 1 activities where situations warrant such involvement.

The structure of the Quality organization is well defined, with single point accountability and responsibilities assigned. The functions and expectations of quality assurance, quality control, and quality engineering are well understood by each respective group as well as the rest of the nuclear organization.

The direct reporting relationship with the Chief Executive Officer provides the necessary independence to permit the organization to function freely. Quality does have the authority to stop work when situations warrant such measures. Work is only continued when management, including Quality, is satisfied that appropriate and effective corrective actions have been put in place.

In summary, Rancho Seco is a quality plant. A strong Quality organization is in place and has been armed with the necessary programs, structures and authorities to ensure that quality is maintained.

I would like now to return to Joe Firlit, who will talk about site operational readiness.

CHAIRMAN ZECH: Thank you very much. You may proceed.

MR. FIRLIT: We have told you that our plant is ready. We have told you that our programs are ready. Now we'd like to tell you why our people are ready.

We have structured a new management team and we have been working very effectively together for the past ten months. We have experienced, seasoned managers at Rancho Seco who came from plants throughout the United States.

We took the time to clearly define responsibilities and today we have single point accountability. That is a cultural change for Rancho Seco.

We have developed and implemented departmental management plans for personnel readiness and we involved the first line supervisors. We got their buy-in and we needed their buy-in order for the whole team to be successful.

We have reduced the reliance on contractors. For instance, in our engineering department at one time we had a ratio of three contractors for every engineer in that department. Today that ratio is less than 1.5:1.

We have implemented an extensive training program for incorporating the INPO guidelines. In the area of maintenance we have covered mechanical, I&C, and electrical, and in the I&C area we have stressed the items and lessons learned from NUREG 1275.

Training also includes chemistry, health physics and operations.

We have increased our employee awareness for radiation protection program, and that is being continuously monitored by the management team and also the quality assurance organization.

We have implemented what we feel is a very effective employee fitness for duty program. We have demonstrated quality performance of our personnel to the specific events.

(Slide.)

If you take a look at the next slide, I'd like talk about the senior management experience. As you can see, we have at least twelve years of nuclear power plant experience, and if you look down that list, you will also note that five of the seven management members at one time held a license.

(Slide.)

Moving on to the next slide, we have developed a state of the art personnel qualification program that Dan Keuter talked about. The purpose of that program was to allow management to evaluate people at specific modes and also at various power levels. The departments included in this program are operations, maintenance, chemistry, rad protection, and system test.

Each one of these power levels indicates specific qualification tasks that have to be performed by each of these

disciplines. There is also management assessment. The senior management has to review and approve a change in mode or a change in power.

We will utilize and continue to utilize the test activities to gain experience and if we identify any deficiencies we will stop the program and take the appropriate action to correct the deficiencies.

In addition to the personnel qualification program, we have developed departmental action plans addressing new attitudes towards achieving excellence. I believe that safety is the number one priority at Rancho Seco and so do the other teams members on our team.

The program stresses safety, and then quality, and then schedule -- in that order. It stresses teamwork. Our team today is much more self-critical. We are not defensive at all. We want to do an excellent job. We are now in the mode of saying "What if this doesn't work, what could happen?"

Our supervisors are taking more responsibility for their people. We are starting to look ahead and we are planning ahead. We have a very professional team. The area that I think has shown marked improvements in professionalism is the control room activities. I can assure you from personal observation that they are conducted in a professional manner. The management team that you see around this table today has personally witnessed many of the tests right from the control

room so that we could observe the operators in action.

We also have a Quality program. This plan is a living document developed by the supervisors and it is a buy-in by our employees.

(Slide.)

With that, I'd like to turn it back over to Mr. Carl Andognini for his concluding remarks.

CHAIRMAN ZECH: Thank you very much.

You may proceed.

MR. ANDOGNINI: Mr. Chairman and Commissioners, when I was here last October, I told you that I would not start Rancho Seco until I was completely satisfied that the plant was ready for operation and the people were ready to operate it.

I am satisfied on both accounts.

At this point, let me say my statement does not mean we have achieved perfection. We have not. But we are striving for it. The plant has not operated for more than two years. The people have not been faced with power operation for the same period. That is the reason why I have instituted a very conservative and extended power extension text program. We need the experience.

In getting the experience, we will find some weaknesses and we will fix them. That is the fundamental objective of any test program. We learn and continue to improve from our experiences.

How do we know that the plant is ready? First, we have conducted a very exhaustive problem identification program. It was not limited to the December 26 incident but went to all problems that have impacted or limited the operation of Rancho Seco since 1974. It include root cause analysis, so the proper corrective action could be taken to prevent reoccurrence.

Second, we conducted numerous audits to assure that the plant as it exists today meets the safety analysis made when it was first licensed.

Third, we have completed an exhaustive pre-start test program. We tested all the components that had been modified, and then we tested the systems involved in the modification and finally we conducted a comprehensive series of integrated system tests.

I don't know of any other plant in the circumstances of Rancho Seco that has been subjected to a more rigorous test program.

The result is that the plant is in better condition than it has ever been to support safe operation. I am very proud of what we have accomplished. Moreover, the fact is that the plant is in topnotch condition and appearance has boosted morale and pride.

How do we know that the people are ready?

First, we have put a sound organizational structure

in place and we have manned it with qualified SMUD personnel.

Second, the management team has extensive experience with nuclear operating plants. Also, they have been working together during the pre-start test program and now are operating as a unified team.

Third, we have put in place improved systems that will permit management to track, control and improve performance.

Fourth, our training program has been demonstrated to be effective through INPO audits and certification and by our pass/failure rate on operator examinations.

(Slide.)

Fifth, we have reviewed and revamped our operating procedures to make them more effective and reflect all plant modifications.

Sixth, we have established accountability as a fact of life at Rancho Seco.

Severth, I am particularly proud of the improvements we have achieved in the Quality program. It is directing and improving performance and safety is not in terms of perfection. It is a valuable tool for me and the management team of Rancho Seco.

Eighth, I have managed Rancho Seco to establish a work priority of safety first, quality second, and cost and schedule, third.

Ninth, when something goes wrong, we have and will continue to stop, look, and listen to find the root cause. This is now a way of life at Rancho Seco.

Mr. Commissioners, if I were sitting on your side of the table, I think I would be asking the question: "Mr. Andognini, we are very impressed with your accomplishments, but how do you, Carl Andognini, know, and why are you so confident that Rancho Seco is ready to restart?"

This is a fair question and this is my answer:

First, I am confident by my judgment of readiness because it has been confirmed by a number of independent assessments. To start with, we have the intensive and searching scrutiny of the NRC staff in Region V. We would not be here today if we did not feel that they concur that we are ready for restart.

Next, INPO has conducted corporate and plant audits last December. The reports of the audit were positive. Followup visits since then have also been positive. The nuclear insurance organization has conducted several inspections and concluded that they are satisfied we have satisfied their criteria.

The Babcock & Wilcox Owners' Group sent a ten man utility team to Rancho Seco to see how we stood with respect to the B&W safety performance and improvement program. The report of this group showed that Rancho Seco is the leader in the

implementation of programs among all B&W plants.

I have personally contacted Don Hall of Illinois Power to have our staff review Clinton's quality assurance practices in the startup test programs, as you Commissioners suggested, and have improved the Rancho practices as a result.

Additionally, I have had the benefit of two independent committees that I have organized to report directly to me. First, the Nuclear Advisory Committee, headed by Dick DeYoung, was asked to dig into any aspect of plant operation they chose or I wanted their review. The subject was to find out if work was being done competently and to get recommendations for improvement.

The other committee was the Operational Readiness Review Committee headed up by Dr. Sol Levy. This committee's task was focused on plant and people readiness.

Both of these committees were comprised of men with long nuclear experience in a variety of disciplines. They know the business. They are men of integrity. Their insights and recommendations were invaluable.

Second, we have completed a very comprehensive pre-start integrated system test program.

Third, I have been careful to say that we were ready to restart. To ensure readiness for power operation, we have designed the extensive and conservative power ascension program so that we will achieve readiness to support full power

operation.

Fourth, and most importantly, I am confident that we are ready for restart because I have been personally involved.

Here are some of the key examples.

I have a full-time office at the site. I have daily involvement in plant and people activities.

I personally stopped testing when problems were encountered to obtain root cause and develop appropriate corrective action. I am involved in the identification of root cause of people problems. I have reviewed in detail the departmental programs to address the people problems. I met for four and a half hours with all the shift supervisors and the assistant shift supervisors to have them convince me that the root cause and corrective action to address the people problem was adequate.

I have witnessed plant activities in the control room and toured the plant during critical tests such as the loss of off-site power test.

I conduct several weekly tours and visit the control room several times during the week.

To ensure my certification to the regional administrator, Mr. Martin, each of the 24 organizational department managers with their key staff have provided detailed assurance of readiness to me for both heat-up and reactor criticality and startup.

Commissioners, when the problems with the diesel generators are solved to our satisfaction, Rancho Seco will be ready for a safe restart, and we respectfully request your approval to do so.

CHAIRMAN ZECH: Thank you very much. Any questions from my fellow Commissioners? Mr. Bernthal?

COMMISSIONER BERNTHAL: Well, I appreciate the briefing and don't want to prolong things. It's getting late. But I wanted to ask one question about the operator qualification exams. Could you give us some idea of what your percent pass/fail ratio has been in the last two or three years?

MR. KEUTER: Okay. On our last requal exam, which was conducted by the NRC, we had two that had to go back and receive remedial training. They came back and successfully took the exam.

And, then, I believe, on our initial exams, that all personnel passed. Some of those exams are being held until they receive some additional operating experience. But they all did successfully pass.

COMMISSIONER BERNTHAL: Okay. You have about 1,000 -- well, you say, less than 1,000 -- maintenance requests out. Commissioner Carr inquired earlier how long it would take you to work that down. Obviously, some of these things are in a lesser category of significance than others.

What fraction of those do you classify as being necessary prior to restart? Any?

MR. KEUTER: None of those are required for restart. As of this weekend, I went through the list on Saturday. There was approximately -- well, there were 71 that we were scheduled to complete for restart. None of those looked like there was any problem of completing them by today.

In fact, 21 of the 71 were in closure. So, that left 50 as of Saturday, and none of those looked like they were going to be a problem. So, none of them.

COMMISSIONER BERNTHAL: Okay. Thank you.

MR. KEUTER: We have taken the remaining ones, have personally reviewed those, broke them down to the different categories. And none of those affect plant safety.

In fact, only approximately a third of the 1,000 are even associated with equipment important to safety.

COMMISSIONER BERNTHAL: Okay. You are one of two plants, I guess, that -- Or, one of the plants. There are more than two that have only two automatic feed water pumps. I believe that Davis-Besse installed a third. I don't think that you have done that yet.

If not, why not, and do you have plans to do so?

MR. ANDOGNINI: We have a unique situation. We have an aux pump that's both electric and steam driven, and we have another that's electric.

We have started, and are in process of an evaluation of whether a third auxiliary feed pump is necessary. That study will be done about mid-year, and then we'll determine a plan of action of whether to install one. If we do, we will.

COMMISSIONER BERNTHAL: Okay. I would like staff to comment on that, as well.

Let me read just one of the issues. Commissioner Roberts raised the subject of the letter that we received from Union of Concerned Scientists, with a number of issues raised therein. And I'd like to pick just one salient item out here.

Let me just read it to you. There is a paragraph that deals with the recommendation to modify the power supply for the instrumentation at Rancho Seco. The B&W owners group stated that, quote: This recommendation is applicable only to Rancho Seco. Unquote.

Nevertheless, SMUD reported that it was evaluating the recommendation to determine whether it is applicable to Rancho Seco, and gave no scheduled date for completing that evaluation.

How would you respond to that?

MR. ANDOGNINI: First of all, I have to say that we first received a copy of this letter this morning.

COMMISSIONER BERNTHAL: I understand. So did I.

MR. ANDOGNINI: So, we're not prepared to speak in detail. I would be happy to provide that data to you. I'd

rather not give you any erroneous data.

COMMISSIONER BERNTHAL: Okay.

MR. ANDOGNINI: I'd rather go back and get the facts and provide them to you.

COMMISSIONER BERNTHAL: Okay.

MR. ANDOGNINI: What I will do is, I think, in the best interest of everyone, I will respond item by item to that letter back to Union of Concerned Scientists, and have a response sent to each of the Commissioners.

COMMISSIONER BERNTHAL: Good. I think you should do that. That's all I had, Mr. Chairman.

MR. KEUTER: I'd like to comment that we have gone through modifications on our electrical power supplies. And, in fact, we have gone back and we just completed a test.

It was our last test to isolate, remove power to our non-nuclear instruments in our integrated control system. And that test did pass. In fact, we ran it twice for operator training.

CHAIRMAN ZECH: All right. Thank you. Commissioner Carr? Commissioner Rogers?

COMMISSIONER ROGERS: If you could say just a few words about, I think, the little problem you told me about when I was out there. I was very impressed with my visit out to Rancho Seco, and what I saw, and the people that I met while I was there. It seemed to me that you had been making excellent

progress.

A little question of how you were to extend the notion of personal accountability a little bit further through the management chain and spread it out among the supervisors. You've referred to that, in a sense, in the slides.

But I know that you felt you had achieved something of a breakthrough on a long-standing problem there of recognition of accountability at all levels throughout the management chain. Could you say just a few words about how extensive that has now been to the rest of the organization from where you first made your beachhead?

MR. ANDOGNINI: I'd be happy to. I think I first encountered it when I stopped testing, at one time in December I asked two people, the assistant shift supervisor and the control room operator, if they would be willing to submit to a voluntary drug test. They both did. Both came back negative.

I went out one day in the plant and found the assistant shift supervisor to express my sincere appreciation for him taking the test. He was very happy that I went out to talk to him.

But he was also very upset, because he had been employed at Rancho Seco for seven years and our management had put a letter in his file. And he could not understand why he had to have a letter of reprimand in his file for what the control room operator did. Because he said: I didn't do it.

It was the control room operator.

We had a discussion that lasted for about two hours between him and myself. And it concluded that I said: I'm very sorry that we have a fundamental difference in management philosophy, but I'm accountable to the board of directors for mistakes that everybody makes out here. And I think you need to understand what accountability is.

They were able to tell you that they were accountable, but they didn't know what it meant. This is what instituted the shift supervisors -- And there was a shift supervisor sitting in the meeting with me. He was rather embarrassed.

They went back. Put a program together to determine what accountability really is and what people are accountable for. What they're supposed to do. How they're supposed to act as supervisors.

That's when I sat down with them for 4-1/2 hours and had them convince me that it was, one, a team approach and that everybody had agreed to it. That they meant what they said. That they wanted to strive for excellence. They wanted accountability. They wanted leadership. And they went through all these programs in detail.

It was then that we decided we needed to do this across the site. So, each one of the 24 departments got together and developed their own program for improvement,

personnel behavior. Where they decided what accountability was. And then it was their job to sell it to senior management to ensure that we agreed with it.

I think that's the program that I outlined to you and how we stumbled on it, really. It had been suggested in the past by the regional administrator that we weren't getting to the root of our personnel problems. And it was very clear that we weren't. And this, stumbling on it by accident, got us to the root cause, and we've since corrected that program.

I have also just had an independent assessment completed last Thursday of both the action programs to strive for excellence that each department has, that says what they're going to do and how they're going to get there and what resources they're going to use, and the program for personnel improvement.

I had an independent audit done of those to determine whether the programs were being implemented or whether they were gathering dust on a shelf or whether they were being utilized and updated. And the report came back that the programs that he looked at -- He was unable to look at them all in that period of time, and we're going to go back and do them all, but he selected the key ones. That all of them were being implemented and being modified as required.

So, they were programs that were on-going and living. Does that answer your question?

COMMISSIONER ROGERS: Yes. Thank you. That's all.

CHAIRMAN ZECH: All right. I understand that, since the shutdown, you've installed the EFIC system, the emergency feed water initiation control system. Is that correct?

MR. ANDOGNINI: Yes, sir.

CHAIRMAN ZECH: Have the operators trained on that system?

MR. ANDOGNINI: Yes, sir. I turned that over to Dan Keuter.

MR. KEUTER: Yes. We have gone through an extensive program, both in the classroom and -- Again, this hot functional testing of our EFIC program is one that we took critical path time to go through and repeat the whole test. So, not only have we trained on it, but we've actually gone through and every operator has seen the test and gotten that firsthand experience running that equipment.

CHAIRMAN ZECH: It's my opinion that that system may have -- may have, I emphasize -- been important if you had it installed during your transit that you had. It may have mitigated it. Would you agree with that?

MR. KEUTER: That's correct. In fact, the simulator at Lynchburg, we have modified it to show our new EFIC modules. And so, they have actually trained on that simulator on EFIC, too.

CHAIRMAN ZECH: All right. Could you tell us a

little bit about the diesel engine vibration problem?

MR. ANDOGNINI: We have an expert in the audience that's working on it, and I believe we've gotten to the root cause of the vibration problem. We have completely tested the A diesel, and as recently as yesterday we made some modifications to a valve that had given us some problems.

We found the root cause of that problem, and have corrected it. The A diesel, to our surveillance done, was completed yesterday afternoon, and the A diesel is okay.

We've had problems. They're supposed to be identical engines. They're not. They react differently to fixes that we put on them.

We were able to get ahold of an individual, Buddy Waichell, who was very knowledgable in vibration, and was able to find the root cause of the vibration problem.

The problem that we're having with the B diesel is that a vibration problem, also coupled with a structural problem on some supports, has caused some cracking in a shroud that's on the engine to remove heat from the exhaust system. We're working with TDI, the manufacturer of the diesel, and other diesel experts to determine the corrective fix for that. I believe that we have the fix for that, since we fundamentally know the root cause of the vibration problem.

We have committed to the region and to the NRC that, even after those two diesels become operable, we'll do an

extensive remodeling of all of the external piping on those diesels and make whatever modifications are appropriate before the end of the next refueling. So, we've started into that program right now.

In addition to that, we've committed to meet the requirements of OM-3, which is the acceptance criteria on vibration, at a safety factor of 1.3 in our new analysis.

CHAIRMAN ZECH: How many diesels do you have?

MR. ANDOGNINI: We have a total of four.

CHAIRMAN ZECH: We all know how important the diesels are. They're primary for emergency power and removing residual heat. And you don't expect to start up until you get those diesels fully operational, I presume. And you don't expect NRC to allow you to start up until that happens.

MR. ANDOGNINI: I will not send a letter of certification to Mr. Martin, regional administrator, saying that we're ready to start, until we have thoroughly convinced ourselves that those diesels are operable.

CHAIRMAN ZECH: Right. When do you expect they'll be operable?

MR. ANDOGNINI: The plan shows right now, at the earliest, on Thursday morning. That's the earliest.

Tomorrow morning at 8:30 in the morning we have a meeting with the key members of the staff here to review what modifications are being made, whether they're successful,

whether we're doing it adequately, do we have adequate independent review of the analysis that's been done. And, in addition to that, we've committed to run the diesels for a 24 hour surveillance run to ensure operability.

CHAIRMAN ZECH: All right. Well, let me just say it certainly would appear that you've made some significant changes at Rancho Seco. Mr. Andognini, I think you deserve a considerable share of the credit in the changes that have been made, and your team. I, too, am impressed with your emphasis on the people side of it, because I think Rancho Seco needed that emphasis.

And so, I think that, although you have the diesel engine problem to fix, that it would appear that you've made a rather significant turnaround. The proof, though, of course, will be results and execution, if and when we authorize you to restart.

If there are no other questions from my fellow Commissioners, thank you very much, and we'll ask the staff to come forward.

MR. ANDOGNINI: Thank you.

CHAIRMAN ZECH: Mr. Taylor, you may begin.

MR. TAYLOR: Mr. Chairman, with me to present the staff's analysis on Rancho Seco are Tom Murley and Frank Miraglia, George Kalman from the Office of Nuclear Reactor Regulations. George is the project manager for Rancho Seco.

Also from Region V, the regional administrator, Jack Martin, and the resident inspector at the table, Tony DiAngelo, the senior resident at Rancho Seco.

I'll now ask Tom Murley to commence the staff presentation.

CHAIRMAN ZECH: All right. Thank you very much. You may begin.

MR. MURLEY: Mr. Chairman, the staff will describe for the Commission the basis for our recommendation that, pending completion of repairs and confirmatory testing of one of the emergency diesel generators, the Rancho Seco plant is ready to resume safe operation, and the licensing management and plant staff can operate the plant safely.

These conclusions by the staff are based on some 50,000 staff hours of licensing and reviews and inspections over the last two years. In fact, since the plant was shut down in December of 1985. There have been some 78 inspection reports issued on Rancho Seco in the past two years. I believe both of these statistics show that we put more emphasis on this plant than probably any other plant in the country for the last two years.

You've heard of major equipment modifications, a better maintenance program, improved procedures in training. There has been a big improvement in engineering support. Nearly all of the management has been changed at the plant.

One thing that was not mentioned, that I think it's important to mention, is our view that there's been a major improvement in attitude at the plant. And that's important. We now see there a professional organization, more self-critical. They go out themselves and find problems and fix them.

Commissioner Bernthal asked about the auxiliary feed water system. The system at Rancho Seco meets our current regulations and requirements today. Under generic issue 124, however, the staff is looking at cost effective ways to improve safety at some plants. There are seven plants that we are looking at to upgrade the auxiliary feed water system. One of those is Rancho Seco.

The staff has concluded that the Rancho Seco aux feed system meets our regulations for adequate safety to protect the health and safety of the public. And we will be reviewing with them this summer their study for ways to improve even further the safety of their auxiliary feed water system.

COMMISSIONER BERNTHAL: Well, just to pick up on the point. Was the aux feed system at Davis-Besse, then -- I simply don't remember -- qualitatively different in some way that it seemed more appropriate for them to make that change?

MR. MURLEY: Frank, do you want to discuss the difference?

MR. MIRAGLIA: I'll give that a try. The auxiliary

feed water system at Davis-Besse didn't meet the reliability goals that were originally set up. They did also meet the current requirements.

The concern was what improvements could be made to further increase the reliability. After the Three Mile Island accident, there was a substantial upgrade of auxiliary feed water systems throughout the country. The reliability goal of 10 to the minus 4 to 10 to the minus 5th per demand was put into the SRP for new plants.

As part of the TMI requirements, we did have all plants give us a range of what their reliability per demand was. It was noticed that the two pump plants have a lower reliability. And we are looking at those two pump plants to see what can be done to effectively increase the reliability of that, and are there compensating features.

One would have to look at experience with main feed. Some plants are vulnerable to loss of main feed. Some plants have a better reliability.

COMMISSIONER BERNTHAL: Yes. My question really is what are the differences between Davis-Besse and this plant. Are they significant? Are they qualitative? Was there a reason why Davis-Besse --

MR. MIRAGLIA: Well, one major difference is that Davis-Besse had two steam driven pumps only.

COMMISSIONER BERNTHAL: That's what I thought.

MR. MIRAGLIA: All right. In Rancho Seco they have two pumps, one of which is a tandem pump that runs on steam as well as electric. So, that's a difference that would result in slightly greater reliability.

COMMISSIONER BERNTHAL: Thank you.

MR. TAYLOR: And the other is an all-electric.

COMMISSIONER BERNTHAL: Yes. There is a diversity, in other words. Correct? That was missing from Davis-Besse.

MR. TAYLOR: Yes.

CHAIRMAN ZECH: All right. Proceed, please.

MR. MURLEY: With regard to the Rancho Seco utilization ordinance that is on the June 7th ballot, I sent a letter to Mr. Andognini expressing our concern as you know. He replied with assurances that he would not permit cutting corners at the expense of safety.

We're pleased with that reply, but we will also, and particularly the region, will give enhanced inspection coverage over these next several months at the plant. And Jack Martin will talk about that.

Finally, I should mention that there is a 2206 petition from Mayor Bradley of Los Angeles that is pending, that I expect to act on later today or tomorrow. And we will, of course, send copies of that action to the Commission on that stuff. So, George Kalman will take over.

CHAIRMAN ZECH: All right. Thank you. Proceed,

please.

MR. KALMAN: Good afternoon. I have been an NRC project manager for Rancho Seco since October in 1985. During that time the NRC involvement with Rancho Seco has been exhaustive. The thoroughness of the NRC evaluation of the Rancho Seco performance and improvement of programs is reflected in the comprehensive and very detailed safety evaluation report, NUREG-1286.

As described in NUREG-1286, the initial phase of the restart process focused on identifying why the December 1985 over-cooling transient occurred and why the Rancho Seco performance history in previous years was so marginal. These issues were also covered in detail in the incident investigation team report, NUREG-1195.

Once the Rancho Seco problem areas were identified, discussions commenced with SMUD to determine which deficiencies would need corrective actions before plant restart, and what type corrective actions would be appropriate. Major differences developed between the NRC and the SMUD management on this issue.

The scope of the initial SMUD performance improvement effort was a proposal to repair equipment deficiencies directly related to the 1985 over-cooling, and restart the plant by March of 1986. Based on the wide range of deficiencies identified by the NRC investigation of the over-cooling event,

and based on the previous history of marginal performance, the NRC staff insisted on a much broader scope of improvements prior to restart.

A stalemate developed between the utility management and the NRC staff over this issue. When it became apparent that the differences between the utility management and the NRC staff were substantial, and apparently irreconcilable, the SMUD board of directors stepped in and took decisive action. The board hired a consultant firm to direct Rancho Seco operations, and that action essentially constituted a 100 percent turnover of management.

Eventually the performance improvement plan was accepted by the NRC staff. And what you heard this morning from the SMUD representatives was the culmination of the restart process that began slowly and developed over a two year period. As mentioned by Dr. Murley, in manhours, the staff expended more resources on Rancho Seco than on any other plant in the country.

Once the requirements for restart were established, inspections by both headquarters and regional teams verified that the required plan modifications were completed and the affected systems were tested for operability. Next slide.

[Slide.]

The status of the B&W owners group SPIP program at Rancho Seco was addressed earlier this morning by SMUD

representatives. I would like to emphasize the positive aspects of SPIP on Rancho Seco.

SPIP addressed essentially the same issues as the Rancho Seco performance improvement plan. One notable exception was that SPIP sidestepped the management issue. But, otherwise, SPIP constituted a very beneficial and independent industry evaluation of the Rancho Seco-type problems.

As might be expected, some of the B&W owners group recommendations overlapped the SMUD-initiated performance improvements. However, some of the SPIP recommendations were outstanding and unique. The good ideas were incorporated into the Rancho Seco restart program.

The NRC staff reviewed the SPIP recommendations, and specifically addressed those in the restart safety evaluation report. The on-site inspection staff reviewed the SMUD disposition of the B&W owners group recommendations and, in cases where SMUD did not choose to implement the recommendations prior to restart, the NRC staff reviewed the rationale behind each of those decisions and agreed with the SMUD management that those items were not restart significant.

That concludes my remarks. Mr. Jack Martin, the regional administrator, will discuss the on-site verification of the programs.

CHAIRMAN ZECH: All right. Thank you very much. Mr. Martin, you may proceed.

MR. MARTIN: All right. Yes. The basic operational readiness is hinged on, basically, a five-fold progression here. The first thing that was done, and was pretty much complete the last time we met, was a thorough review. They were broken down into 33 systems. It included all the safety systems and most of the others, like steam system and feed, electrical distribution, et cetera.

[Slide.]

SMUD did a thorough review of those, using their staff and consultants, including past history at SMUD as well as all the difficulties that Davis-Besse and others have had. Interviewed large numbers of people in the plant for any suggestions they had, based on operating experience, et cetera.

So, I'm convinced that they did a pretty good job going back, and at least learning from past experience. That's been very much of a difficulty with this utility, being able to learn from past experience. So, I'm satisfied on that score.

We in the NRC picked five of the systems and established an equivalent of our safety system functional inspection team, which is the best we have to offer, and shook down thoroughly five of the systems after they finished and confirmed that they had done a pretty good job.

An interesting side product of all of this was, about half way through, a pause to restructure and overhaul their engineering department, which took several months. And so, I

think, in addition to reviewing the systems, the technical arm of the organization has been greatly improved.

[Slide.]

Out of this review resulted a large number of modifications and improvements that have been done. EFIC has been installed and satisfactorily tested, at least to the degree that you can, in the mode they're in. The ICS system has been, the reliability of the power supplies have been greatly improved. Instrument error system has been improved. And the new diesels put into service. We already talked some about the remaining two or three problems with the diesels.

In parallel with that was the hiring and training of management --

CHAIRMAN ZECH: What slide are you on now, Jack? Do you want to turn the slide or --

MR. MARTIN: Well, I'm up to management readiness. Most of these bullets have been talked about.

COMMISSIONER BERNTHAL: Let's get the right slide on. There we go. Okay.

[Slide.]

MR. MARTIN: And the hiring, training, and conditioning of a management and supervisory staff is something that required a great deal of effort over the last couple of years. One of the things that we indicated very early on was that we wanted this to be a team of SMUD people, not

consultants.

That's been done, and, as they pointed out, there's only a couple that still are not full-time SMUD employees. The last time we talked at a meeting here, my concern was whether this management team, although as individuals they all look fine, can they operate together as a team. Or, are they still individual performers. That takes a long time to pull together. Let's go to the next slide.

[Slide.]

What's happened since we last talked was a very thorough testing program equivalent to a new plant test program, somewhat more extensive in some cases because we've insisted on a full functional test where not just the components are tested but the whole system is tested as a whole. That's not only verified that the technical and engineering work and modifications were done properly, but it gave an opportunity to observe how the people operate the system and how the management reacts when challenged.

The test program, particularly in the beginning, had its ups and downs, but over the last few weeks has settled down. And some very complicated tests, the EFIC hot functional test and the loss of ICS test, recently done, have gone quite well.

And when they do encounter unusual situations, the instincts seem to be there at this point to stop and figure it

all out before proceeding, without a lot of prodding from the Government or anyone else. So, I sense that the ability of the people to run this reconstituted plant has been tested, at least to the degree you can without power operation.

The power escalation program as they laid out we consider as satisfactory. It's in stages. We have a team of NRC people to maintain coverage of this program at the various hold points, starting out on a round-the-clock basis and continuing, certainly, at each of the major hold points. That team's been in place now for the last several days. And I expect there will be additional challenges during the test program. But it's something that they seem to be ready for and are in satisfactory shape to proceed.

That's all I had.

[Slide.]

CHAIRMAN ZECH: All right. Thank you very much.

MR. MURLEY: Our conclusion, Mr. Chairman, as I stated at the beginning, is --

CHAIRMAN ZECH: You've got the slide on backwards. That doesn't bode too well.

[Laughter.] [Slide reversed.]

MR. MURLEY: Our recommendation is that, pending completion of repairs and confirmatory testing of the diesel generators, the Rancho Seco plant is ready to resume safe operation, and the licensing management and plant staff can

operate the plant safely. And, we would recommend that, if the Commission were to authorize the staff, we would make sure that these conditions were complete before they restart.

CHAIRMAN ZECH: All right. Thank you very much.

MR. TAYLOR: Mr. Chairman, I might add that I am impressed by the changes in the staff and the hardware in this plant. I go back to after the shutdown and the false starts that were made to try to improve Rancho Seco. And I must say that I think I speak for many of the staff, and I'm impressed with what they've accomplished.

They've done a hard job. They've learned from Davis-Besse. They've learned from other stations. And the staff believes that, when these diesels are fixed, it will be safe to allow them to operate.

CHAIRMAN ZECH: All right. Thank you very much. Questions from my fellow Commissioners? Mr. Roberts? Mr. Bernthal?

COMMISSIONER BERNTHAL: Let's see. This may have been covered while I was out. If so, we won't go through it again. But did you talk about the diesel problem per se, and exactly what it is that we need to fix that? Would one of you like to address that?

MR. MIRAGLIA: We haven't discussed that. But it's pretty much as described by the licensee. They've had vibration problems for several months. They've been homing in

on the problems now. They are down to one diesel that remains to be qualified. There have been some cracks in the shroud on the exhaust.

They are meeting with the staff tomorrow to go over what their corrective action plans are. The staff has had other conversations and telephone calls with the utility. We feel it's a resolvable matter, and expectations are that the shroud could be repaired.

In addition, the utility has committed to remodel, and committing to, as he said, OM-3 standards and criteria, the vibration analysis for the diesels again, to assure that they've got and have identified all problems.

COMMISSIONER BERNTHAL: And you will require a 24 hour test before they start up? That was the --

MR. MIRAGLIA: They have committed to an additional 24 hour test before declaring the diesel operable.

COMMISSIONER BERNTHAL: Okay.

MR. MIRAGLIA: The tech specs require both TDI diesels to be operable to make a mode change, which is required for restart.

COMMISSIONER BERNTHAL: One other item that I'm not sure I ever heard the final word on was the annunciator fire that they had out there not so long ago. One of a few plants, at least, have had this problem in recent weeks or months. Did we ever figure out exactly what the cause of that was, and what

the remedy might be?

MR. MIRAGLIA: Perhaps Gary Holahan of the staff could give more details. There have been three fires within a one or two week period, an annunciator fire at three different stations. It does turn out that they had a common supplier. The exact initiating cause in each board, in all cases, could not be determined.

I think, with respect to the fire at Rancho Seco, this was one event that they handled very well. The follow-up and analysis and corrective action that they took, I think that the staff was impressed with. Perhaps Gary could --

CHAIRMAN ZECH: Would you identify yourself for the reporter, please?

MR. HOLAHAN: Gary Holahan, NRR. I believe the licensee has had a contractor do an extensive fire protection analysis of the equipment to identify the root cause. They do believe that it was a circuit problem on one of the cards itself that initiated the fire, and then progressed to the point of including other nearby cards.

And I think, as Mr. Miraglia stated, we were very satisfied with their action, with their quality assurance activities, with their root cause analysis, and their corrective actions.

MR. MIRAGLIA: In addition, from a generic point of view, the staff has provided information notices. So, the

industry is aware of this issue and problem. We have met with the three utilities that have experienced these annunciator fires to determine what we can, relative to common cause, and exchange of information to look at what other further actions the staff should be taking with respect to this matter. And that's an on-going activity as well, and Rancho Seco has been a participant in that with the staff.

COMMISSIONER BERNTHAL: Thank you. One last question, and I want to get back again to the owners group assessment. I believe I heard you make a fairly definitive statement that this plant has done more than any other plant. Or, was that the licensee? I can't remember who said that, but somebody here did. All right. If they did, then would you agree with that assessment, and, if so, why?

MR. MIRAGLIA: All right. I think the short answer is, yes, we would agree with that statement. We have been following the B&W owners group for quite some time. There have been 70-plus key recommendations, 200-plus -- And the numbers change as the evaluations are on-going.

Rancho Seco did commit to evaluating each of these. And, in doing that, last year at this time we were concerned about the restart list. What was their criteria for saying what needed to be done for restart and to get agreement on that list.

That criteria was defined and approved by the staff.

The staff included in the list of things to be evaluated all of the items identified by the B&W owners group. They were categorized to that criteria. And the staff and resident staff and inspectors reviewed the judgment against the criteria which was agreed upon in the NRC, which of these items needed to be done prior to restart.

Each of the items, the 200-plus items, were evaluated by the staff, and a determination made that appropriate prioritization and criteria in identifying restart items was done properly.

Tony DiAngelo was a principal in looking at that. Tony might want to add something to that.

MR. DiANGELO: Essentially what we have here is a collection of items, some of which affect clearly safety related components and some of them clearly affect plant reliability. The ones which met their re-start criteria, which is in essence a system that could take the plant -- a failure of the system that could take the plant outside the post-trip window, temperature and pressure, a failure of a system which is tech spec or a failure of a system which would require operator action in the first ten minutes, if it met that criteria, it got included in their list and it has been done for the re-start. If it didn't need it, it was postponed.

MR. MARTIN: I might add that Tony and I reviewed all 215 items again last night to make sure we had the right items

in the right box. I'm pretty confident.

COMMISSIONER BERNTHAL: That was my next question then. When you make the statement that they have done more than any other B&W plant in responding to the owners' group recommendations, does that mean just the number of items checked in the boxes or do you have the sense that qualitatively that is true as well as quantitatively?

MR. MIRAGLIA: Quantitatively with respect to the numbers actually implemented.

COMMISSIONER BERNTHAL: Thank you very much.

CHAIRMAN ZECH: Commissioner Carr? Commissioner Rogers?

COMMISSIONER ROGERS: I think we have heard a great deal here of progress and accomplishment. On the basis of my visit about a month ago out there, I certainly came away with the feeling that not only was that true but that a great deal of credit for the attention to constant improvements in quality has to go to the Regional Administrator, Mr. Martin, and his team. Certainly, one person doesn't do it. I think the leadership that Jack Martin brought to this whole operation from the NRC point of view has been outstanding and I think we just really ought to recognize that.

CHAIRMAN ZECH: Let me just say to the staff, I know you put an awful lot of effort into Rancho Seco. There has been substantial progress, certainly very apparent from what we

have been told today by the licensee as well as by you, the staff.

It is important to me that the commitment of Rancho Seco management, which gives emphasis to the Board of Directors, it is important that they and the whole management team make a true commitment to safety and understand safety is paramount. It is much more than a word. It is an attitude, a commitment, it is real.

People make the difference. It looks like you have focused on people at Rancho Seco. With that, I commend you for the progress you have made. I would only ask the Board to be very active in supervising the plant and monitoring the plant. I would ask Mr. Andognini in particular and the General Manager to keep the Board informed and we expect you to keep the Commission informed on all activities at Rancho Seco.

We know that the diesel engines are still -- the vibration problem is still to be fixed. We understand that could happen very soon. I would charge the staff to monitor that very carefully.

Let me just ask the staff one final time, that is the only issue that is remaining; is that correct?

MR. MURLEY: That is correct.

CHAIRMAN ZECH: Thank you.

I would ask my fellow Commissioners if they are ready to vote today?

[Chorus of yes'.]

CHAIRMAN ZECH: I would call for a vote, based on the fact that the staff will need to know that prerequisite for re-start is satisfied concerning the diesel engine.

COMMISSIONER BERNTHAL: If I could make a comment first.

CHAIRMAN ZECH: Yes, please.

COMMISSIONER BERNTHAL: I am prepared to vote, Mr. Chairman, subject to the condition which you were about to clarify, I think, and subject to the testing that staff indicated it would require for the diesels. I also would like to see an on the record response to any specific issues as opposed to general complaints that were raised in the Union of Concerned Scientists' letter. I think Commissioner Roberts referred to that earlier. Those two things, Mr. Chairman.

CHAIRMAN ZECH: I would add, Dr. Murley, I believe you mentioned earlier the 2206 petition which you intend to resolve prior to re-start. I would like to make sure that you have a commitment to do that.

MR. MURLEY: Yes, I will.

CHAIRMAN ZECH: Based on those prerequisites to re-start of the Rancho Seco plant, all those Commissioners in favor, signify by saying aye.

[Chorus of ayes.]

CHAIRMAN ZECH: Opposed?

[No response.]

CHAIRMAN ZECH: The vote is 5-0. The meeting is adjourned.

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

REPORTER'S CERTIFICATE

This is to certify that the attached events of a meeting of the U.S. Nuclear Regulatory Commission entitled:

TITLE OF MEETING: Discussion/Possible Vote on Rancho Seco Restart
PLACE OF MEETING: Washington, D.C.
DATE OF MEETING: Tuesday, March 22, 1988

were held as herein appears, and that this is the original transcript thereof for the file of the Commission taken stenographically by me, thereafter reduced to typewriting by me or under the direction of the court reporting company, and that the transcript is a true and accurate record of the foregoing events.

Suzanne B. Young

Suzanne B. Young

Ann Riley & Associates, Ltd.

3/22/88

SCHEDULING NOTES

TITLE: DISCUSSION/POSSIBLE VOTE ON RANCHO SECO RESTART

SCHEDULED: 10:00 A.M., TUESDAY, MARCH 22, 1988 (OPEN)

DURATION: APPROX 1-1/2 HRS

PARTICIPANTS: SACRAMENTO MUNICIPAL UTILITY DISTRICT (LICENSEE) 45 MINS

SPEAKERS

- CARL ANDOGNINI
  CHIEF EXECUTIVE OFFICER, NUCLEAR

- CLIFFORD WILCOX, PRESIDENT
  BOARD OF DIRECTORS

  - ANN TAYLOR, BOARD MEMBER
  - JOHN KEHOE, BOARD MEMBER
  - ED SMELOFF, BOARD MEMBER

- RICHARD BYRNE, GENERAL MANAGER

- JOSEPH FIRLIT
  ASSISTANT GENERAL MANAGER
  NUCLEAR POWER PRODUCTION

- JIM SHETLER, DIRECTOR
  SYSTEMS REVIEW AND TEST PROGRAM

- DAN KEUTER, DIRECTOR
  NUCLEAR OPERATIONS AND MAINTENANCE

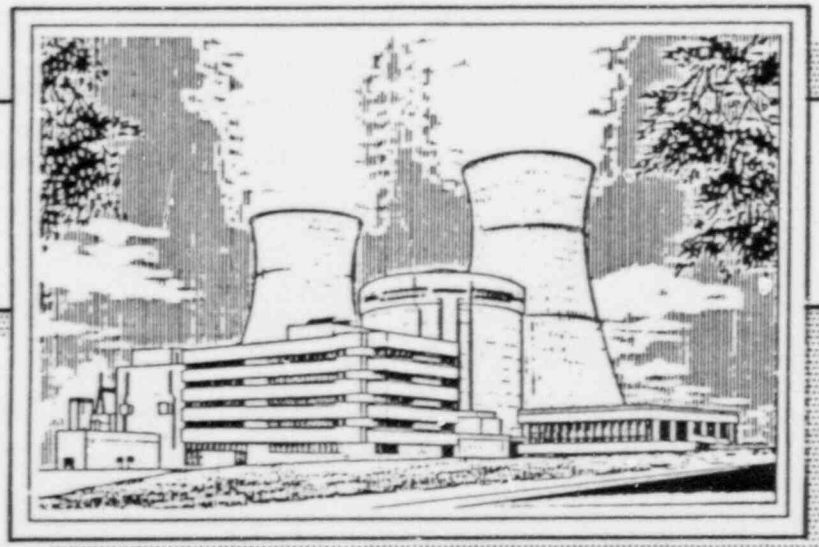
- JOHN VINQUIST, DIRECTOR
  NUCLEAR QUALITY

(NOTE: CORT KOEHLER, BOARD VICE PRESIDENT, IS UNABLE TO ATTEND DUE TO SCHEDULE CONFLICT.)

NRC 15 MINS

- JAMES TAYLOR, EDO
- JACK MARTIN, REGION V
- THOMAS MURLEY, NRR
- GEORGE KALMAN, NRR

RANCHO SECO
NUCLEAR GENERATING STATION



NUCLEAR REGULATORY COMMISSION RESTART MEETING

MARCH 22, 1988

SMUD

SACRAMENTO MUNICIPAL UTILITY DISTRICT

AGENDA

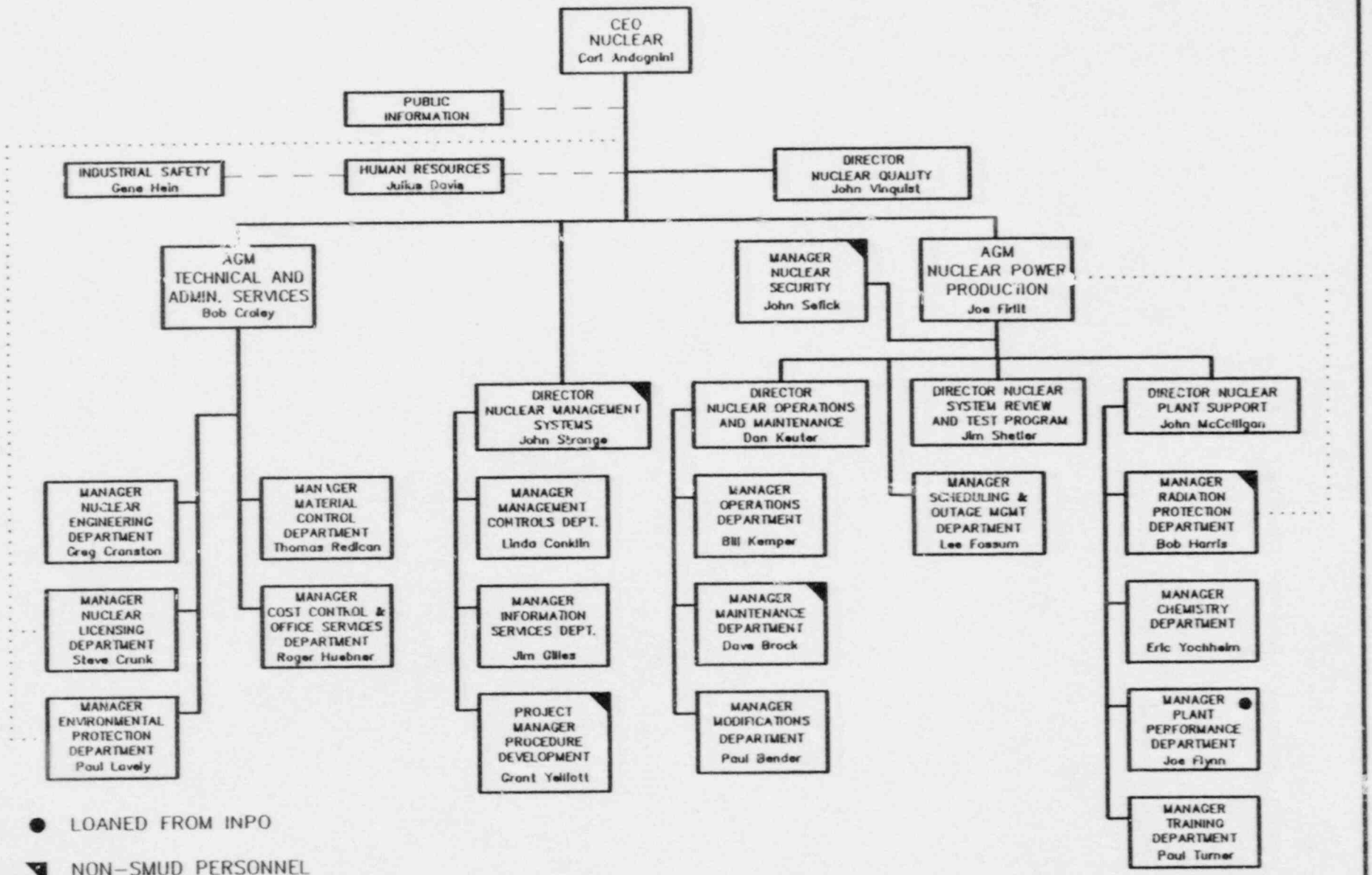
- INTRODUCTION ..... CLIFF WILCOX
- OVERVIEW ..... CARL ANDOGNINI
- MAJOR ACCOMPLISHMENTS ..... JOE FIRLIT
- INTEGRATED TEST PROGRAM ..... JIM SHETLER
- OPERATIONS AND MAINTENANCE READINESS ..... DAN KEUTER
- QUALITY READINESS ..... JOHN VINQUIST
- SITE OPERATIONAL READINESS ..... JOE FIRLIT
- CONCLUSION ..... CARL ANDOGNINI
- BOARD OF DIRECTORS AND GENERAL MANAGER
- COMMISSION QUESTIONS/COMMENTS

OVERVIEW

CARL ANDOGNINI

CEO, NUCLEAR

RANCHO SECO ORGANIZATION



MAJOR ACCOMPLISHMENTS

JOE FIRLIT

ASSISTANT GENERAL MANAGER
NUCLEAR POWER PRODUCTION

MAJOR ACCOMPLISHMENTS (CONT.)

- COMPLETED REFURBISHMENT AND TESTING OF 170 MOTOR OPERATED VALVES
- REDUCED CORRECTIVE MAINTENANCE BACKLOG FROM ABOUT 5000 TO LESS THAN 1000
- SIGNIFICANTLY IMPROVED RADIOLOGICAL CONDITIONS IN THE PLANT
- INSTALLED STATE OF THE ART EQUIPMENT FOR PERSONNEL RADIATION MONITORING
- MAINTAINED VOLUME OF LOW LEVEL RADIOACTIVE WASTE BELOW BOTH THE PLANT GOAL AND INPO 1990 GOAL

MAJOR ACCOMPLISHMENTS (CONT.)

PROGRAMS

- DEVELOPED DEPARTMENT ACTION PLANS FOR CONTINUING PLANT IMPROVEMENTS
- IMPLEMENTED MANAGEMENT OBSERVATION PROGRAM
- DEVELOPED SITE-WIDE INTEGRATED MANAGEMENT SYSTEMS PROGRAM
- UPGRADED THE QUALITY ASSURANCE PROGRAM
- COMPLETED OVER 170 QUALITY SURVEILLANCES IN 1988
- INITIATED A QUALITY CONTROL FIELD INSPECTION PROGRAM

MAJOR ACCOMPLISHMENTS (CONT.)

- IMPLEMENTED A PLANT IMPROVEMENT PROGRAM TO UPGRADE PLANT MATERIAL CONDITION
- DEVELOPED AND IMPLEMENTED A PREVENTIVE MAINTENANCE PROGRAM
- DEVELOPED AND IMPLEMENTED A COMPUTERIZED SURVEILLANCE SCHEDULING PROGRAM
- UPGRADED ALL SURVEILLANCE PROCEDURES FOR POWER OPERATION
- UPGRADED ALL EMERGENCY OPERATING AND CASUALITY PROCEDURES
- IMPLEMENTED A HAZARDOUS MATERIAL/ WASTE PROGRAM

MAJOR ACCOMPLISHMENTS (CONT.)

- STRENGTHENED INDUSTRIAL SAFETY PROGRAM AND PROVIDED 24 HOUR MEDICAL COVERAGE
- MAINTAINED PERSONNEL RADIATION EXPOSURE BELOW BOTH THE PLANT GOAL AND THE MEDIAN REPORTED BY INPO
- DEVELOPED EXTENSIVE POWER ESCALATION PROGRAM FOR TESTING AND ENHANCED PERSONNEL TRAINING
- DEVELOPED A FORCED OUTAGE SCHEDULE PROCESS
- DEVELOPED AND INITIATED IMPLEMENTATION OF A LONG RANGE SCHEDULE PLAN (5 YEARS)

MAJOR ACCOMPLISHMENTS (CONT.)

- B&W OWNERS GROUP SAFETY AND PERFORMANCE IMPROVEMENT PROGRAM (SPIP)
  - –REVIEWED ALL ITEMS FOR RANCHO SECO APPLICABILITY
  - –B&WOG AUDIT – FAVORABLE RESULTS
- NUREG–1275 (RECENT NEW PLANT STARTUP EXPERIENCES)
  - –AEOD EVALUATION – APPEARED SATISFIED (NO RESTART CONCERNS)
- EXTERNAL INDEPENDENT EVALUATIONS FOR READINESS
  - –OPERATIONAL READINESS REVIEW COMMITTEE
  - –NUCLEAR ADVISORY COMMITTEE
  - –ANI
  - –INPO
  - –NRC

INTEGRATED TEST PROGRAM

JIM SHETLER
DIRECTOR
NUCLEAR SYSTEM REVIEW AND TEST PROGRAM

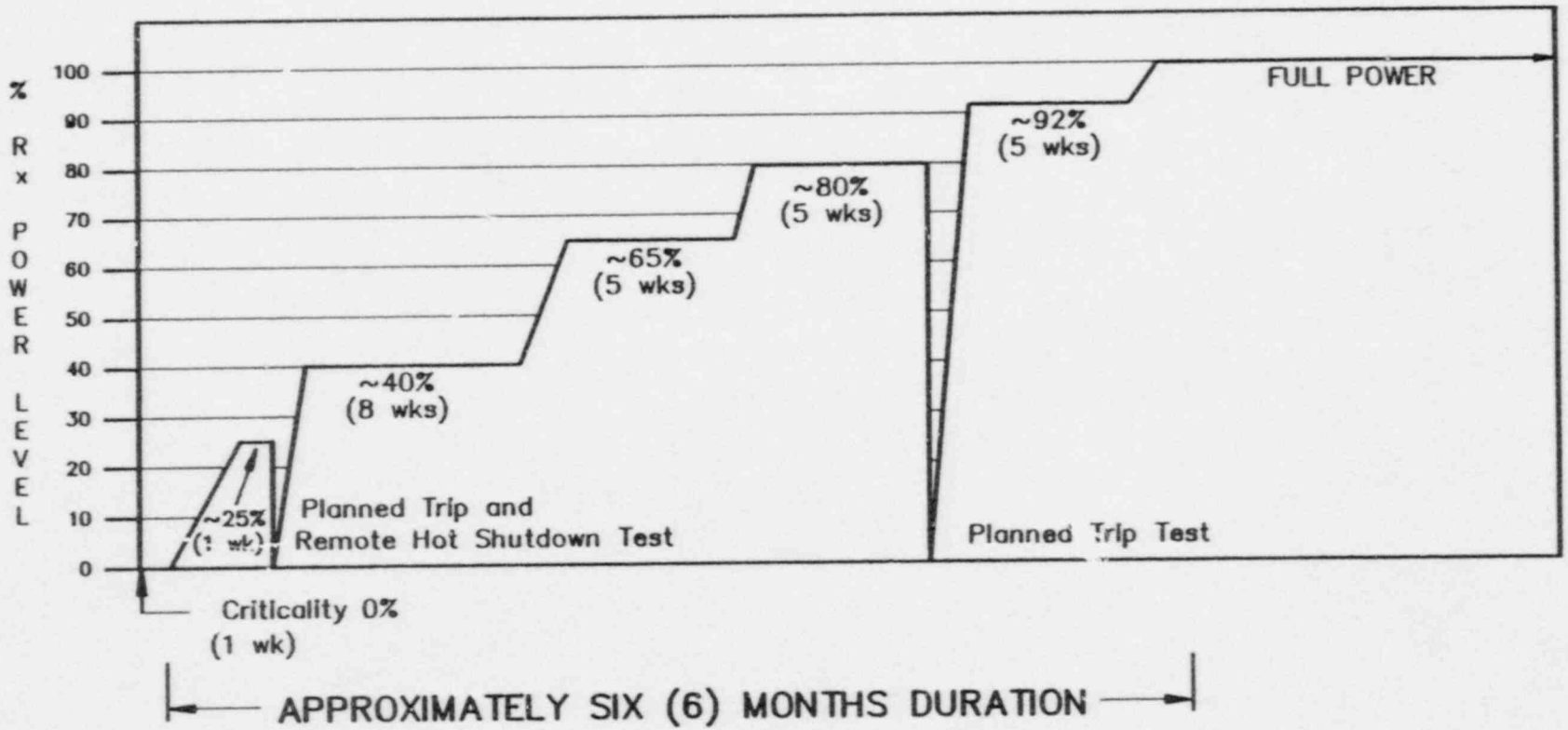
TESTING GOALS

- COMPONENT TESTING
- SYSTEM FUNCTIONAL TESTING
- PLANT INTEGRATED TESTING

PHASES OF INTEGRATED TESTING

- **COLD SHUTDOWN (COMPLETED)**
  - VERIFY COMPONENT AND SYSTEM OPERABILITY
  - VERIFY SYSTEM RESPONSES WITH INTEGRATED TESTS
- **HOT SHUTDOWN USING REACTOR COOLANT PUMP HEAT (COMPLETED)**
  - VERIFY SYSTEM FUNCTIONS/OPERABILITY
  - VERIFY SYSTEM RESPONSES WITH INTEGRATED TESTS
- **POWER ASCENSION**
  - FINAL SYSTEM TESTING
  - CONDUCTED AT VARIOUS POWER LEVELS

POWER ASCENSION TESTING



TRANSITION TO LONG TERM ORGANIZATION

- PERMANENT GROUP OF SYSTEM ENGINEERS UNDER PLANT PERFORMANCE DEPARTMENT
- KEY TEST ENGINEERS ROLLOVER TO SYSTEM ENGINEERS
- TEST KNOWLEDGE RETAINED FOR LONG TERM

CONCLUSIONS

- ACHIEVED TESTING REQUIREMENTS AND GOALS FOR STARTUP
- TESTED PEOPLE/PROCEDURES/PROGRAMS
- IMPLEMENTED MOST EXTENSIVE INDUSTRY RESTART TEST PROGRAM
  - SIMILAR TO NEW PLANT STARTUP
  - AWARDED INPO GOOD PRACTICE
- TRANSITIONING KNOWLEDGE TO LONG TERM ORGANIZATION

OPERATIONS AND MAINTENANCE READINESS

DAN KEUTER

DIRECTOR

NUCLEAR OPERATIONS AND MAINTENANCE

OPERATIONS
ORGANIZATION AND RESOURCE IMPROVEMENTS

- STABILIZED OPERATIONS ORGANIZATION WITH A TOTAL OF 106 PEOPLE
- POSITIONS FILLED WITH SMUD EMPLOYEES
- STAFFED FOR 6 CREW ROTATION WITH 12 PEOPLE/CREW
  - 1 SHIFT SUPERVISOR
  - 2 ASSISTANT SHIFT SUPERVISORS
  - 3 CONTROL ROOM OPERATORS
  - 6 EQUIPMENT OPERATORS
- CURRENTLY OPERATING WITH A 5 CREW ROTATION WITH 14 PEOPLE/CREW
- INCREASED SUPPORT STAFF SIZE TO REDUCE ON-SHIFT ADMINISTRATIVE WORKLOAD

OPERATOR TRAINING IMPROVEMENTS

- INPO ACCREDITED ALL OPERATOR TRAINING PROGRAMS INCLUDING THE SHIFT TECHNICAL ADVISOR TRAINING PROGRAM
- COMPLETED 240 HOURS OF SIMULATOR TRAINING PER LICENSED OPERATOR – EVALUATED BY MANAGEMENT AND INPO
- CONDUCTED OVER 400 HOURS OF MODIFICATION TRAINING PER LICENSED OPERATOR
- REPEATED SIGNIFICANT TESTS FOR TRAINING
- ALL LICENSED OPERATORS EXAMINED BY THE NRC IN THE LAST TWO YEARS

OPERATOR INVOLVEMENT DURING TESTING

- TESTING ACTION PLANS
  - OPERATORS COMMAND AND CONTROL TESTING
  - DETAILED PROCEDURE REVIEWS
  - DETAILED CREW BRIEFING BEFORE TESTS
- OBTAIN BENEFIT FROM TESTING EXPERIENCE

OPERATIONS PERSONNEL IMPROVEMENTS

- OPERATIONS ACTION PLAN
  - GOAL–REDUCE PERSONNEL ERRORS
  - DEVELOPED BY SHIFT SUPERVISORS AND ASSISTANTS
  - ADDRESSES ROOT CAUSES AND ACTIONS
  - LIVING DOCUMENT
- OPERATIONS PROGRAM SELF–EVALUATION – BASED ON INPO CRITERIA

OPERATING PROCEDURES READINESS

PRIOR TO STARTUP

- REVISED EMERGENCY OPERATING AND CASUALITY PROCEDURES
  - 1985 EVENT LESSONS LEARNED
  - LATEST B&W TECHNICAL BASIS DOCUMENT GUIDELINES
  - PLANT MODIFICATIONS
- REVISED SYSTEM/PLANT OPERATING PROCEDURES FOR PLANT MODIFICATIONS

AFTER STARTUP

- COMPLETE UPGRADE OF SYSTEM/PLANT OPERATING PROCEDURES

CONTROL OF PLANT HEATUP AND OPERATING PROCEDURE FOR POWER ESCALATION TESTING – B.1A

- **INTEGRATED CONTROLLING DOCUMENT FOR STARTUP AND TESTING**
  - TEST PROCEDURES
  - NORMAL PLANT OPERATING PROCEDURES
- **MANAGEMENT APPROVALS**
  - DEPARTMENT MANAGERS
  - DIRECTORS
  - SAFETY REVIEW BOARDS
  - ASSISTANT GENERAL MANAGERS
  - CEO NUCLEAR
- **MANAGEMENT HOLD AND REVIEW POINTS**
  - HEATUP
  - REACTOR STARTUP
  - 25%
  - 40%
  - 65%
  - 80%
  - 92%

MAINTENANCE
ORGANIZATION AND RESOURCE IMPROVEMENTS

- DISCIPLINE/FUNCTIONAL MATRIX STRUCTURE
  - BETTER SUPERVISION
  - BETTER PROGRAMS/PROJECT
  - BETTER PLANNING
- MINIMIZE LAYERS OF MANAGEMENT TO IMPROVE:
  - COMMUNICATION
  - ACCOUNTABILITY
- ADEQUATE PERSONNEL
  - 56 MECHANICAL MAINTENANCE
  - 39 ELECTRICIANS
  - 20 UTILITY WORKERS
  - 44 I & C TECHNICIANS
  - 24 MAINTENANCE ENGINEERS
  - 8 ELECTRICAL TECHNICIANS

MAINTENANCE PERSONNEL IMPROVEMENT

- PROCEDURAL ADHERENCE
- JOB BRIEFING, CRITIQUES AND TURNOVERS
- MANAGEMENT OBSERVATION PROGRAM
- RESTART PERSONNEL QUALIFICATION GUIDE
- QUALITY FIELD INSPECTION CHECKLISTS
- IMPROVED TRAINING PROGRAMS

MAINTENANCE PROGRAM IMPROVEMENT

- IMPLEMENTED NEW PROGRAMS BASED ON 13 NEW MAINTENANCE ADMINISTRATIVE PROCEDURES
- IMPLEMENTED AUTOMATED WORK CONTROL SYSTEM "NUCLE'S"
- IMPLEMENTED OPERATION REVIEWS AND PRIORITIZATION
- IMPLEMENTED DETAILED CENTRALIZED PLANNING
- IMPLEMENTED QUALITY REVIEW OF WORK REQUESTS BEFORE AND AFTER
- INCREASED USE OF QUALITY CONTROL HOLD POINTS
- IMPLEMENTED INTEGRATED SCHEDULING OF CORRECTIVE MAINTENANCE, PREVENTIVE MAINTENANCE, AND SURVEILLANCE ACTIVITIES
- INCREASED FIRST LINE SUPERVISORS IN FIELD
- IMPROVED WORK DOCUMENTATION AND TRACKING
- IMPLEMENTED CAUSE DETERMINATION
- IMPLEMENTED MANAGEMENT OBSERVATION PROGRAM
- MAINTENANCE SELF EVALUATION

PREVENTIVE/PREDICTIVE MAINTENANCE

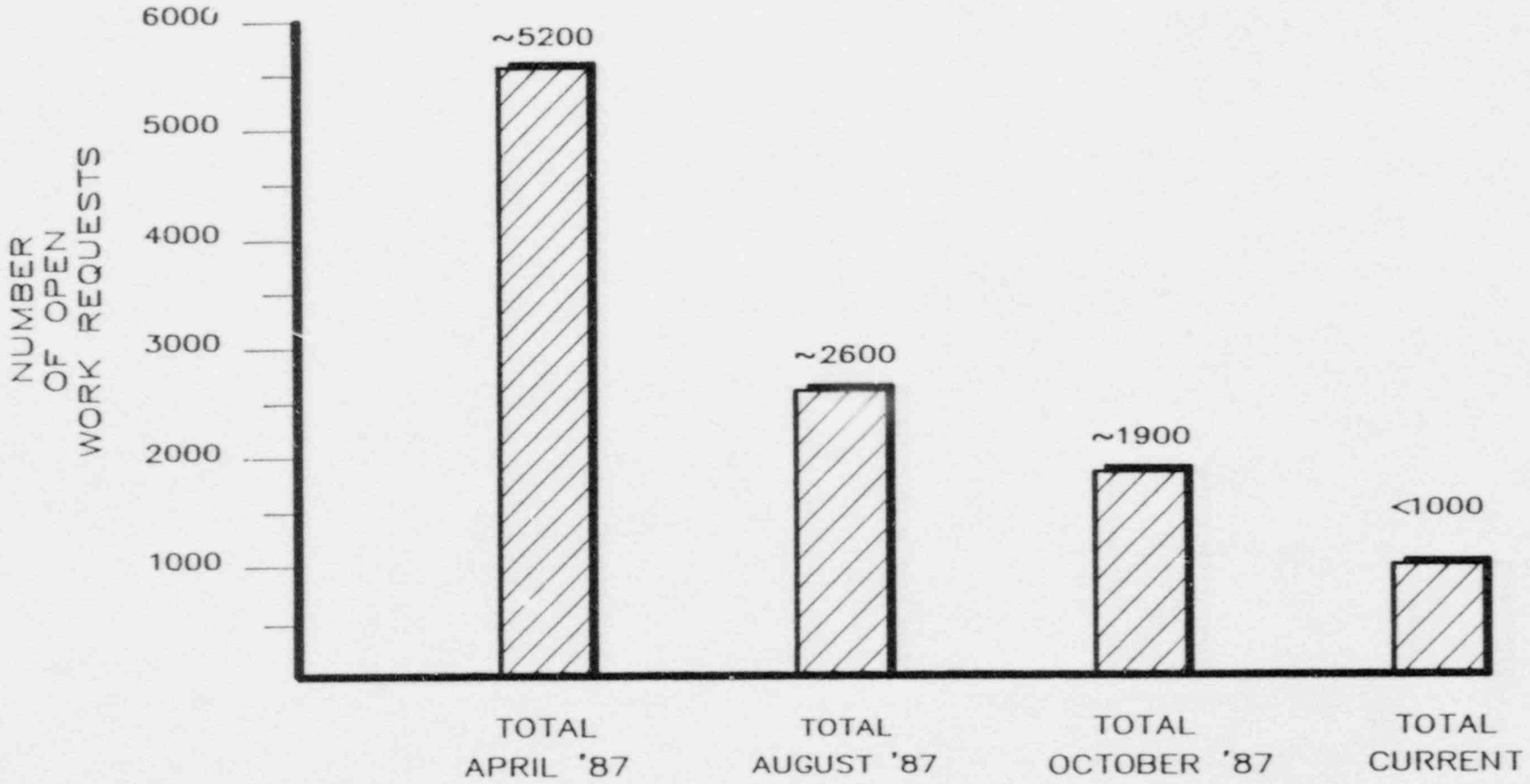
- CURRENTLY ~25%, GOAL IS ~50%
- PROGRAM DEVELOPED BASED ON:
  - INPO GOOD PRACTICE MA-307 "PREVENTIVE MAINTENANCE"
  - INPO GUIDELINE 85-038 "GUIDELINES FOR THE CONDUCT OF MAINTENANCE"
  - EPRI NP-3 "GUIDE FOR DEVELOPING PREVENTIVE MAINTENANCE PROGRAMS"
- PRIORITIZED PREVENTIVE MAINTENANCE - BASED ON PLANT SAFETY
- COMPLETED PREVENTIVE MAINTENANCE ON EQUIPMENT IMPORTANT TO SAFETY

CORRECTIVE MAINTENANCE IMPROVEMENTS

- WORK REQUEST (WR) BACKLOG
- CRITERIA USED TO DETERMINE RESTART PRIORITY FOR WRs
  - –PLANT SAFETY
  - –PERSONNEL SAFETY
  - –PLANT RELIABILITY
- AROUND THE CLOCK MAINTENANCE SHIFT COVERAGE

WORK REQUEST STATUS

(COMPLETED A TOTAL OF ~30,000 WORK REQUESTS)



QUALITY READINESS

JOHN VINQUIST
DIRECTOR
NUCLEAR QUALITY

QUALITY READINESS

READINESS OF THE QUALITY ORGANIZATION

- PEOPLE
  - INCREASED SMUD STAFF
  - QUALIFIED
  - MULTIDISCIPLINED (SRO/RO, CHEMISTRY, HEALTH PHYSICS, MAINTENANCE, ENGINEERING, CONSTRUCTION, ETC.)
  - REINFORCED INDEPENDENCE
- PROGRAM
  - NEW QUALITY PROGRAM MANUAL
  - INCREASED AUDIT AND SURVEILLANCE ACTIVITIES
  - EXPANDED QC INVOLVEMENT
  - STRENGTHENED QE TECHNICAL INVOLVEMENT AND INTERFACE
  - STRENGTHENED CORRECTIVE ACTION PROGRAM
- STRUCTURE
  - REPORTS TO CEO–NUCLEAR
  - STRUCTURE DEFINED (QA, QC, QE)
  - SINGLE POINT ACCOUNTABILITY ASSIGNED

SITE OPERATIONAL READINESS

JOE FIRLIT
ASSISTANT GENERAL MANAGER
NUCLEAR POWER PRODUCTION

PEOPLE

- STRUCTURED A NEW MANAGEMENT TEAM
- CLEARLY DEFINED RESPONSIBILITY AND SINGLE POINT ACCOUNTABILITY
- DEVELOPED AND IMPLEMENTED DEPARTMENT MANAGEMENT PLANS FOR PERSONNEL READINESS
- REDUCED RELIANCE ON CONTRACTORS FROM APPROXIMATELY 1700 TO 700
- IMPLEMENTED AN EXTENSIVE TRAINING PROGRAM INCORPORATING INPO GUIDANCE

PEOPLE (CONT)

- INCREASED AWARENESS FOR RADIATION PROTECTION PROGRAM
- IMPLEMENTED AN EFFECTIVE EMPLOYEE FITNESS FOR DUTY PROGRAM
- DEMONSTRATED QUALITY PERFORMANCE OF PERSONNEL TO EVENTS (E.G., ANNUNCIATOR FIRE, RELIEF VALVE)

SENIOR MANAGEMENT EXPERIENCE

NAME & TITLE	LICENSES	UTILITY EXPERIENCE (YEARS) NUCLEAR	NON-NUCLEAR
CARL ANDOGNINI CEO NUCLEAR	RO	30	0
JOE FIRLIT AGM, NUCLEAR POWER PRODUCTION	–	12	10
BOB CROLEY AGM, TECHNICAL AND ADMIN. SERVICES, ACTING	SRO Cert.	20	0
JOHN VINQUIST DIRECTOR NUCLEAR QUALITY	SRO	14	5
JOHN McCOLLIGAN DIRECTOR PLANT SUPPORT	SRO	27	0
DAN KEUTER DIRECTOR NUCLEAR OPERATIONS AND MAINTENANCE	SRO	14	0
JIM SHETLER DIRECTOR SYSTEM REVIEW AND TEST PROGRAM	–	16	0

PERSONNEL QUALIFICATION PROGRAM

- EVALUATE PEOPLE AT:
  - HOT SHUTDOWN
  - CRITICALITY
  - 25% - 80%
  - 40% - 92%
  - 65%
- DEPARTMENTS INCLUDED:
  - OPERATIONS
  - MAINTENANCE
  - CHEMISTRY
  - RADIATION PROTECTION
  - SYSTEM TEST (ENGINEERING)
- IDENTIFIES SPECIFIC QUALIFICATION TASKS
- MANAGEMENT ASSESSMENTS
- UTILIZE TEST ACTIVITIES TO GAIN EXPERIENCE

MOTIVATION AND COMMITMENT

- DEPARTMENTAL ACTION PLANS ADDRESSING NEW ATTITUDES TOWARD ACHIEVING EXCELLENCE:
  - SAFETY
  - TEAM WORK
  - SELF CRITICAL
  - NON-DEFENSIVE
  - QUESTIONING
  - SUPERVISORS RESPONSIBLE FOR THEIR PEOPLE
  - LOOK AHEAD AND PLANNING
  - PROFESSIONAL
  - QUALITY
- LIVING DOCUMENTS DEVELOPED BY SUPERVISORS

CONCLUSION

CARL ANDOGNINI
CEO, NUCLEAR

HOW DOES CARL ANDOGNINI KNOW
THAT RANCHO SECO IS READY
FOR RESTART?

IS THE PLANT READY?

ARE THE PEOPLE READY?

THE PLANT IS READY

- WE IDENTIFIED THE PROBLEMS
- WE HAVE FIXED ALL PROBLEMS REQUIRED FOR SAFE OPERATION
- WE HAVE COMPLETED AN EXHAUSTIVE PRE-RESTART TEST PROGRAM
- RESULT – THE PLANT IS IN BETTER CONDITION THAN IT EVER HAS BEEN

THE PEOPLE ARE READY

- SOUND ORGANIZATIONAL STRUCTURE
- EXPERIENCED MANAGEMENT
- IMPROVED MANAGEMENT SYSTEMS
- EFFECTIVE TRAINING
- GOOD PROCEDURES
- SINGLE POINT ACCOUNTABILITY
- QUALITY ASSURANCE PROGRAM DIRECTED TOWARD PERFORMANCE

WHY IS CARL ANDOGNINI CONFIDENT THAT THE PLANT AND THE PEOPLE ARE READY?

- INDEPENDENT ASSESSMENTS
- TEST PROGRAM COMPLETED
- POWER ASCENSION PROGRAM
- PERSONAL INVOLVEMENT

RANCHO SECO IS READY
FOR SAFE OPERATION...

THE HEALTH AND SAFETY
OF THE PUBLIC IS ASSURED

RANCHO SECO

COMMISSION MEETING

MARCH 22, 1988

G. KALMAN

NRC STAFF BRIEFING
for
RANCHO SECO RESTART

AGENDA

INTRODUCTION (Director ONRR, Dr. T. E. Murley)

NRC STAFF EVALUATION (Project Manager, George Kalman)
- Safety Evaluation Report, NUREG 1286
- B&W Safety and Performance Improvement Program (SPIP)

OPERATIONAL READINESS (Regional Administrator, J. B. Martin)
- Systems Review
- Systems Readiness
- Management Readiness
- Functional Testing and Verification
- Deliberate Power Escalation Program

CONCLUSIONS (Director ONRR, Dr. T. E. Murley)

NRC STAFF EVALUATION OF SMUD RESTART PROGRAM

- NRC STAFF PERFORMED DETAILED REVIEW OF RANCHO SECO PERFORMANCE IMPROVEMENTS
- NRC EVALUATIONS DOCUMENTED IN RESTART SER, NUREG–1286, AND RELATED INSPECTION REPORTS
- SCOPE OF ORIGINAL PERFORMANCE IMPROVEMENT PLAN SIGNIFICANTLY EXPANDED BY NRC STAFF INPUT
- VERIFICATION OF IMPROVEMENT ACTIONS ASCERTAINED BY:
  - REGIONAL INSPECTIONS
  - ONSITE MONITORING/INSPECTION OF SYSTEM REVIEW & TEST
  - OPERATIONAL READINESS INSPECTION

B&W SAFETY AND PERFORMANCE IMPROVEMENT PROGRAM (SPIP)

- SPIP INITIATED JANUARY 1986
- SPIP CONSTITUTES INDEPENDENT EVALUATION/RECOMMENDATIONS
- SPIP RECOMMENDATIONS INCORPORATED INTO RANCHO SECO PERFORMANCE IMPROVEMENT

SYSTEMS REVIEW

SYSTEMS HAVE BEEN REVIEWED TO IDENTIFY NEEDED IMPROVEMENTS AND NECESSARY UPGRADES.

- 33 SELECTED SYSTEMS REVIEWED
- NRC ASTRP REVIEW OF FIVE SYSTEMS
- SMUD EASTRP REVIEW OF 33 SELECTED SYSTEMS

SYSTEMS READINESS

SYSTEMS HAVE BEEN UPGRADED AND PLACED IN A HIGH STATE OF MATERIAL READINESS TO PERFORM THEIR INTENDED FUNCTIONS.

- ALL 33 SELECTED SYSTEMS
- IMPROVED PROGRAM FOR CORRECTIVE AND PREVENTATIVE MAINTENANCE
- REDUCED MATERIAL WORK BACKLOG
- MAJOR MODIFICATIONS – PASS, EFIC, ICS, TDI
- MAJOR SYSTEMS OVERHAULED – BATTERIES, MOTOR OPERATED VALVES, CONTROL ROOM HVAC

MANAGEMENT READINESS

A SMUD OPERATING AND MANAGEMENT TEAM IS IN PLACE WITH A RECORD OF SUCCESSFUL CONDUCT OF RESTART READINESS ACTIVITIES.

- MANAGEMENT AND ORGANIZATIONAL CAPABILITY HAVE BEEN REVISED AND IMPROVED
- QA ORGANIZATION HAS BEEN IMPROVED AND STAFFED
- MAINTENANCE ORGANIZATION HAS BEEN IMPROVED AND STAFFED
- EMERGENCY PREPAREDNESS ORGANIZATION HAS BEEN IMPROVED AND STAFFED
- OPERATORS HAVE RECEIVED EXTENSIVE CLASSROOM AND SIMULATOR TRAINING
- MAINTENANCE AND OPERATIONAL PROCEDURES HAVE BEEN IMPROVED
- TECHNICAL SPECIFICATIONS HAVE BEEN ENHANCED AND IMPROVED
- INCREASED USE OF ROOT CAUSE APPROACH TO PROBLEM RESOLUTION

FUNCTIONAL TESTING & VERIFICATION

SYSTEMS HAVE BEEN TESTED AND VERIFIED CAPABLE OF RELIABLY PERFORMING THEIR INTENDED FUNCTIONS.

- TEST PROGRAM ESSENTIALLY EQUIVALENT TO NTOL PREOPERATIONAL TEST PROGRAM
- EXTENSIVE INTEGRATED FUNCTIONAL TEST PROGRAM BEING SUCCESSFULLY CONDUCTED
- MAJOR TESTS COMPLETED – COLD HYDRO, TDI, CILRT, EFIC LOGIC TESTING, LOOP, CABLE ROUTING VERIFICATION, MOV FUNCTIONAL TESTING ON IMPORTANT VALVES, CR HVAC
- MAJOR TESTING PLANNED – HFT, REMOTE SHUTDOWN SYSTEM, LOSS OF ICS/NNI, EFIC HFT

DELIBERATE POWER ESCALATION PROGRAM

A CAREFUL, DELIBERATE POWER ESCALATION PROGRAM IS PLANNED TO ASSURE THAT SYSTEMS AND PERSONNEL ARE FULLY TESTED TO ASSURE SAFE AND RELIABLE PERFORMANCE.

- TEST PROGRAM EXTENDS OVER SIX MONTHS
- POWER WILL BE INCREASED THROUGH SEVERAL PLATEAUS
- EACH CREW WILL ACHIEVE AT LEAST ONE WEEK EXPERIENCE AT EACH PLATEAU
- POWER ESCALATION WILL BE MONITORED CLOSELY BY NRC TEAM
- TESTING WILL INCLUDE REACTOR TRIPS AT 25% AND 90% POWER TO ASSESS SYSTEM RESPONSE
- REMOTE SHUTDOWN SYSTEM TESTING WILL BE PERFORMED

CONCLUSIONS

1. LICENSEE HAS CORRECTED PLANT MANAGEMENT AND DESIGN DEFICIENCIES IDENTIFIED DURING OVERCOOLING EVENT.

2. LICENSEE HAS CORRECTED THE ADDITIONAL DEFICIENCIES IDENTIFIED.

3. LICENSEE HAS DEMONSTRATED OPERATIONAL READINESS.

THE STAFF RECOMMENDS:

AUTHORIZATION OF RANCHO SECO RESTART.

TRANSMITTAL TO: X Document Control Desk, 016 Phillips

ADVANCED COPY TO: _____ The Public Document Room

DATE: 3/24/88

FROM: SECY Correspondence & Records Branch

Attached are copies of a Commission meeting transcript and related meeting document(s). They are being forwarded for entry on the Daily Accession List and placement in the Public Document Room. No other distribution is requested or required.

Meeting Title: dis/Pass Vote on Rancho Seco Restart

Meeting Date: 3/22/88 Open X Closed _____

Item Description*:	Copies Advanced to PDR	DCS Copy
1. TRANSCRIPT w/scheduling notes + viewgraphs	1	1
2. _____	___	___
3. _____	___	___
4. _____	___	___
5. _____	___	___
6. _____	___	___

* PDR is advanced one copy of each document, two of each SECY paper. C&R Branch files the original transcript, with attachments, without SECY papers.

4/86