

ORIGINAL

**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

- 1
- 2
- 3
- 4
- 5
- 6
- 7
- 8
- 9
- 10
- 11
- 12
- 13
- 14
- 15
- 16
- 17
- 18
- 19
- 20
- 21
- 22
- 23
- 24
- 25

13
14
15
16
17
18
19
20
21

22
23
24
25

1 UNITED STATES OF AMERICA

2 NUCLEAR REGULATORY COMMISSION

3 DISCUSSION/POSSIBLE VOTE ON RANCHO SECO RESTART

4 * * *

5 Public Meeting

6 * * *

7
8 Nuclear Regulatory Commission

9 1717 H Street, N.W.

10 Washington, D.C.

11 Tuesday, March 22, 1988

12
13 The Commission met, pursuant to Notice, at

14 10:00 a.m.

15
16 COMMISSIONERS PRESENT:

17
18 LANDO W. ZECH, JR., Chairman of the Commission

19 THOMAS M. ROBERTS, Commissioner

20 FREDERICK M. BERNTHAL, Commissioner

21 KENNETH M. CARR, Commissioner

22 KENNETH C. ROGERS, Commissioner

23

24

25

1 NRC STAFF AND PRESENTERS SEATED AT COMMISSION TABLE:

2

3	S. Chilk	W. Parler
4	C. Wilcox	C. Andognini
5	A. Taylor	E. Smeloff
6	R. Byrne	J. Kehoe
7	J. Firlit	D. Keuter
8	J. Vinguist	J. Shetler
9	J. Taylor	T. Murley
10	F. Miraglia	J. Martin
11	T. DiAngelo	G. Kalman

12

13 AUDIENCE SPEAKERS:

14

15 G. Holahan

16

17

18

* * * * *

19

20

21

22

23

24

25

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

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

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

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

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

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

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

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

7 CHAIRMAN ZECH: Any other comments?

8 [No response.]

9 All right, Mr. Wilcox, you may begin.

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

21 CHAIRMAN ZECH: Mr. Wilcox, you may begin.

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

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

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

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

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

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

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

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

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

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

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

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

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

1 unacceptable economic risk to the District and the community.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

25 Clearly the SMUD Board is putting forward two

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

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

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

25 Prior to the adoption of this ordinance, the Board of

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

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

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

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

25 Finally, the most flawed part of the Rancho Seco

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

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

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

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

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

13 Thank you.

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

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

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

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

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

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

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

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

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

1 of that commitment to excellence.

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

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

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

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

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

21 CHAIRMAN ZECH: Thank you very much.

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

24 CHAIRMAN ZECH: Yes, please.

25 MS. TAYLOR: Chairman Zech and Commissioners, the

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

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

8 Mr. Solomon Levy, a distinguished member of the
9 American Nuclear Society, a member of the oversight committee
10 for four nuclear power plants and who has published more than
11 50 technical papers, was assigned the review of the following
12 areas of safety: cable separation, engineering action plan,
13 and quality vertical audit. As a member of the Operational
14 Readiness Review Committee, Mr. Levy joined his fellow
15 committee members in concluding that Rancho Seco is ready for a
16 safe restart.

17 Reliability is the key to safety. If you will refer
18 to the report, "Future Plant Capacity Factor Engineering
19 Assessments," dated February 24, 1988, I am sure you will
20 concur that the corrective action should ensure better
21 capacity, and with these plant improvements, capacity could
22 conceivably attain 72 to 84 percent. With that in mind, your
23 50 percent lower level is not an unattainable or exorbitant
24 figure.

25 Preventative maintenance program verification has

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

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

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

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

20 CHAIRMAN ZECH: Thank you.

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

25 CHAIRMAN ZECH: He has indeed and I appreciate the

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

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

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

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

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

25 I want to point out strongly that the QUEST report

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

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

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

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

12 COMMISSIONER BERNTHAL: Thank you.

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

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

25 It was mentioned earlier by President Wilcox that the

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

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

17 That concludes my remarks.

18 CHAIRMAN ZECH: All right, thank you very much.

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

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

24 MR. WILCOX: Yes, sir.

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

1 are there questions from my fellow Commissioners of the Board?

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

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

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

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

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

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

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

5 CHAIRMAN ZECH: Commissioner Bernthal?

6 COMMISSIONER BERNTHAL: Well, I'm just wondering.

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

18 MR. ANDOGNINI: I can commit to you, Commissioner,
19 that the funds are there, and I can commit to you that we will
20 do what we intended to do whether it's an 18-month cycle or an
21 18-year cycle -- put safety first and put in the modifications
22 that we have intended to do, regardless of how long the plant
23 operates.

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

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

2 MR. ANDOGNINI: Nothing has been deferred, sir.

3 There has been no work activities at all been deferred and no
4 expenditures have been deferred. I have gotten no direction
5 from the Board to attempt to do that, either.

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

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

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

14 COMMISSIONER BERNTHAL: Okay.

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

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

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

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

3 MR. SMELOFF: Let me explain my position.

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

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

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

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

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

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

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

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

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

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

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

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

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

25 Both advisory committees were fully authorized by the

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1 based my decision on.

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

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

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

22 COMMISSIONER BERNTHAL: Thank you very much.

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

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

13 COMMISSIONER BERNTHAL: Well, I appreciate that.

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

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

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

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

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

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

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

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

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

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

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

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

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

1 MR. WILCOX: I hope so.

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

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

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

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

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

3 I thank you very much.

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

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

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

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

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

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

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

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

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

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

15 CHAIRMAN ZECH: Yes, please. Go ahead.

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

19 MR. WILCOX: That's correct.

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

22 MR. WILCOX: You mean one votes to shut down and one
23 --

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

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

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

6 [Laughter.]

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

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

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

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

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

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

23 CHAIRMAN ZECH: All right. Anything else?

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

1 understand.

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

4 MS. TAYLOR: No, sir.

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

10 COMMISSIONER ROBERTS: It is staggered.

11 MS. TAYLOR: Yes, sir.

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

14 MS. TAYLOR: No, sir.

15 COMMISSIONER ROBERTS: Thank you.

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

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

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

22 CHAIRMAN ZECH: All right. Thank you.

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

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

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

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

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

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

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

24 MR. ANDOGNINI: I have my staff prepared.

25 CHAIRMAN ZECH: All right. I thank the Board very

1 much. I appreciate your being with us today.

2 CHAIRMAN ZECH: You may proceed.

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

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

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

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

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

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

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

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

7 (Slide.)

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

16 (Slide.)

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

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

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

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

21 Joe?

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

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

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

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

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

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

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

19 (Slide.)

20 We have completely refurbished 170 of our motor
21 operated valves. We have reduced our corrective maintenance
22 backlog from about 5000 back in April of 1987 to less than
23 1000 to day. Now that represents a quantity, but I want to
24 also emphasize to you that our maintenance people are doing a
25 quality job as well.

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

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

13 (Slide.)

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

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

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

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

11 We feel that our audits today for the management team
12 are much more in depth. They are not paper audits. They are
13 valuable tools for the management team. We have completed over
14 170 quality surveillances in 1988 alone. Some of these were
15 initiated by QA. A good portion of those were initiated by the
16 management team. This is a significant improvement over our
17 past record.

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

21 (Slide.)

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

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

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

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

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

24 (Slide.)

25 The next two bullets deal with our procedures. We

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

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

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

10 (Slide.)

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

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

20 (Slide.)

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

1 people, and we will minimize errors.

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

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

15 (Slide.)

16 With the latest information that we have, there are
17 215 items that have been issued by the B&W owners' group for
18 consideration. After careful review, we figured out that there
19 are 169 items that are applicable to Rancho Seco. Seventy-one
20 of these items are already implemented; 29 items are partially
21 complete; and 69 items are being further evaluated for
22 implementation after restart.

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

1 group that are critical to the safety of our plant.

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

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

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

8 MR. FIRLIT: And 35 are non-key.

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

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

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

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

17 CHAIRMAN ZECH: By the owners' group.

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

21 CHAIRMAN ZECH: Right.

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

25 CHAIRMAN ZECH: You have completed 36, really, of

1 those 71 items --

2 MR. ANDOGNINI: Right.

3 CHAIRMAN ZECH: -- that the owners' group puts in the
4 74 category up above, but you have completed 36 of those items
5 that are considered key items.

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

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

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

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

15 MR. ANDOGNINI: Yes, we will.

16 COMMISSIONER ROBERTS: Thank you.

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

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

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

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

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

1 favorable.

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

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

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

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

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

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

24 MR. ANDOGNINI: Yes, sir.

25 COMMISSIONER CARR: Can you send us that, too?

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

10 COMMISSIONER CARR: Please.

11 MR. FIRLIT: Mr. Shetler.

12 MR. SHETLER: Thank you, Joe.

13 Good morning, Mr. Chairman and Commissioners.

14 CHAIRMAN ZECH: Good morning.

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

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

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

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

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

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

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

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

25 In addition, another planned trip is scheduled for

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

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

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

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

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

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

1 Practice.

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

5 That concludes my formal remarks.

6 CHAIRMAN ZECH: Thank you very much.

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

11 CHAIRMAN ZECH: Thank you. You may proceed.

12 MR. KEUTER: Good morning, Chairman and
13 Commissioners.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

1 concerns. Our goal was to reduce personnel errors.

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

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

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

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

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

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

5 Next we have developed a special administrative
6 procedure to control the plant heat-up and power escalation.
7 It is an overall control and procedure that integrates all of
8 the normal operating¹ procedures and test procedures.

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

5 Next we have gone through an extensive program to
6 improve our preventive and predictive maintenance. Currently
7 20 percent of our total maintenance workload is preventive
8 maintenance. Our goal is to increase this to 50 percent.

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

14 As a final area, I would like to talk about
15 corrective maintenance and corrective maintenance backlog. Our
16 goal is to reduce and keep the corrective maintenance backlog
17 as low as possible. Currently we are working off approximately
18 250 work requests per week, and receiving approximately 200.

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

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

25 Also to ensure a full support of the operations

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

4 (Slide.)

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

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

9 CHAIRMAN ZECH: Thank you very much.

10 You may proceed.

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

16 (Slide.)

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

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

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

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

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

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

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

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

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

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

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

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

1 inspection performed during verification.

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

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

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

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

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

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

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

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

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

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

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

21 We have implemented an extensive training program for
22 incorporating the INPO guidelines. In the area of maintenance
23 we have covered mechanical, I&C, and electrical, and in the I&C
24 area we have stressed the items and lessons learned from NUREG
25 1275.

1 Training also includes chemistry, health physics and
2 operations.

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

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

10 (Slide.)

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

16 (Slide.)

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

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

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

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

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

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

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

1 room so that we could observe the operators in action.

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

5 (Slide.)

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

8 CHAIRMAN ZECH: Thank you very much.

9 You may proceed.

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

14 I am satisfied on both accounts.

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

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

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

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

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

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

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

24 How do we know that the people are ready?

25 First, we have put a sound organizational structure

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

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

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

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

12 (Slide.)

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

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

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

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

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

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

9 This is a fair question and this is my answer:

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

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

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

1 implementation of programs among all B&W plants.

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

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

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

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

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

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

1 operation.

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

4 Here are some of the key examples.

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

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

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

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

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

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

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

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

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

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

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

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

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

8 In fact, 21 of the 71 were in closure. So, that left
9 50 as of Saturday, and none of those looked like they were
10 going to be a problem. So, none of them.

11 COMMISSIONER BERNTHAL: Okay. Thank you.

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

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

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

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

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

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

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

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

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

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

20 How would you respond to that?

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

23 COMMISSIONER BERNTHAL: I understand. So did I.

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

1 rather not give you any erroneous data.

2 COMMISSIONER BERNTHAL: Okay.

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

5 COMMISSIONER BERNTHAL: Okay.

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

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

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

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

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

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

1 progress.

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

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

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

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

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

1 It was the control room operator.

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

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

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

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

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

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

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

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

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

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

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

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

5 MR. ANDOGNINI: Yes, sir.

6 CHAIRMAN ZECH: Have the operators trained on that
7 system?

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

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

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

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

25 CHAIRMAN ZECH: All right. Could you tell us a

1 little bit about the diesel engine vibration problem?

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

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

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

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

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

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

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

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

8 CHAIRMAN ZECH: How many diesels do you have?

9 MR. ANDOGNINI: We have a total of four.

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

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

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

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

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

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

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

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

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

20 MR. ANDOGNINI: Thank you.

21 CHAIRMAN ZECH: Mr. Taylor, you may begin.

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

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

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

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

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

14 These conclusions by the staff are based on some
15 50,000 staff hours of licensing and reviews and inspections
16 over the last two years. In fact, since the plant was shut
17 down in December of 1985. There have been some 78 inspection
18 reports issued on Rancho Seco in the past two years. I believe
19 both of these statistics show that we put more emphasis on this
20 plant than probably any other plant in the country for the last
21 two years.

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

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

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

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

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

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

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

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

4 The concern was what improvements could be made to
5 further increase the reliability. After the Three Mile Island
6 accident, there was a substantial upgrade of auxiliary feed
7 water systems throughout the country. The reliability goal of
8 10 to the minus 4 to 10 to the minus 5th per demand was put
9 into the SRP for new plants.

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

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

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

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

25 COMMISSIONER BERNTHAL: That's what I thought.

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

5 COMMISSIONER BERNTHAL: Thank you.

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

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

9 MR. TAYLOR: Yes.

10 CHAIRMAN ZECH: All right. Proceed, please.

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

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

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

25 CHAIRMAN ZECH: All right. Thank you. Proceed,

1 please.

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

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

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

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

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

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

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

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

23 [Slide.]

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

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

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

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

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

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

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

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

8 [Slide.]

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

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

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

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

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

3 [Slide.]

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

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

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

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

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

20 [Slide.]

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

1 consultants.

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

9 [Slide.]

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

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

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

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

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

14 That's all I had.

15 [Slide.]

16 CHAIRMAN ZECH: All right. Thank you very much.

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

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

21 [Laughter.] [Slide reversed.]

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

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

4 CHAIRMAN ZECH: All right. Thank you very much.

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

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

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

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

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

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

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

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

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

15 MR. MIRAGLIA: They have committed to an additional
16 24 hour test before declaring the diesel operable.

17 COMMISSIONER BERNTHAL: Okay.

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

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

1 the remedy might be?

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

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

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

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

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

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

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

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

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

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

25 That criteria was defined and approved by the staff.

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

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

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

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

24 MR. MARTIN: I might add that Tony and I reviewed all
25 215 items again last night to make sure we had the right items

1 in the right box. I'm pretty confident.

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

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

10 COMMISSIONER BERNTHAL: Thank you very much.

11 CHAIRMAN ZECH: Commissioner Carr? Commissioner
12 Rogers?

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

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

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

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

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

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

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

22 MR. MURLEY: That is correct.

23 CHAIRMAN ZECH: Thank you.

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

1 [Chorus of yes'.]

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

5 COMMISSIONER BERNTHAL: If I could make a comment
6 first.

7 CHAIRMAN ZECH: Yes, please.

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

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

20 MR. MURLEY: Yes, I will.

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

24 [Chorus of ayes.]

25 CHAIRMAN ZECH: Opposed?

1 [No response.]

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

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

6

7

8

9

10

11

12

13

14

15

16

17

18

19

20

21

22

23

24

25

1
2 REPORTER'S CERTIFICATE
3

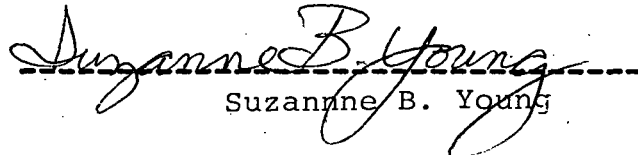
4 This is to certify that the attached events of a
5 meeting of the U.S. Nuclear Regulatory Commission entitled:
6

7 TITLE OF MEETING: Discussion/Possible Vote on Rancho Seco Restart

8 PLACE OF MEETING: Washington, D.C.

9 DATE OF MEETING: Tuesday, March 22, 1988
10

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

17
18 
Suzanne B. Young
19
20
21

22 Ann Riley & Associates, Ltd.
23
24
25

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

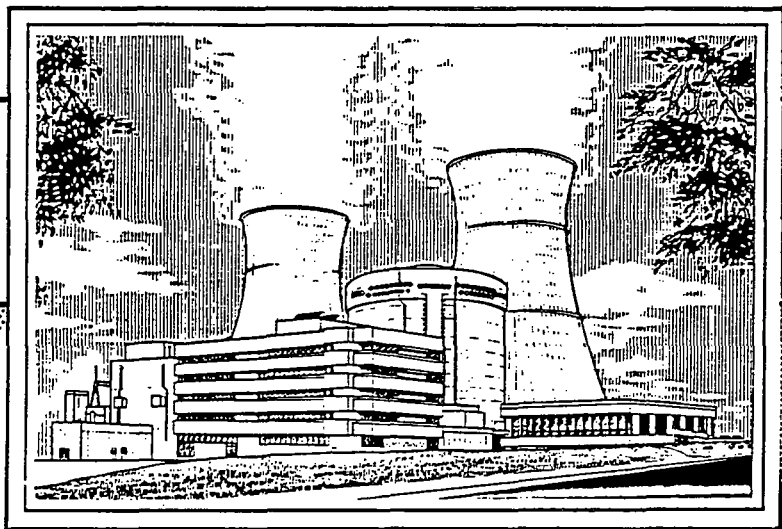
(NOTE: CORT KOEHLER, BOARD VICE PRESIDENT, IS UNABLE TO ATTEND DUE TO SCHEDULE CONFLICT.)

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

MAJOR ACCOMPLISHMENTS

JOE FIRLIT

ASSISTANT GENERAL MANAGER
NUCLEAR POWER PRODUCTION

AGENDA

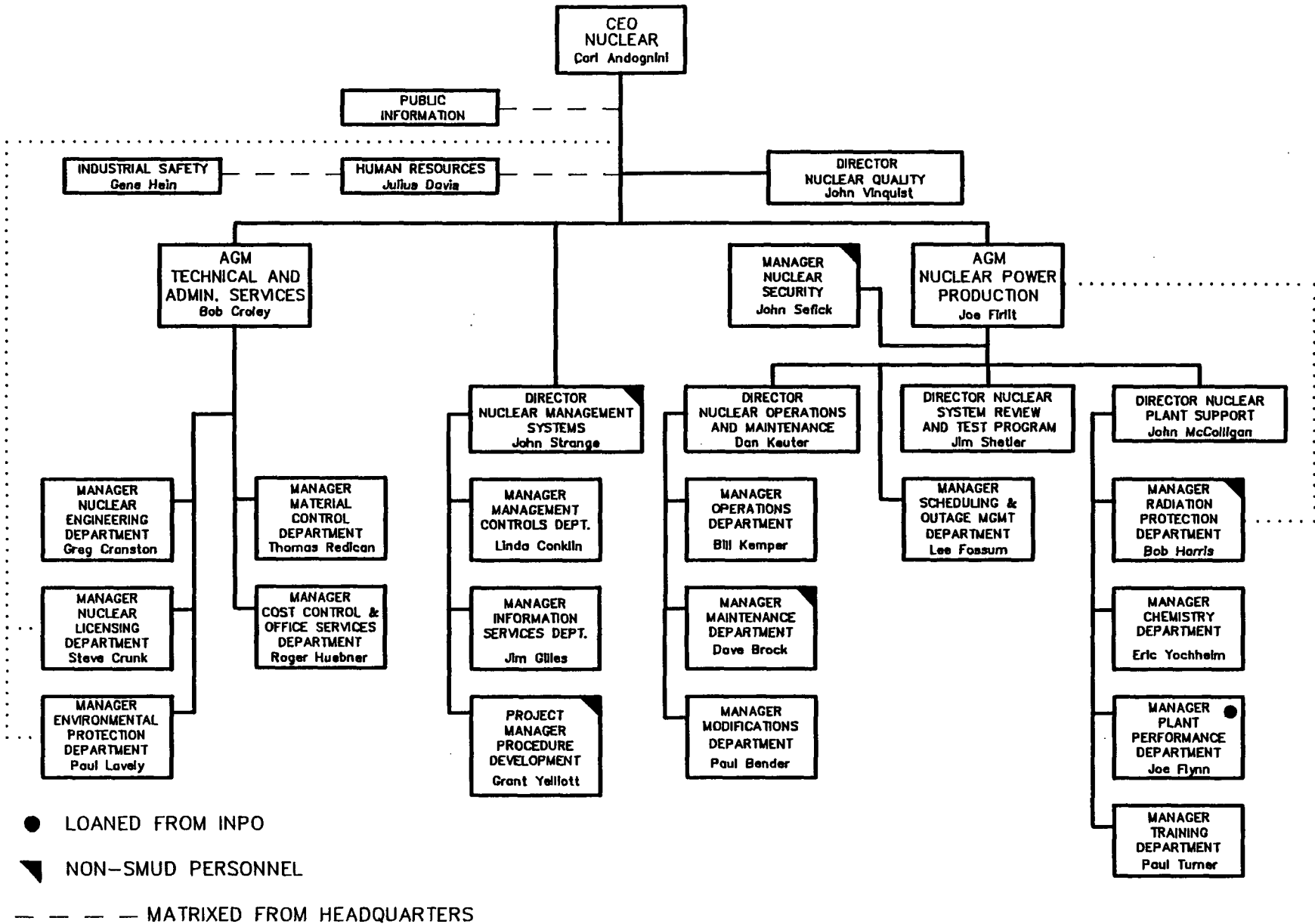
- INTRODUCTION. CLIFF WILCOX
- OVERVIEW. CARL ANDOIGNINI
- MAJOR ACCOMPLISHMENTS. JOE FIRLIT
- INTEGRATED TEST PROGRAM. JIM SHETLER
- OPERATIONS AND MAINTENANCE READINESS. DAN KEUTER
- QUALITY READINESS. JOHN VINQUIST
- SITE OPERATIONAL READINESS. JOE FIRLIT
- CONCLUSION. CARL ANDOIGNINI
- BOARD OF DIRECTORS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

OVERVIEW

CARL ANDOIGNINI

CEO, NUCLEAR

RANCHO SECO ORGANIZATION



MAJOR ACCOMPLISHMENTS

PLANT

- COMPLETED AN EXTENSIVE SSFI-TYPE REVIEW OF THE 33 KEY SYSTEMS
- COMPLETED OVER 600 PLANT MODIFICATIONS
 - SAFETY ENHANCEMENTS
 - TDI DIESELS
 - CONTROL ROOM/TECHNICAL SUPPORT CENTER HVAC
 - POST ACCIDENT SAMPLING SYSTEM
 - CAPACITY FACTOR ENHANCEMENTS
 - TURBINE MODIFICATIONS
 - STEAM GENERATOR TUBE SLEEVING
- DEVELOPED AND IMPLEMENTED A COMPREHENSIVE INTEGRATED FUNCTIONAL TEST PROGRAM
- COMPLETED ALL 209 SPECIAL TESTS REQUIRED FOR CRITICALITY

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 CASUALTY 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

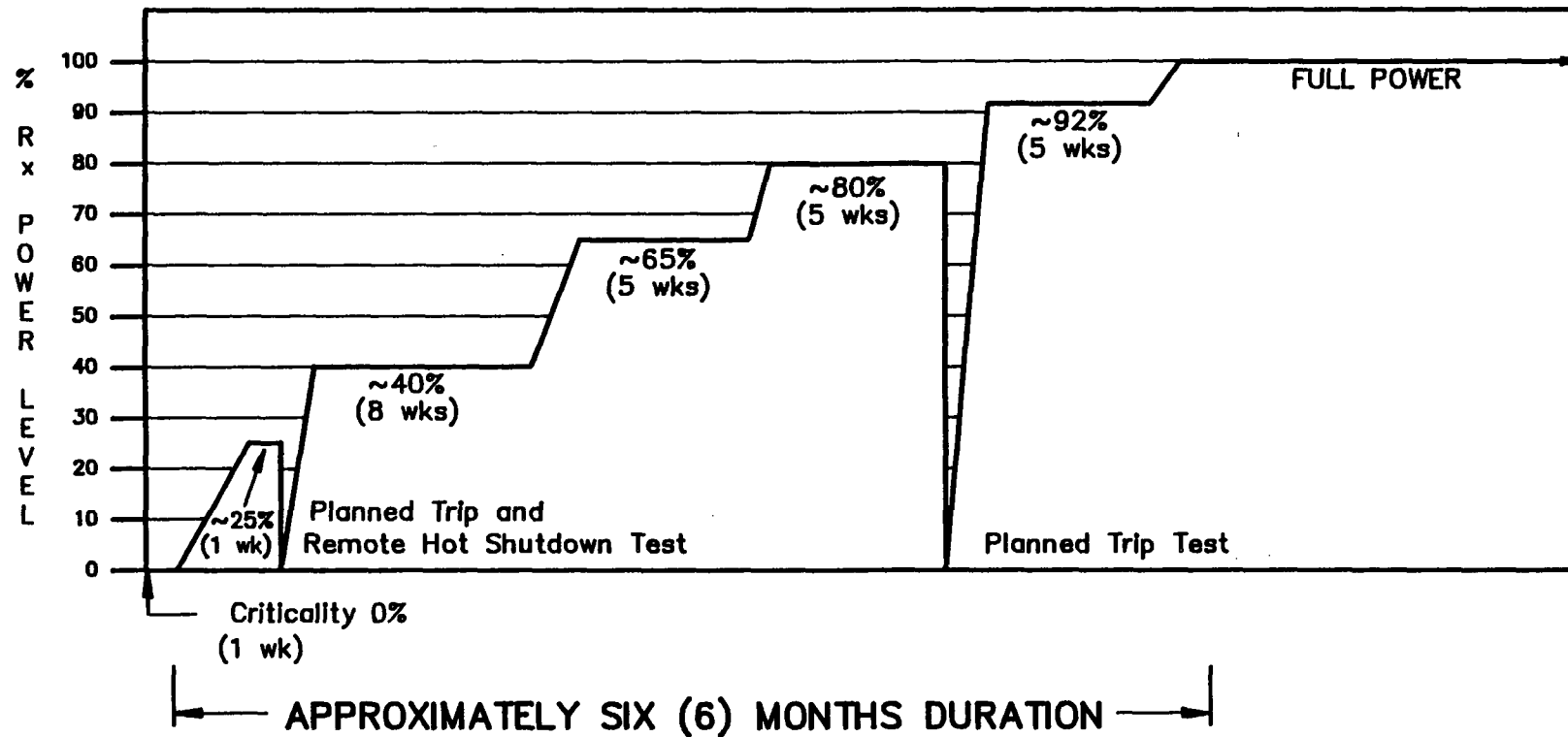
■ HOT SHUTDOWN USING REACTOR COOLANT PUMP HEAT (COMPLETED)

- 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 "NUCLEIS"
- 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

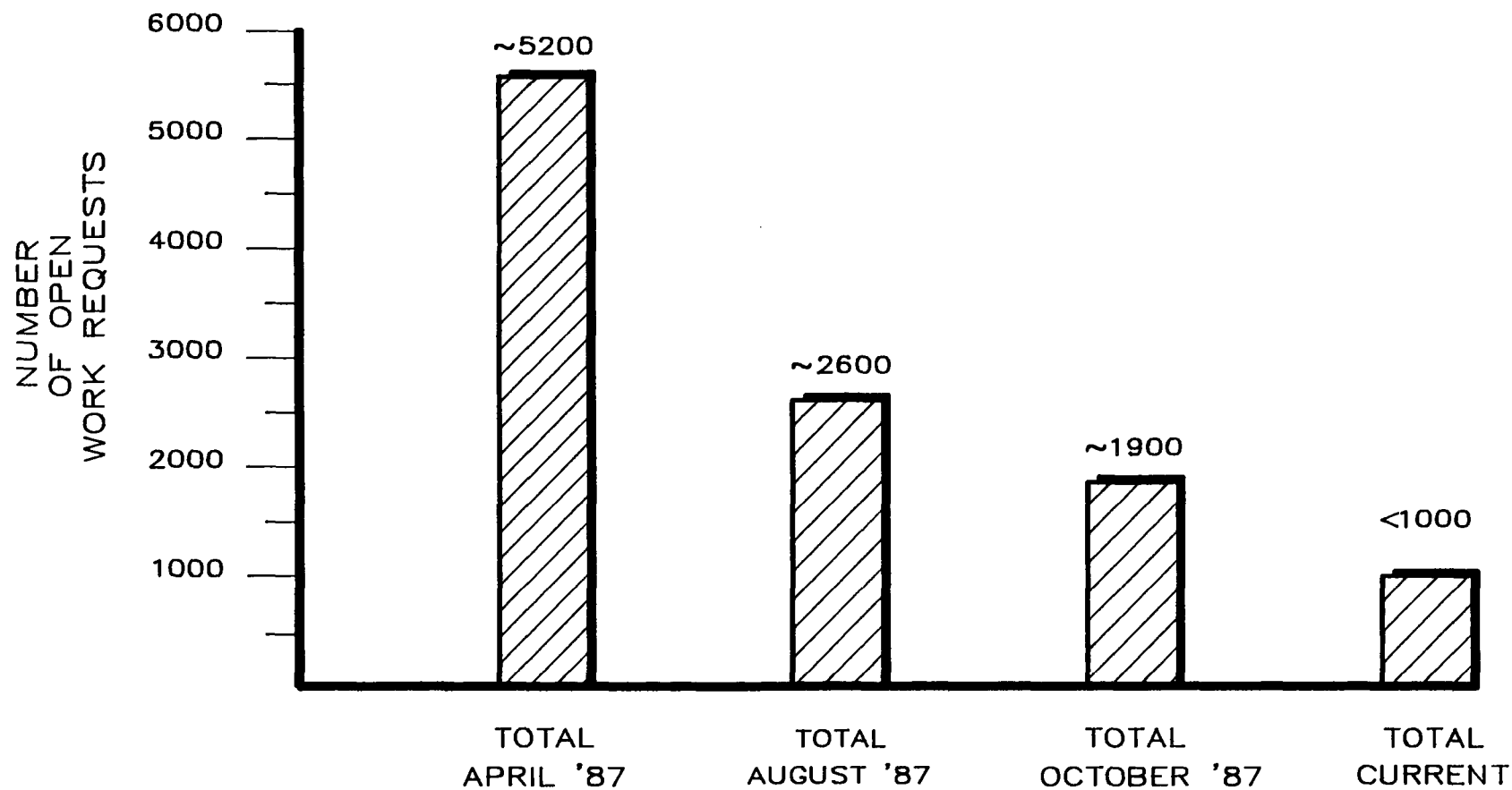
- CURRENTLY ~25%, GOAL IS ~50%
- PROGRAM DEVELOPED BASED ON:
 - INPO GOOD PRACTICE MA-307 "PREVENTIVE MAINTENANCE"
 - INPO GUIDELINE 85-038 "GUIDELINES FOR THE CONDUCT OF MAINTENANCE"
 - EPRI NP-3 "GUIDE FOR DEVELOPING PREVENTIVE MAINTENANCE PROGRAMS"
- PRIORITIZED PREVENTIVE MAINTENANCE —
BASED ON PLANT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

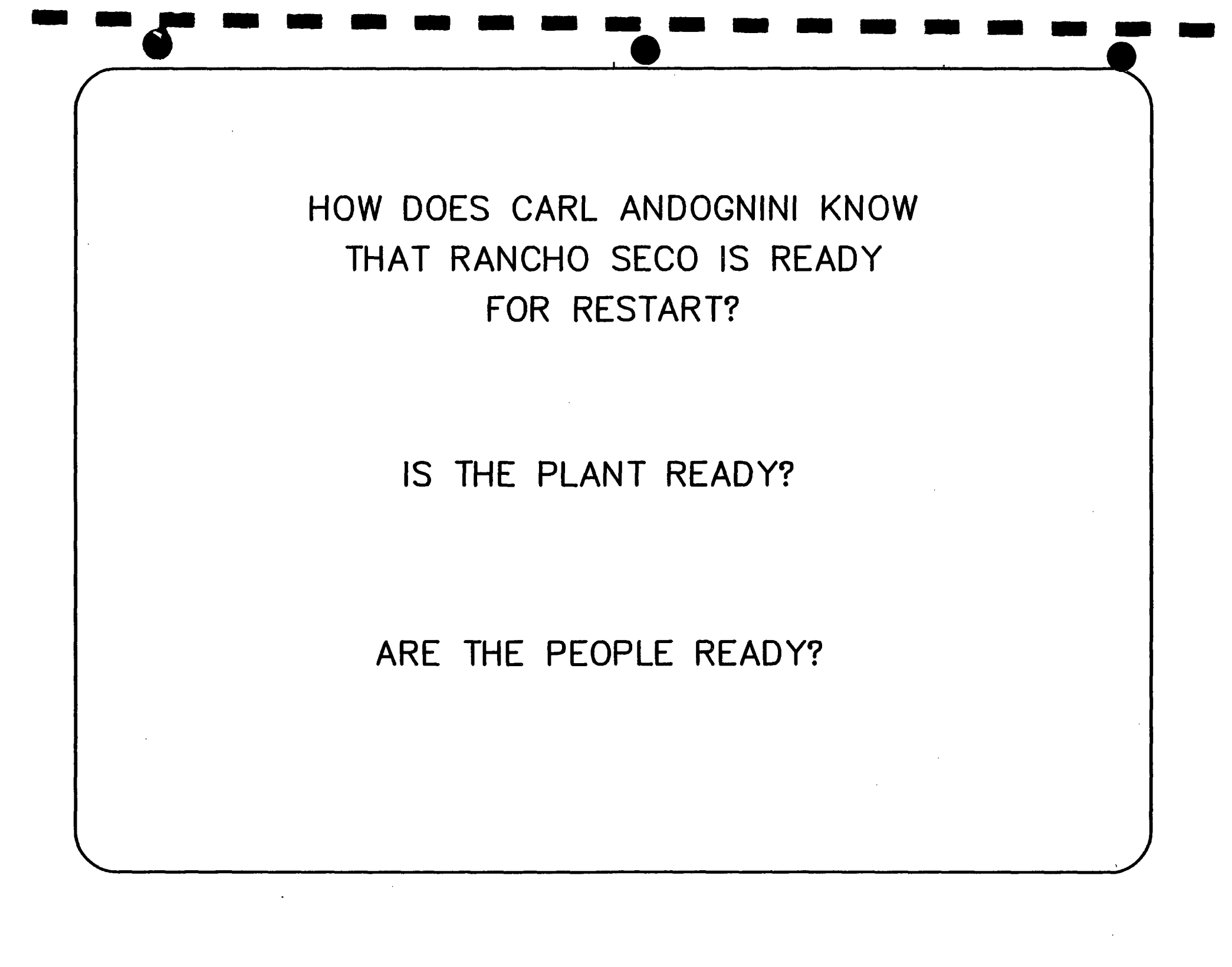
- EVALUATE PEOPLE AT:
 - HOT SHUTDOWN
 - CRITICALITY
 - 25% – 80%
 - 40% – 92%
 - 65%
- DEPARTMENTS INCLUDED:
 - OPERATIONS
 - MAINTENANCE
 - CHEMISTRY
 - RADIATION PROTECTION
 - SYSTEM TEST (ENGINEERING)
- IDENTIFIES SPECIFIC QUALIFICATION TASKS
- MANAGEMENT ASSESSMENTS
- UTILIZE TEST ACTIVITIES TO 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 ANDOIGNINI 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 ANDOIGNINI CONFIDENT
THAT THE PLANT AND THE PEOPLE
ARE READY?

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

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



RANCHO SECO IS READY
FOR SAFE OPERATION...

THE HEALTH AND SAFETY
OF THE PUBLIC IS ASSURED

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.**