



Docket No. 50-312

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

July 13, 1978

RANCHO SECO
MARCH 20, 1978.

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LICENSEE: SACRAMENTO MUNICIPAL UTILITY DISTRICT

FACILITY: RANCHO SECO NUCLEAR GENERATING STATION

SUMMARY OF MEETING HELD ON JUNE 20, 1978, TO DISCUSS COOLDOWN TRANSIENT
OF MARCH 20, 1978

A list of attendees is given in Attachment 1. The agenda followed during the meeting is given in Attachment 2.

Introduction

Following the occurrence of the subject transient on March 20, 1978, the licensee submitted the prompt and followup reports required by the facility operating license. The followup report of March 31, 1978 provided a comprehensive preliminary description of the transient, an assessment of the cause of the transient and a description of the corrective action. Further discussion of the transient was contained in the Inspection Report by the Commission's Office of Inspection and Enforcement dated April 21, 1978, from J. L. Crews to J. J. Mattimeo.

The purpose of this meeting was to obtain further information concerning the event in order to determine:

1. Whether additional corrective action, including changes in system design, was needed,
2. Whether the automatic initiation of the emergency feedwater pumps by an Engineered Safety Features Actuation Signal (ESFAS) should be retained as a design feature, and
3. Whether there were other failures or initiating events that could cause a similar transient.

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The meeting was held at the reactor site to facilitate access to design drawings and permit inspection of the Control Room and the instrumentation available to the operators.

Summary

Highlights of the meeting were as follows:

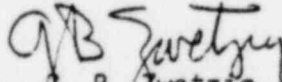
1. The loss of the 24 volt power supplies not only caused a loss of input signals to the Integrated Control System (ICS), but also caused a loss of many signals displayed in the Control Room. This loss of display, however, did not affect the operability of the Reactor Protection System.
2. The licensee indicated that Rancho Seco was the only Babcock and Wilcox (B&W) designed facility where emergency feedwater (EFW) flow was initiated by an ESFAS. They stated that this came about because their evaluation indicated that EFW flow had been assumed in the B&W analyses of the LOCA and Core Flood Tank line break. Subsequent evaluation, however, has indicated that the presence or absence of EFW flow has little effect on the consequences of these postulated accidents. The licensee indicated that, depending on the results of a current re-evaluation of the postulated steam line break accident, he may propose to eliminate ESFAS initiation of EFW flow.
3. The licensee discussed the results of the review of this matter by a specially appointed technical committee.* Some of the committee's recommendations were as follows:
 - a. The use of non-conducting caps or plugs or the transporting of the bulb fixture to a remote location during the changing of bulbs on the back-lighted pushbutton assemblies.
 - b. The testing of breakers, fuses, transfer switches, power supply monitors, etc. to assure proper coordination.
 - c. To consider performing studies of several matters including use of lower rated fuses in conjunction with current-limited power supplies, and improvements in the Non-Nuclear Instrumentation (NNI) D.C. power supply configuration.

* In his letter of March 31, 1978, the licensee committed to provide the findings of the Committee to the NRC Regional Office.

- d. To study the practicability of providing instrument indications or computer readouts in the Control Room necessary for controlled plant cooldown which would not be affected by loss of the NNI power supplies.
4. During the "brainstorming" session none of the attendees postulated another mechanism or failure which would initiate a similar transient. (Note: Because of the limited discussion of this subject at the meeting, the staff does not consider this a closed item.)

Conclusion

The licensee was advised that we would review the information provided and inform him of any additional corrective actions we concluded were appropriate.



G. B. Zwetzig, Project Manager
Operating Reactors Branch #4
Division of Operating Reactors

Attachments:

1. List of Attendees
2. Agenda

ATTACHMENT 1

LIST OF ATTENDEES

MEETING ON RANCHO SECO COOLDOWN TRANSIENT

SMUD

Ron Colombo
S. I. Anderson
Lloyd Stephenson
John D. Dunn
Norm Brock
Bob Dieterich
Ron Rodriguez
Donald C. Blachly
John V. McColligan
Pierre Oubre

NRC

Phil Johnson-IE:V
M. Chiramal
John Anderson-Oak Ridge Nat'l. Lab
Richard Lobel
Dom Tondi
Gerald B. Zwetzig
Bob Dodds

B&W

Joel T. Janis

ATTACHMENT 2

AGENDA

March 1978 Reactor Transient

- (1) A brief description of the Integrated Control System as installed at Rancho Seco, presented by Norm Brock, Senior Instrument & Control Engineer.
- (2) General description of sequence of events prior to, during and following cooldown and a summary of the valid and nonvalid instrument indications available to Operators during the transient, presented by Don Blachly, Associate Mechanical Engineer.
- (3) Review of electrical drawings pertinent to event, presented by John Dunn, Supervising Electrical Engineer.
- (4) Corrective action (implemented and planned) including a discussion of adequacy, presented by John Dunn, Supervising Electrical Engineer.
- (5) Reasons for providing SFAS automatic start of auxiliary feedpumps and consequences if SFAS automatic start is deleted, presented by Stan Anderson, Associate Nuclear Engineer.
- (6) "Brainstorm" session on other initiating events which could cause significant cooldown transients.