



UNITED STATES
NUCLEAR REGULATORY COMMISSION
ADVISORY COMMITTEE ON REACTOR SAFEGUARDS
WASHINGTON, D. C. 20555

May 6, 1985

MEMORANDUM FOR: J. Ebersole, Chairman
Palo Verde Nuclear Station Unit 1 Subcommittee

FROM: A. Wang, Staff Engineer *Alan Wang*

SUBJECT: PROPOSED MEETING SUMMARY AND WORKING COPY OF THE
MINUTES FOR THE PALO VERDE NUCLEAR STATION SUBCOMMITTEE
MEETING, APRIL 26, 1985, WINTERSBURG, ARIZONA

A proposed combined summary and working copy of the minutes of the subject meeting is attached for your review. Copies are being distributed to the other ACRS Members and Subcommittee Consultants for their information and comment. Corrections and additions will be included in the minutes of the meeting.

Attachments: As stated

cc: ACRS Members
M. Libarkin
G. Quittschreiber

ATTACHMENT 4

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WORKING COPY

DATE ISSUED: 3/22/85

PROPOSED MEETING SUMMARY/MINUTES FOR
THE ACRS PALO VERDE NUCLEAR STATION SUBCOMMITTEE
MEETING, APRIL 26, 1985 - WINTERSBURG, ARIZONA

Principal Attendees:

ACRS

J. Ebersole, Chairman
H. Lewis, Member
G. Reed, Member
A. Wang, Staff, DFO

NRC

R. Zimmerman

Arizona Public Service

E. VanBrunt
O. Zeringue
A. Roger
R. Adney

Introduction

J. Ebersole stated he would like to get an overview of the plant status. This overview should include discussions of the power escalation program, unexpected findings during hot functional testing, and valve and pump reliability with particular attention to the Chemical Volume and Control System (CVCS) and the Auxiliary Feedwater System (AFS). He also asked the Arizona Public Service (APS) to discuss their emergency procedures and walk through what APS might consider one of their more critical accident situations. He asked that APS include in this discussion how the operator determines the reliability in his instruments, how back-up indications based on indirect instrument indications are used, and the difference between "safety related" and "important to safety" systems. Both J. Ebersole and G. Reed stated Palo Verde is a no "frills" plant, as APS has installed the minimum required safety systems. Because of this, the plant has less flexibility in responding to an accident and J. Ebersole wanted to assure himself that APS has the operator capability commensurate with this minimum

configuration to deal with potential problems. G. Reed stated he would like a discussion of the quality and selection of operators.

Power Ascension Program

O. Zeringue provided the Subcommittee a status of the plant with regards to its power ascension. He noted the hot functional test in Mode 4 are complete and they will soon enter into Mode 3. There are seven planned trip tests. He stated their ascension program was compared with San Onofre's and Arkansas'.

Significant Unexpected Findings During Preoperational Testing

A. Rogers stated the principal unexpected findings have been the damage to the primary coolant system and the HPSI valve failures. J. Ebersole asked A. Rogers to limit his discussion to those items which there was a safety concern. A. Rogers stated the primary system damage was only a concern from an operational standpoint. The HPSI valves were a safety problem. The resolution was to reverse the valve seat orientation, add flow balancing orifices downstream, change torque switch and contact springs. He noted they had problems opening and closing the valve. J. Ebersole asked if APS had tested their isolation valves to open or close against full flow. He also inquired had analysis been done to assure checks are qualified to take the full dynamic load of a line break. APS stated most of their isolation tests are at full flow. The checks are leak tested periodically to verify their condition.

Emergency Operating Procedures

R. Adney provided a discussion on Palo Verde's symptom oriented emergency procedures. J. Ebersole requested R. Adney to walk through his procedures assuming a steam generator tube break. He asked what does the operator do when he get conflicting readings. R. Adney stated they have diverse indications and there procedures are such that two operators are following two separate flow charts to evaluate the accident. At the same time the supervisor is following his own flow

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chart to determine the most probable cause of the accident. H. Lewis reiterated what does the operator do when he gets conflicting readings. He noted at TMI-2 the instruments were right but the operators chose not to believe them because they could not believe that they were having a serious accident. He inquired if during their simulations training spurious readings are inputted. R. Adney said yes and noted the procedures require the operator to look at numerous indications to verify that the process is working as expected.

J. Ebersole inquired about what APS considered safety related versus important to safety. R. Adney stated they are different from other plants because all their safety systems including the UHS are on standby. G. Reed stated has APS looked at the availability of stand-by systems with the isolation valves closed (APS configuration) versus the leaving the isolation valves open. J. Ebersole asked since all systems are on standby do the operators know what the critical times for cooling water is to various equipment or does APS run the component to destruction, for example the diesels? APS stated the critical time factors are known. In the case of the diesels, APS would shutdown the diesels and lose all AC power rather than lose all diesels. APS believes they can always repair the diesels.

NOTE: Additional meeting details can be obtained from a transcript of this meeting available in the NRC Public Document Room, 1717 H Street, N.W., Washington, D.C. or can be purchased from ACE-Federal Reporters, 444 North Capitol Street, Washington, D.C. 20001, (202) 347-3700.