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

JUN 3 1981

Docket Nos: 50-329
and 50-330

APPLICANT: Consumers Power Company

FACILITY: Midland Plant, Units 1 & 2

SUBJECT: SUMMARY OF APRIL 30, 1981 MEETING TO REVIEW AUXILIARY FEEDWATER SYSTEM DESIGN

On April 30, 1981, the NRC staff and its Sandia consultant met in Ann Arbor, Michigan with Consumers Power Company (the Applicant); Bechtel; Babcock and Wilcox (B&W); and Pickard, Lowe and Garrick, Inc. Attendees are listed in Enclosure 1. The propose of the meeting was to review the design of the Midland Auxiliary Feedwater System (AFWS). A site tour to observe the system was conducted on April 28, 1981.

The meeting consisted of a review of the written presentation, "Auxiliary Feedwater Design Review," which was submitted by the Applicants letter of April 24, 1981. The table of contents of that submittal provided the agenda for the meeting and is attached (Enclosure 2). The submittal also includes as Appendix A a synopsis (Report PLG-0166 dated March, 1981) of the reliability analysis of the Midland AFWS, for which the full report (PLG-0147 dated October, 1980) was forwarded by the Applicant's letter of February 23, 1981. For details of the meeting, see these documents. Selected illustrations from these documents are reprinted (Enclosure 3).

Several action items were identified during the meeting:

1. At least one AFWS flow train should be capable of being operated independently of AC power for at least two hours. In the event of a complete loss of AC the AFW turbine driven pump room coolers will not be available. Consumers Power committed to provide the results of a study to demonstrate that the AFW turbine driven pump and any associated equipment in the turbine driven pump room will operate and remain operable for two hours without room cooling.

2. A transfer of the normal suction of the AFWS to the Service Water System is automatic upon coincident AFW Actuation Signal and low suction pressure. If the AFWS is manually initiated and the normal (non-seismic, non-tornado) water source is lost, operator action would be required to effect a transfer. Consumers Power should investigate the advisability of installing an automatic low suction pressure pump trip to provide pump protection. This concern must be addressed to evaluate Recommendation GL-4, paragraph 10A.3.3 of FSAR Appendix 10A.

3. Consumers Power should revise FSAR section 9.3.3, Equipment and Floor Drainage System, to include a description and location of the controls for the drain isolation valves for the Engineered Safety Features and AFWS equipment rooms.

4. Consumers Power should investigate the effects of the seismic anchor being located downstream of the check valve on the suction line to the condenser hotwell. Consumers Power should discuss the reason for the present location of the seismic anchor and the merits of relocating it upstream of the check valve.

5. The Midland design includes AC solenoid control valves in the pump recirculation lines. Since these valves fail closed on loss of control power, Consumers Power should determine whether there are conditions in a complete loss of AC event that could result in the AFWS turbine driven pump flow falling below the manufacturer's required pump flow.

6. On April 24, 1980, a generic letter with short term and long term AFWS recommendations was issued to applicants with Babcock and Wilcox NSSS. Subsequently, Additional Short Term Recommendation 2 on pump endurance testing was revised from 72 hours to 48 hours. Test data requirements were added to the 48 hours endurance test guidelines. Consumers Power should commit to conducting pump endurance tests per the revised recommendation and providing the data requested in the revised recommendation.

7. Recommendation GS-4 states that emergency procedures for transferring to alternate sources of AFW supply should be available to the plant operators. Consumers Power should indicate that procedures will be available for the case in which the primary water supply is being depleted. The procedures should be consistent with the criteria in GS-4.

8. Recommendation GS-6 specifies that flow path availability for an AFWS flow train that has been out of service to perform periodic testing or maintenance should be confirmed. Consumers Power should state that there will be procedures or a technical specification requirement for independent backup verification of proper valve alignment. Consumers Power should also indicate that technical specifications will be proposed to assure that prior to plant startup following an extended cold shutdown, a flow test will be performed to verify a flow path from the Condensate Storage Tank to the steam generators.

9. Additional Short Term Recommendation 1 discussed the level indication and alarm provisions needed for the primary water sources. Consumers Power should describe how its design meets these provisions.

10. Additional Short Term Recommendation 4 discusses procedures to be followed in plants which require local manual realignment of valves to conduct periodic tests on one AFWS train and which have only one remaining AFW train available for operation. The Consumers Power response only discussed provisions for operator communication with the control room. Consumers Power should commit to following the operator procedures discussed in this recommendation.

11. Consumers Power should review the AFWS normally open manual valves from a reliability view point to determine the need for administrative controls.

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ENCLOSURE 1

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ENCLOSURE 2

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