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Docket Nos. 50-329
and 50-330

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Consumers Power Company
ATTN: Mr. S. H. Howell
Vice President
212 West Michigan Avenue
Jackson, Michigan 49201

Gentlemen:

We have reviewed Amendment 26 to your application on the Midland Plant, Units 1 and 2. Our review of this amendment, consisting of revisions to the Preliminary Safety Analysis Report, is directed to your compliance with the Seismic Classification and Quality Group Classification of those water and steam containing components which are part of the reactor coolant pressure boundary and to other fluid systems important to safety.

Enclosed you will find the staff's comments and requests for additional information relative to component classification. The staff's comments are intended to augment the classification guidelines presently available for your use. The requests for additional information are needed to clarify and amplify the information you have previously submitted in Amendment 26.

In summary, until we receive the additional information requested, we cannot complete our review of the Seismic and Quality Group C Classification of the Component Cooling Water System for the Midland Plant, Units 1 and 2.

Please contact us, if you have any questions regarding the staff's comments or information requested.

Sincerely,

Original signed by

A. Schwencer, Chief
Light Water Reactors Branch 2-3
Directorate of Licensing

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Enclosure:

Requests for Information and Comments

OFFICE	Applicable to Section 4.2.2.4 and Figure 4.1-1, Amendment 26, Midland				
SURNAME	Plant, Units 1 and 2				
DATE					

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OFFICE →	x7886/LWR 2-3	L:C/AWR 2-3			
SURNAME →	LEngle:cjb	ASchwencer			
DATE →	10/24/74	10/1/74			

REQUESTS FOR INFORMATION AND COMMENTS
PURSUANT TO THE MIDLAND PLANT, UNITS 1 AND 2
AMENDMENT 26, SECTION 4.2.2.4 AND FIGURE 4.1-1

1. In Figure 4.1-1, you indicate that components in Quality Group C may be either Seismic Category I or Category II. However, for systems designated ASME III, class 3 (Quality Group C), there is no indication of the applicable seismic category. Revise Figure 4.1-1 to clearly define the seismic category applicable to all Quality Group C systems and components.
2. In Figure 4.1-1, construction of the feedwater ring header in accordance with ANSI B31.1.0 is not acceptable. This portion of the feedwater system should be constructed in accordance with ASME Section III, class 2.
3. In Figure 4.1-1, construction of the reactor coolant pump seal water injection piping in accordance with ASME III, class 3 is not acceptable. These lines should be constructed in accordance with ASME III, class 2.
4. In Section 4.2.2.4, the specified 19.4 minutes after loss of CCM required to de-energize the reactor coolant pumps to insure a damage-free coastdown is considered acceptable. In order that we may review your analysis, provide a detailed description of the calculation procedure including the following:
 - a. The equations used
 - b. The parameters used in the equations, such as: the design parameters for the motor bearings, motor, pump and any other equipment entering into the calculation; and material property values for the oil and metal parts
 - c. A discussion of the effects of possible variations in part dimensions and material properties, such as, bearing clearance tolerances and misalignment
 - d. A description of the cooling and lubrication systems (with appropriate figures) associated with the reactor coolant pump and motor and the applicable design criteria and standards

- e. Information to verify the applicability of the equations and material properties chosen for the analysis (i.e., references should be listed, and if empirical relations are used, provide a comparison of their range of application to the range used in the analysis).

In addition provide an analysis assessing the safety consequences to the Reactor Coolant System should no action be taken following the loss of component cooling water.

5. In Figure 4.1-1, the Quality Group D classification of the cooling water lines to and from the letdown coolers cannot be considered acceptable until additional information is presented. To facilitate the staff's consideration of the acceptability of Quality Group D cooling lines, provide the following:
 - a. A detailed analysis of the effects of a complete loss of cooling water to the letdown coolers. Provide all equations, assumptions, system parameters and material properties used to conservatively calculate the resulting temperature and pressure increases throughout the makeup system. Provide a system diagram for reference in the calculations.
 - b. The various times at which system alarms would be activated following a significant break in the CCWS.
 - c. Assuming the letdown system is isolated after one of the alarms is activated, provide the calculations showing the events which would occur after letdown isolation.
 - d. Indicate the times at which alarms would signal various conditions and indicate the maximum time that the system could continue to operate with the letdown system isolated. Describe the system monitors that would signal the necessity to shutdown or to take further action. Describe in detail the subsequent shutdown procedure for this situation. Discuss any differences in the shutdown procedure from the normal procedure.
 - e. Assuming that the letdown system is not isolated after the alarms are activated, consider the resulting consequences to the system and its components. Provide calculations indicating the time at which

system temperature or pressure would reach levels which would interfere with the normal operation of the filters, demineralizers, makeup tank, makeup pump, reactor coolant pump and seals and associated piping. Indicate any system alarms which would activate during this situation. Discuss in detail any differences in shutdown procedures required depending on whether the letdown system is isolated or not.

6. In Figure 4.1-1, the Quality Group D classification of the cooling water piping to and from the seal return coolers cannot be considered acceptable until additional information is presented. Provide a complete analysis of the effects of loss of cooling water to the seal return coolers as outlined in item 21.5 above. In addition, provide a complete analysis of the effects of simultaneous loss of cooling water to both the letdown and seal return coolers.