Consumers Power Company

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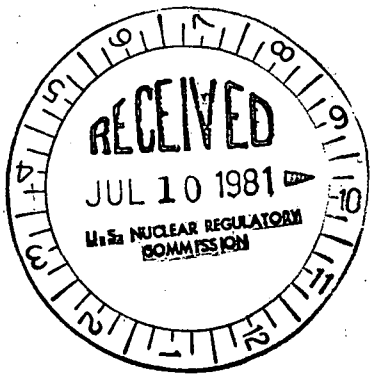

Director, Nuclear Reactor Regulation
Att Mr Dennis M Crutchfield, Chief
Operating Reactors Branch No 5
US Nuclear Regulatory Commission
Washington, DC 20555

DOCKET 50-255 - LICENSE DPR-20 -
PALISADES PLANT - SEP TOPIC IX-3, STATION SERVICE
AND COOLING WATER SYSTEMS

By letter dated May 26, 1981, the NRC issued for comment a draft evaluation of SEP Topic IX-3 for the Palisades Plant. Consumers Power Company has completed a review of this document and provides the following comments:

1. Page 6 - Table 1 is not included in report.

2. Page 6 - Prior to recirculation, component cooling water (CCW) is not used to remove energy from the containment and the only service water system (SWS) load is water for the 3 air coolers. The energy removed by 3 air coolers is 229 x 10^6 Btu/hr. However, after recirculation, energy is removed via both the SWS (CCW HX and air coolers) and CCW (containment sprays). FSAR Sec 14.18 found the heat removed by 2 containment spray pumps to be sufficient. Under this configuration, the heat removed is 167 x 10^6 Btu/hr. Thus, this value should be used as the heat load rather than 229E6 Btu/hr.

3. Page 6 - With only D/G 1-1 operable, the required service water flow is 8855 gpm:

1 air cooler	1625 gpm
2 CCW HX	6600 gpm
Eng. Safeguards A/C	200
Control Rm. A/C	25
D/G Cooling	400
Air Compressors	5
	8855 gpm

However, there is only one service water pump loaded on D/G 1-1 with a flow of 8000 gpm. If this 855 debt in service water is conservatively assumed to be applied to the CCW HX, there will still be sufficient containment energy removal without exceeding CCW temperature limits. This is supported in the following discussion:

A035
S1/0

The FSAR analysis for post-DBA assumed CCW temperature in and out of the CCW NX to be 156° and 114° respectively with a CCW flow of 4000 gpm per HX. The corresponding service water inlet and outlet temperatures assumed were 75° and 126.5° respectively with a flow of 3300 gpm per HX. If the service water flow per HX is 428 gpm less, the SW exit temperature will increase approximately 10°F while the CCW exit temperature will decrease approximately 3°F. This is due to the fact that the longer residence time in the HX due to the lower flow allows greater energy transfer to service water.

4. Page 13 - The basis for 153×10^6 Btu/hr containment spray heat load cannot be identified in the FSAR Section 14.18.

5. Page 13 - The 170° SW temperature seems excessive. Also, assuming the same condition for CCW and SW entering the CCW HX, an increase in SW exit temperature would be combined with a decrease in CCW exit temperature. Thus, there is no need for additional operator action.

6. Page 16, First Paragraph - One service water pump is loaded on D/G 1-1; two pumps are loaded on D/G 1-2.

7. Page 18, Last Paragraph - As described above, with a D/G 1-2 failure, there exists sufficient service water for containment energy removal without exceeding CCW design temperature. Thus, there is no need for additional operator action.

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CC Director, Region III, USNRC
NRC Resident Inspector - Palisades