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Power  
Company

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US Nuclear Regulatory Commission  
Washington, DC 20555



MIDLAND PROJECT  
MIDLAND DOCKET NOS 50-329, 50-330  
SUBMITTAL OF THERMAL MECHANICAL REPORT, NUREG-0737, ITEM II.K.2.13  
FILE: 0906 UFI: 71\*01 SERIAL: 11643  
ENCLOSURE: BAW-1628, "REACTOR VESSEL BRITTLE FRACTURE ANALYSIS  
DURING SMALL BREAK LOCA EVENTS WITH EXTENDED LOSS OF FEEDWATER" (6 COPIES)

NUREG-0737, Item II.K.2.13 identifies the staff's concern and position regarding thermal-mechanical conditions in the reactor vessel during recovery from small breaks with an extended loss of all feedwater.

Consumers Power Company participated in a B&W Owners Group program to address this issue. B&W performed a conservative, bounding analysis to cover all of the 177 FA B&W plants and reported the results in the attached report BAW-1628 "Reactor Vessel Brittle Fracture Analysis During Small Break LOCA Events with Extended Loss of Feedwater".

Results of the thermal-mechanical analysis are highly dependent upon weld orientation and irradiation with longitudinal welds adjacent to the cold leg vessel nozzles being the most limiting case. Even with the conservative bounding analysis used in BAW-1628, the B&W analysis shows acceptable results for a more limiting reactor vessel with longitudinal welds through at least 3.75 effective full power years (EFPY) of operation. This analysis conservatively bounds the Midland vessels which do not have longitudinal welds. Therefore, thermal shock is not a concern with respect to startup and initial operation of the Midland reactors.

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We are continuing to work with B&W on review of the thermal shock analysis as it affects the Midland reactor vessels. The results are expected to show acceptable service conditions for a considerable period beyond 3.75 EFPY. These results will be forwarded to the staff as they become available.

*James W. Cosh*

JWC/JNL/cr

CC RJCock, Resident Inspector w/a

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REACTOR VESSEL BRITTLE FRACTURE ANALYSES DURING  
SMALL BREAK LOCA EVENTS WITH EXTENDED  
LOSS OF FEEDWATER

DUPLICATE

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Babcock & Wilcox