



Consumers
Power
Company

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84-10 #1

Mr J G Keppler, Regional Administrator
US Nuclear Regulatory Commission
Region III
799 Roosevelt Road
Glen Ellyn, IL 60137

MIDLAND ENERGY CENTER PROJECT
DOCKET NOS 50-329 AND 50-330
REACTOR COOLANT PUMP COVER AND SEAL
FILE: 0.4.9.97 SERIAL: 31793

On June 22, 1984, Consumers Power Company notified your staff of a potential 10CFR50.55(e) condition involving reactor coolant pump seals and seal covers. This is an interim report.

Description of Concern

During normal operation, reactor coolant pump seal injection water, which is supplied from the make-up tank, has a temperature of 95-125°F. In cases such as HPI initiation, however, seal injection water is supplied from the borated water storage tank, which could have a temperature of 40°F during cold weather. The resulting temperature transient could damage the reactor coolant pump cover and seals causing a breach of the pressure boundary.

Background and Scope of Investigation

This issue originally was documented by B&W as a Preliminary Safety Concern. Since that time, engineering analysis has failed to eliminate all potential safety consequences of this condition. In fact, investigation has confirmed that a seal injection water transient could take place under certain conditions and that under those conditions, seal injection water temperature would drop below the range specified for plant design.

Analysis of Safety Impact

B&W has been requested to determine whether plant safety could have been adversely affected. B&W's evaluation is not complete. Engineering judgment has been consistent on both B&W and CPCo's part that the pump materials affected could in fact successfully withstand the few transients that would be inspected over the life of the plant.

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Root Cause

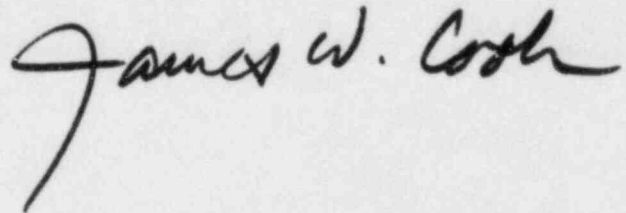
The root cause of the condition was that the design which was a slight modification of previous pump designs did not consider the design basis of cold ejection water affecting the seals and seal covers.

Corrective Action

The following corrective actions will be required to resolve this issue:

- 1) Make a final determination if plant safety is impacted.
- 2) If necessary as the result of Item 1, make plant modification to assure temperature transients are acceptable.

No activity is currently being pursued on this subject. No further reports on this subject will be made unless the Midland Energy Center is reactivated.



JWC/AHB/lr

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