



WISCONSIN PUBLIC SERVICE CORPORATION

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February 26, 1993

U. S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

Gentlemen:

Docket 50-305
Operating License DPR-43
Kewaunee Nuclear Power Plant
Status of WPSC Evaluation to Increase Safety Injection Pump Recirculation
Flow in Response to NRC Bulletin No. 88-04: Potential Safety-Related Pump Loss

Reference: 1) Letter to Document Control Desk from C. R. Steinhart dated April 26, 1991

In reference 1, Wisconsin Public Service Corporation (WPSC) summarized the status of our response to Bulletin 88-04 Potential Safety-Related Pump Loss. This response stated that all safety-related pump configurations at the Kewaunee Nuclear Power Plant (KNPP) were reviewed and that the safety injection pumps were the only pumps that had a potential cause for concern. The miniflow recirculation piping for the safety injection pumps currently allows a recirculation flow of 47 GPM per pump. WPSC had made a previous commitment to increase the recirculation flow however, due to the sensitivity that a reduced safety injection flow can have on large break and small break LOCA analyses results, this modification was delayed until these safety analyses were completed. WPSC provided justification for continued operation of the safety injection pumps in the present configuration until the modification was installed.

On August 18, 1992, WPSC submitted a letter to the manufacturer of the KNPP safety injection pumps discussing the operational and maintenance history of the pumps. In this letter, WPSC provided the manufacturer with information on how the pumps were operated. This included a discussion of:

- The training received by the control room operators on pump operation. This training together with the appropriate procedures, stresses the importance of ensuring that the pumps do not operate in only the recirculation mode for longer than 30 minutes.

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- The amount of maintenance/testing currently being performed to detect pump degradation. The pumps are started and operated in the recirculation mode only during the quarterly surveillance procedure. This procedure requires the pump to operate in the recirculation mode for approximately 15 minutes.
- During the quarterly test, pump vibration measurements are taken. This vibration data is then compared against the required procedure tolerance.
- In order to assure pump performance is not degrading, an annual flow test is performed. During this test bearing temperatures are also measured.

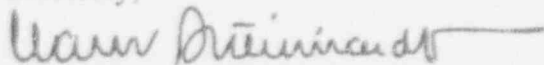
In addition, the results of a 1981 inspection which involved disassembly of each pump was also discussed. This inspection determined that after over 7 years of operational testing with a recirculation flow rate of 47 GPM, there was no evidence of cavitation or recirculation damage to the impellers.

In response to this letter, the manufacturer agreed that sufficient information was gained during the 1981 pump inspection to conclude that the minimum recirculation flow rate does not have to be increased. However, in a follow up letter on January 11, 1993, the manufacturer recommended a five year inspection frequency.

In addition to the conclusions from the pump manufacturer, WPSC's review has determined that the operational and maintenance history together with the pump inspections justifies maintaining the current recirculation flow rate. Consequently, WPSC no longer plans on increasing the recirculation flow rate of the safety injection pumps. During the 1993 refueling outage, WPSC plans on performing a complete inspection of a safety injection pump impeller. However, the future inspection frequency for these pumps will be based upon maintenance history and the results of predictive/preventative maintenance.

We believe that upon completion of the 1993 refueling outage pump inspection, together with the commitment to develop a future inspection frequency, this issue can be closed out.

Sincerely,

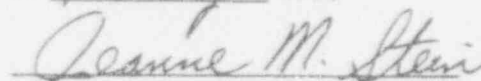


C. R. Steinhardt
Senior Vice President - Nuclear Power

DJM

cc - US NRC - Region III
Mr. Patrick Castleman, US NRC

Subscribed and Sworn to
Before Me This 26th Day
of February 1993


Notary Public, State of Wisconsin

My Commission Expires:

June 18, 1995