



August 9, 1994

OCAN089403

U. S. Nuclear Regulatory Commission
Document Control Desk
Mail Station P1-137
Washington, DC 20555

Subject: Arkansas Nuclear One - Units 1 and 2
Docket Nos. 50-313 and 50-368
License Nos. DPR-51 and NPF-6
Close-out Of NRC Bulletin 88-04, "Potential Safety-Related Pump Loss"

Gentlemen:

Per your request, this letter confirms completion of actions described in our letter dated December 19, 1989, to close-out NRC Bulletin 88-04, "Potential Safety-Related Pump Loss." Specifically, modifications and procedure changes for the high pressure injection (HPI) system are complete.

Our December 19, 1989 (OCAN128905), letter stated that plans called for the addition of venturis to the HPI system. The venturis were to be installed in an effort to ensure that sufficient flow would be provided to the reactor core in the event of a complete HPI line break. A design change¹ to the HPI system was developed and installed during the Arkansas Nuclear One - Unit 1 (ANO-1) December 1989 outage to permit operation of ANO-1 at 100% full power. However, during post modification testing, an unexpected high level of vibration was experienced due to the venturis. Consequently, ANO removed the venturis, restored the system to its previous configuration, and continued to limit power to 80%. Additional previously considered options were reevaluated in order to develop an optimum design to allow 100% full power operation.

A design change package (DCP 89-1012B) was subsequently installed during refueling outage 1R9 (October 1, 1990 - January 6, 1991). The DCP involved the installation of four additional injection lines with throttling isolation valves and flow instrumentation powered by the same train of safety grade power as the pump which supplies them. With this modification, each injection pump is able to supply borated water through four lines with individual flow indication and throttling isolation valves. Given any single failure,

¹This design and its basis are further discussed in our letter dated September 26, 1989 (ICAN098903).

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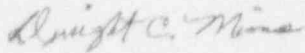
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this arrangement allows a broken line to be throttled independently to enable the intact lines to provide adequate HPI flow. This modification is discussed further in our license amendment request submitted to the NRC on August 8, 1990 (1CAN089002) and in the NRC's Safety Evaluation dated December 5, 1990 (1CNA129001).

Should you have questions, please contact me.

Very truly yours,



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Director, Licensing

DCM/dwb

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