



444 South 16th Street Mall
Omaha NE 68102-2247

December 14, 2004
LIC-04-0125

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

- References:
1. Docket No. 50-285
 2. Letter from OPPD (Ralph L. Phelps) to NRC (Document Control Desk) dated May 21, 2004, "Incorporation of Allowance to Secure Containment Spray Pumps During a Loss-of-Coolant-Accident to Minimize the Potential for Containment Sump Clogging" (LIC-04-0050)
 3. Letter from NRC (Alan B. Wang) to OPPD (R. T. Ridenoure) dated November 19, 2004, Request for Additional Information (TAC No. MC3217) (NRC-04-0138)

SUBJECT: Response to Request For Additional Information Regarding License Amendment Request, "Incorporation of Allowance to Secure Containment Spray Pumps During a Loss-of-Coolant-Accident to Minimize the Potential for Containment Sump Clogging"

In support of the License Amendment Request, "Incorporation of Allowance to Secure Containment Spray Pumps During a Loss-of-Coolant-Accident to Minimize the Potential for Containment Sump Clogging" (Reference 2), the Omaha Public Power District (OPPD) provides the attached response to the Nuclear Regulatory Commission's (NRC's) Request for Additional Information of Reference 3.

I declare under penalty of perjury that the forgoing is true and correct. (Executed on December 14, 2004). No commitments to the NRC are made in this letter.

If you have any questions or require additional information, please contact Thomas R. Byrne of the Fort Calhoun Station Unit No. 1 Licensing staff at (402) 533-7368.

Sincerely,

Ross T. Ridenoure
Vice President

RTR/TRB/trb

Attachment 1: Response to Request For Additional Information Regarding License
 Amendment Request, "Incorporation of Allowance to Secure Containment
 Spray Pumps During a Loss-of-Coolant-Accident to Minimize the Potential
 for Containment Sump Clogging"

c: Division Administrator - Public Health Assurance, State of Nebraska

ATTACHMENT 1

Response to Request For Additional Information Regarding License Amendment Request, "Incorporation of Allowance to Secure Containment Spray Pumps During a Loss-of-Coolant-Accident to Minimize the Potential for Containment Sump Clogging"

Question 1:

For the manual operator actions required to reduce to one [Containment Spray] CS train operation, are all required actions taken from the main control room? Are there any actions required to be taken from the plant (i.e., from local control stations)? Describe the actions to reduce to one CS train.

OPPD Response:

- a) All actions are taken from the Control Room.
- b) The only action to reduce to the one CS pump is to take the control switch on the Control Room Panel to the "Pull-to-Lock" position. There are no additional actions required outside of the Control Room.

Question 2:

Using ANSI/ANS 58.8 guidance, the analysis on page 7 of their May 24, 2004 submission indicates that the estimated time for operators to take all the required actions that terminate the CS pumps is approximately four minutes. The licensee further states that the emergency operating procedures (EOPs) do not direct these actions until other, more time restrictive actions such as post trip actions, safety function status checks, or tripping of the reactor coolant pumps are performed. However, the required actions (i.e., to terminate the CS pumps) are intended to be taken as soon as possible and prior to the recirculation actuation signal (RAS). [a] Is terminating to one CS train "time sensitive"? [b] How much time is there from when operators complete the more time restrictive actions until the RAS is received? [c] Does this time vary as a function of the [Loss of Coolant Accident] LOCA size or, is it constant? [d] If the time is variable, what is the shortest amount of time that operators will have to successfully complete the actions to terminate one CS train (i.e., will operators have at least four minutes to complete the required actions under all LOCA conditions?).

OPPD Response:

- a) It is preferred that the action takes place prior to RAS to provide the benefit of delaying time until switchover to the sump; however, it is not critical. Other benefits of reducing CS flow are the reduction in debris transport to the sump once RAS switchover has occurred and preservation of a CS pump for use in later mitigation strategies. If the action is not completed prior to the RAS switchover, then it should be taken as soon as practicable thereafter.
- b) It is assumed that the operators can accomplish the more time restrictive actions in 10 minutes. Assuming a time to RAS of 20 minutes, a period of 10 minutes is available to reduce to one CS train operation.
- c) The time to RAS varies as a function of break size. For the Large Break LOCA scenario, with the Safety Injection Refueling Water Storage Tank (SIRWT) at minimum Technical Specification level and all pumps (3 CS pumps, 3 High Pressure Safety Injection (HPSI) pumps, and 2 Low Pressure Safety Injection (LPSI) pumps) running at full capacity, the time to RAS switchover is approximately 20 minutes [Reference Fort Calhoun Station USAR, Section 6.2.3.1]. For smaller breaks, where HPSI and LPSI pumps do not operate at maximum capacity, the time to RAS will be delayed.
- d) During the large break LOCA conditions in c) above, the operators will have approximately 10 minutes to complete the reduction to one CS train operation. If this action is not completed prior to RAS, this action will be performed after RAS when time is available. No timeline for stopping excess CS pumps need be specified. There is no impact on accident mitigation if the CS pumps are stopped after RAS since the goal of stopping the excess CS pumps is preservation of a CS pump for use in later mitigation strategies.