

Omaha Public Power District
1623 Harney Omaha, Nebraska 68102
402/536-4000

May 23, 1985
LIC-85-215

Mr. James R. Miller, Chief
Office of Nuclear Reactor Regulation
Division of Licensing
U. S. Nuclear Regulatory Commission
Washington, DC 20555

References: (1) Docket No. 50-285

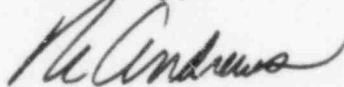
(2) Letter NRC (J. R. Miller) to OPPD (R. L. Andrews) dated April 23, 1985

Dear Mr. Miller:

Request for Additional Information
Concerning Reactor Coolant Pump Trip

The Omaha Public Power District received your letter (Reference (2)) concerning this subject. Please find attached our responses to your questions.

Sincerely,



R. L. Andrews
Division Manager
Nuclear Production

RLA/DJM/rh

Attachment

cc: LeBoeuf, Lamb, Leiby & MacRae
1333 New Hampshire Avenue, N.W.
Washington, DC 20036

Mr. E. G. Tourigny, NRC Project Manager
Mr. L. A. Yandell, NRC Senior Resident Inspector

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Question #1

Does any containment isolation signal result in the termination of systems essential for continued operation of the reactor coolant pumps? If so, identify the signals and systems effected.

District Response

The logic for the closure of containment isolation valves (HCV-438A through D) for the component cooling water going into containment is designed such that a CIAS (Containment Isolation Actuation Signal) and a low component cooling water pressure less than 60 psig must occur concurrently before the isolation valves will close. Thus, Fort Calhoun Station does not experience an isolation of an essential system needed for continued RCP operation upon CIAS.

Question #2

If essential water services are terminated, provide a description of the operator guidelines, training, and procedures in place (or to be implemented) which assure that these services are restored in a timely manner to prevent seal damage or failure, once a non-LOCA situation has been confirmed.

District Response

As discussed in response to Question #1, essential water services to the RCP's are not terminated on CIAS. It should be noted that the operator has the capability to override the isolation signal on the component cooling system, even if the pressure in the component cooling water system falls below 60 psig. This capability is identified and discussed during operator training.

Question #3

Provide confirmation, including the technical basis, that containment isolation with continued RCP operation will not lead to seal or pump damage or failure.

District Response

Because all essential systems for operation of the RCP's continue to be available upon CIAS (see answer to #1), the pumps can continue operating indefinitely.

Question #4A

Since an RCP trip is required for LOCA events, assurance must be provided that an RCP trip, when required, will occur. To address this concern, provide the following information:

- Identify the components required to trip the RCP's. Include relays, power supplies, and breakers. Address reliability and alternate trip methods.

District Response

The four RCP's are supplied from each of the four 4.16KV buses, RC-3A bus 1A1, RC-3B bus 1A2, RC-3C bus 1A3, and RC-3D bus 1A4. Tripping of the RCP breakers in a DBA (Design Basis Accident) situation is accomplished, normally, by tripping the breaker from the control switch in the control room.

This tripping requires the station's 130 VDC control power system, the control switch, the breakers, and their operating mechanisms.

In the event the control room switch fails to trip the breaker, the trip may be accomplished locally either by electric control switch, or manually in the breaker cubical. It should be noted that for electrically tripped breakers the buses may be switched to an alternate control power supply which is operated from the switchgear room.

Reliability of the Fort Calhoun 4.16KV system is maintained through periodic breaker maintenance, relay maintenance, and trip check testing. The operating history of the 4.16KV system has been excellent. The District has a system in place to track information from INPO and the NRC so that failures at other plants of various electrical equipment are evaluated for their potential of occurring at the Fort Calhoun Station. Maintenance and service on the Fort Calhoun electrical system is affected by these notices. Thus, actions to modify equipment to prevent malfunctions observed at other plants, but not observed at Fort Calhoun, have been and will continue to be taken.

Question #4B

If necessary, as a result of the location of any critical component, include the effects of adverse containment conditions on RCP trip reliability. Describe the basis for the adverse containment parameters selected.

District Response

In accordance with the District's 10 CFR 50.49 program, (electrical equipment qualification) none of the equipment needed to trip the RCP's is considered to be in a "harsh" environment under postulated accident conditions. Access for local tripping will not be inhibited under any accident analyzed in the Updated Safety Analysis Report.