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402/636-2000

March 3, 1993
LIC-93-052

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

Reference: Docket No. 50-285

Subject: Special Report on Inoperability of Post-Accident Monitoring Instrumentation

Gentlemen:

The Omaha Public Power District (OPPD), holder of Operating License DPR-40, submits this report pursuant to the requirements of Fort Calhoun Station Technical Specification (TS) 2.21 "Post-Accident Monitoring Instrumentation."

Technical Specification 2.21, Table 2-10, item 8, note (i) specifies that if the number of operable Core Exit Thermocouples (CETs) is less than four CETs per quadrant as required by NUREG-0737, either restore to at least four CETs per quadrant within seven days or prepare and submit a special report to the Commission pursuant to Technical Specification 5.9.3 within 30 days, outlining the actions taken, the cause of the inoperability and the plans for restoring the CETs to operable status. The actual number of CETs per quadrant for each channel is shown in Figure 1 of the attachment.

Technical Specification 2.21, Table 2-10, item 9, note (k) specifies that if the number of operable Heated Junction Thermocouple (HJTC) channels is one less than the minimum operable channels requirement (two HJTC channels), then OPPD must either restore the inoperable channel to operable status within seven days of discovery of loss of operability if repairs are feasible during power operation (Mode 1), or prepare and submit a special report to the Commission pursuant to Technical Specification 5.9.3 within 30 days outlining the actions taken, the cause of the inoperability and the plans for restoring the HJTC channel to operable status.

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On February 2, 1993, at 0625 hours the channel A Qualified Safety Parameter Display System (QSPDS) was taken out of service (Channel B QSPDS remained in service) for the installation of modification MR-FC-89-082, "QSPDS Communication Priority Change." Thus, the CETs shown for QSPDS Channel A in Figure 1 and one channel of HJTCs were out of service, invoking notes (i) and (k) of TS Table 2-10. During the post-modification testing on February 4, 1993, eleven thermocouples (ten CETs and one unheated HJTC) did not indicate as expected. As a result of the failure, the system was not able to be restored to service within the TS specified seven days.

To ensure that the modified configuration was not the cause of the unexpected indications, the system was returned to the pre-modification condition. The eleven thermocouples continued to indicate incorrectly. Further troubleshooting revealed a failed communication card, which had a firmware change as part of the modification, was the cause of the erroneous indication. Extreme care was taken to prevent static discharge damage to the circuit cards and system power transients (cycling of system power) were kept to a minimum during the modification. However, OPPD suspects that the card was operable up to the time of the modification and failed as a result of either a static discharge or a power transient during the modification.

The circuit card was replaced and the modification reinstalled. Post-modification testing was completed with satisfactory results. The system was declared operable on February 12, 1993 at 1858 hours. The seven days specified in notes (i) and (k) of Table 2-10 of the Technical Specifications were exceeded by four days thus requiring this report.

If you have any questions, do not hesitate to contact me or my staff.

Sincerely,

W. G. Gates

W. G. Gates
Vice President

WGG/cfs

c: LeBoeuf, Lamb, Leiby & MacRae
S. D. Bloom, NRC Project Manager
J. L. Milhoan, NRC Regional Administrator, Region IV
R. P. Mullikin, NRC Senior Resident Inspector

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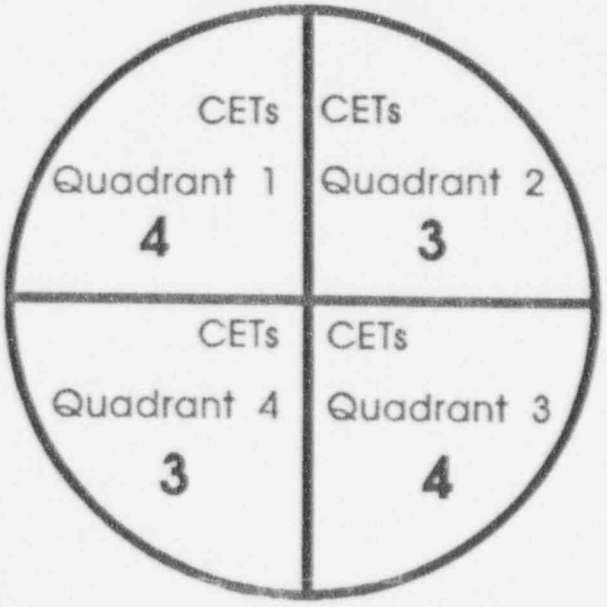
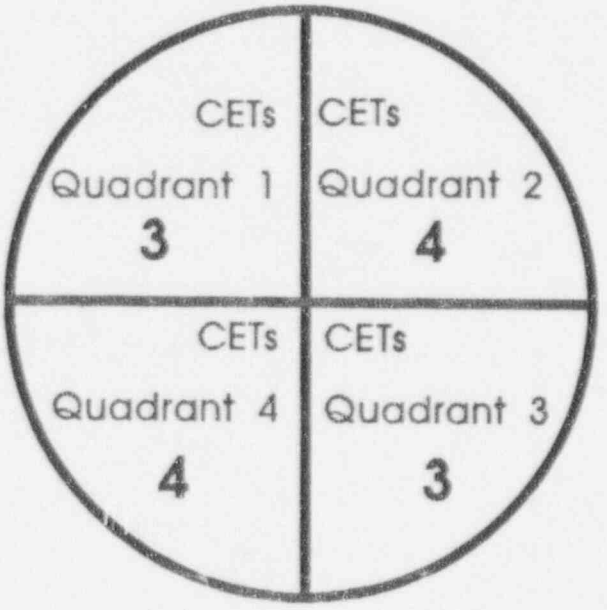
Attachment

Number of Core Exit Thermocouples Installed in QSPDS Channels A & B



QSPDS Channel A



QSPDS Channel B

Figure 1