Nebraska Public Power District

COOPER NUCLEAR STATION
P.O. BOX 98, BROWNVILLE, NEBRASKA 68321
TELEPHONE (402)825-3811
FAX (402)825-5205

NLS960173
September 13, 1996

U.S. Nuclear Regulatory Commission
Attention: Document Control Desk
Washington, D.C. 20555-0001

Gentlemen:

Subject: Revision of Commitment
Cooper Nuclear Station, NRC Docket 50-298, DPR-46

References:
1. NEDO-31558 dated March 1988, "Position on NRC Regulatory Guide 1.97, Revision 3, Requirements for Post-Accident Neutron Monitoring System"
2. Letter to NRC from G. R. Horn (NPPD) dated June 7, 1993, "Cooper Nuclear Station Compliance with NEDO-31558"
3. USNRC Generic Letter 94-02 dated July 11, 1994, "Long-Term Solutions and Upgrade of Interim Operating Recommendations for Thermal-Hydraulic Instabilities in Boiling Water Reactors"
4. Letter to NRC from J. H. Mueller (NPPD) dated December 4, 1995, "Cooper Nuclear Station Compliance with NEDO-31558, 'Position on NRC Regulatory Guide 1.97, Revision 3, Requirements for Post-Accident Neutron Monitoring System'"

By letter dated June 7, 1993 (Reference 2), Nebraska Public Power District (District) committed to implementing a plant modification to relocate the APRM and LPRM card power sources to two redundant uninterruptable power sources to conform with the guidance of NEDO-31558 (Reference 1). By letter dated December 4, 1995 (Reference 4), this commitment was integrated with actions being taken in response to Generic Letter 94-02 (Reference 3) and rescheduled from the original commitment date of prior to startup from refueling outage RE16 to RE 17. As a result of further evaluation, the commitment to implement the described modification is being retracted.

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Basis for Commitment Change

Paragraph 5.2.8 of NEDO-31558 (Reference 1) establishes the alternate requirements necessary to meet the intent of Regulatory Guide 1.97. Specifically, as stated in Paragraph 5.2.8:

"Power supplies should be reliable and available during most events in order to avoid unnecessary actions in some events such as are described in Section 4.0. They should be from uninterruptable sources in order to monitor neutron flux continuously during automatic load shed events, but because of the many alternate methods to establish reactor power (see Section 6.0), it is not necessary that Class 1E power be provided."

These requirements are met as described below.

The Average Range Power Monitors (APRMs) and the Local Power Range Monitors (LPRMs) are divided into two divisions. Each division is normally powered by a Reactor Protection System (RPS) high inertia motor-generator (MG) set, with each MG set powered from a separate critical bus. During power operation, these critical buses are powered from the Normal Transformer. When this source is unavailable, three alternate feeders are available through automatic, fast transfer breakers. These are, listed in the order of the selection logic:

- The Startup Transformer - the normal off-site source, supplied through non-critical buses.
- The Emergency Transformer - the back-up off-site source supplied directly to the 4160 VAC critical buses.
- The Emergency Diesel Generators (EDGs) - the back-up on-site source. (Note that if power is lost to the critical buses and the above sources are unavailable, restoration of power could be delayed up to the time required to start and load the Emergency Diesel Generators.)

In addition to the above, each division can be powered by the other division's supply through a manual break-before-make transfer switch.

Based on the above described configuration, only during a complete loss of off-site power (LOOP) would there be a temporary loss of all APRM and LPRM indication. During this time, reactor status could be determined by the Rod Position Indication System (RPIS). (Power to RPIS is provided by the 250 VDC batteries through the No-Break Power Panel.) Under these conditions, restoration of the APRM and LPRM indications would be accomplished by:

1. Repowering the critical buses by the EDGs (automatic action).
2. Manually resetting the electrical protection assemblies (EPAs) and transferring RPS power to the alternate source.

Direction for completing these actions is provided in Abnormal Procedure 2.4.6.12, "RPS Power Supply Failure," and Emergency Procedure 5.2.5, "Loss of Normal AC Power - Use of Emergency AC Power."

In addition, the operators could use the Intermediate Range Monitor (IRM) system to determine core power. The IRM system utilizes detectors that are withdrawn from the core during operation at higher power levels to prevent damage from high neutron flux. The IRM drives are supplied with power from an essential bus through a non-essential distribution panel. The IRM electronics are powered by two 24 VDC battery chargers, supplied from essential buses, which are backed up by redundant 24 VDC batteries. Thus, the IRM system would remain available if a LOOP were to occur. If necessary, the IRMs could be inserted into the core and used as another separate and diverse means to confirm reactor shutdown.

In summary, the District is currently in compliance with the requirements of NEDO-31558 as delineated in Paragraph 5.2.8. Therefore, the commitment to implement a plant modification to relocate the APRM and LPRM card power sources to two redundant uninterruptable power sources is being retracted. This position is similar to that presented by Monticello, Fitzpatrick, and Brunswick, and approved by the NRC.

Should you have any questions concerning this matter, please contact me.

Sincerely,

P D Graham

P. D. Graham
Site Manager

/crm

Attachment

cc: Regional Administrator
USNRC - Region IV

Senior Project Manager
USNRC - NRR Project Directorate IV-1

Senior Resident Inspector
USNRC

NPG Distribution

Correspondence No: NLS960173

The following table identifies those actions committed to by the District in this document. Any other actions discussed in the submittal represent intended or planned actions by the District. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Licensing Manager at Cooper Nuclear Station of any questions regarding this document or any associated regulatory commitments.

| COMMITMENT | COMMITTED DATE OR OUTAGE |
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