

February 28, 2005

MEMORANDUM TO: Cynthia D. Pederson, Director
Division of Reactor Safety
Region III

FROM: James E. Lyons, Deputy Director **/RA/**
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 - RESPONSE
TO TASK INTERFACE AGREEMENT (TIA 2004-02), REQUEST FOR
TECHNICAL ASSISTANCE REGARDING DEGRADED VOLTAGE
PROTECTION (TAC NOS. MC3428 AND MC3429)

By memorandum dated June 7, 2004 (ML041590273), you requested technical assistance from the Office of Nuclear Reactor Regulation (NRR) regarding the lack of automatic degraded voltage protection at Donald C. Cook Nuclear Plant, Units 1 and 2 (CNP), during normal operations (when power is supplied through the unit auxiliary transformers) and for the first 30 seconds following an accident signal when engineered safety features loads are being sequenced onto the safety-related electrical buses. You questioned whether this degraded voltage protection design met the current licensing basis and was adequate.

The staff preliminarily concluded that the degraded voltage protection design at CNP was not in accordance with previously established U. S. Nuclear Regulatory Commission (NRC) acceptance criteria and should be modified to include degraded voltage protection during normal operation and during the first 30 seconds of design-basis events. Since the preliminary staff conclusion was adverse to the licensee, in accordance with NRR Office Instruction COM-106, "Control of Task Interface Agreements," the staff gave the licensee the opportunity to provide to the staff any relevant information regarding the issue that the staff may not have considered. During a telephone conference on November 1, 2004, (ML043100172), the licensee was informed of the staff's preliminary conclusions. By letter dated November 4, 2004, (ML042920158), the NRR staff issued a request for relevant information. During a telephone conference on November 18, 2004 (ML043280096), the licensee provided information regarding (1) the electrical distribution system design and operation, (2) their understanding of the NRC's safety concerns from the November 4, 2004, letter, (3) their understanding of the licensing basis of the degraded voltage protection design, and (4) their understanding of the NRC's compliance concerns from the November 4, 2004, letter. These issues were further discussed during a meeting at NRC Headquarters with the licensee on December 8, 2004 (ML043440087). The licensee provided a written response on December 10, 2004 (ML043500015), to the NRC's November 4, 2004, request for relevant information.

Upon consideration of the licensing basis documents and the information provided by the licensee, the NRR staff revised its preliminary conclusions. The staff concludes that the existing design is in conformance with the current licensing basis and, therefore, is in compliance with the technical specification requirements.

However, the staff considers that the degraded voltage protection design at CNP may either not provide adequate protection or not be in compliance with existing regulatory requirements or written licensee commitments. If the staff concludes that the design does not provide adequate protection or is not in compliance, then the licensee may be required to modify the design to provide automatic degraded voltage protection during normal operations. Since the staff concludes that the existing design is in conformance with the current licensing basis, a conclusion that the design should be modified has been determined to be a backfit for CNP in accordance with 10 CFR 50.109, "Backfitting." The staff's conclusions are documented in further detail in the backfit determination dated January 18, 2005 (ML050050462), which, in accordance with NRR Office Instruction LIC-202, "Procedures for Managing Plant-Specific Backfits and 50.54(f) Information Requests," is not publicly available. Further resolution of this issue with the licensee will be pursued by NRR in accordance with LIC-202.

Docket Nos. 50-315 and 50-316

cc: W. Lanning
C. Casto
D. Chamberlain

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***Per phoncon with SSheldon and FLyon

*Previously concurred

**Nonconcurrence per ML050330614

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