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INDIANA
MICHIGAN
POWER

C1199-11
10 CFR 50.90

November 5, 1999

Docket Nos.: 50-315
50-316

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Mail Stop O-P1-17
Washington, DC 20555-0001

Donald C. Cook Nuclear Plant Units 1 and 2
TECHNICAL SPECIFICATIONS CHANGE REQUEST
EMERGENCY CORE COOLING SYSTEM ACCUMULATORS

Pursuant to 10 CFR 50.90, Indiana Michigan Power Company (I&M), the Licensee for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, proposes to amend Appendix A, Technical Specifications (T/S), of Facility Operating Licenses DPR-58 and DPR-74. I&M proposes to revise T/S Surveillance Requirement 4.5.1.c to require verification that power is removed from each emergency core cooling system accumulator isolation valve operator instead of verification that each accumulator isolation valve breaker is removed from the circuit. In addition, I&M proposes to revise T/S 3.5.1 to change "pressurizer pressure" to "reactor coolant system pressure" in the applicability and action statement requirements. The Bases for T/S 3/4.5.1 will also be revised to reflect both changes. Additionally, administrative changes are proposed to the page format. This request is being submitted as a corrective action in Licensee Event Report 315/99-024-00, which was submitted on October 18, 1999, to report a noncompliance with T/S Surveillance Requirement 4.5.1.c.

Attachment 1 provides a detailed description and safety analysis to support the proposed changes. Attachments 2A and 2B provide marked up T/S pages for Unit 1 and Unit 2, respectively. Attachments 3A and 3B provide the proposed T/S pages with the changes incorporated for Unit 1 and Unit 2, respectively. Attachment 4 describes the evaluation performed in accordance with 10 CFR 50.92(c), which concludes that no significant hazard is involved. Attachment 5 provides the environmental assessment.

A001

I&M requests approval of this request by December 28, 1999, to support the restart of CNP Unit 2.

No previous submittals affect T/S pages that are submitted in this request. If any future submittals affect these T/S pages, then I&M will coordinate changes to the pages with the NRC Project Manager to ensure proper T/S page control when the associated license amendment requests are approved.

Copies of this letter and its attachments are being transmitted to the Michigan Public Service Commission and Michigan Department of Environmental Quality, in accordance with the requirements of 10 CFR 50.91.

Should you have any questions, please contact Mr. Robert C. Godley, Director of Regulatory Affairs, at (616) 466-2698.

Sincerely,

R. P. Powers
Vice President

SWORN TO AND SUBSCRIBED BEFORE ME

THIS 5th DAY OF November, 1999

Notary Public

PATRICIA A. EDDIE
NOTARY PUBLIC - BERRIEN CO. MICH
MY COMMISSION EXPIRES
NOVEMBER - 5 - 2000

My Commission Expires _____

/dms

Attachments

c: J. E. Dyer
MDEQ - DW & RPD
NRC Resident Inspector
R. Whale

ATTACHMENT 1 TO C1199-11

DESCRIPTION AND SAFETY ANALYSIS FOR THE PROPOSED CHANGES

A. Summary of the Proposed Changes

Indiana Michigan Power Company (I&M), the Licensee for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, proposes to amend Appendix A, Technical Specifications (T/S), of Facility Operating Licenses DPR-58 and DPR-74. I&M proposes to revise T/S Surveillance Requirement 4.5.1.c to require verification that power is removed from each emergency core cooling system accumulator isolation valve operator instead of verification that each accumulator isolation valve breaker from the circuit. In addition, I&M proposes to revise T/S 3.5.1 to change "pressurizer pressure" to "reactor coolant system [RCS] pressure" in the applicability and action statement requirements. The Bases for T/S 3/4.5.1 will also be revised to reflect both changes. Additionally, administrative changes are proposed to the page format. This request is being submitted as a corrective action in Licensee Event Report 315/99-024-00, which was submitted on October 18, 1999, to report a noncompliance with T/S Surveillance Requirement 4.5.1.c.

The proposed changes are described in detail in Section E of this attachment. T/S pages that are marked to show the proposed changes are provided in Attachments 2A and 2B for Unit 1 and Unit 2, respectively. Note that these changes may reflect formatting that differs slightly from the current pages.

B. Description of the Current Requirements

T/S Surveillance Requirement 4.5.1.c requires verifying that power to the accumulator isolation valve operator is disconnected by removal of the breaker from the circuit at least once per 31 days when RCS pressure is above 2000 psig.

T/S 3.5.1 Actions "a" and "b" require reducing pressurizer pressure to less than or equal to 1000 psig within 6 hours if an accumulator becomes inoperable.

The Applicability for T/S 3.5.1 is Modes 1, 2, and 3 with pressurizer pressure above 1000 psig. In addition, the term "pressurizer pressure" is used in the Bases for the specification.

C. Bases for the Current Requirements

The accumulators are passive engineered safety features (ESF) that rely upon nitrogen gas as the motive force for injection. One accumulator is attached to each of the cold legs of the RCS. During normal plant operation, each accumulator is isolated from the RCS by two check valves

in series. When RCS pressure decreases below 600 psig, the contents of each accumulator are released into the RCS.

The basis of T/S Surveillance Requirement 4.5.1.c for removing power from the accumulator power operated isolation valves is to prevent a single active failure from closing the isolating valve. Verification that the accumulator isolation valve is open ensures that the accumulator is aligned to the RCS and can perform its ESF function. The accumulator isolation valve is motor operated and is provided to isolate the accumulators during shutdown conditions when the accumulators are not required by T/S.

The pressurizer pressure criterion in T/S 3.5.1 is based on establishing an RCS pressure below which the accumulators are not needed. At pressures less than 1000 psig, the rate of RCS blowdown is such that the safety injection pumps can provide adequate injection to ensure that peak clad temperature remains below the 10 CFR 50.46 limit of 2200°F.

D. Need for Revision of the Requirement

T/S Surveillance Requirement 4.5.1.c should be changed to reflect the actual design of the plant. As part of Amendment 12 for Unit 1, issued on March 30, 1976, T/S Surveillance Requirement 4.5.1.c. was revised to the guidance of NUREG-0452, "Standard Technical Specifications - Westinghouse Pressurized Water Reactors." It was believed that placing the manual switch handle on the molded-case circuit breakers (MCCB) that supplied power to the accumulator isolation valve operators to the "OFF" position would satisfy the T/S surveillance requirement. However, I&M later determined that the CNP design of the 600-volt MCCBs does not support literal compliance with the surveillance requirement. The MCCBs are not designed for ready removal. Physical removal of the breaker from the circuit can not be performed without an increased concern for station personnel safety. Additionally, to preclude nitrogen injection into the RCS following system depressurization, the emergency operating procedures direct the re-powering and closing the accumulator isolation valves.

The references to "pressurizer pressure" should be changed to provide consistency between T/S 3.5.1, the Bases, and plant design. Each of these references involves a 1000 psig criterion for pressurizer pressure. However, control room instrumentation for narrow-range pressurizer pressure displays a range of 1700-2500 psig and cannot display 1000 psig.

E. Description of the Proposed Changes

I&M proposes to revise T/S Surveillance Requirement 4.5.1.c to delete the words "by removal of the breaker from the circuit." I&M also proposes to change "pressurizer pressure" to "RCS pressure" throughout T/S 3.5.1 and the associated Bases section. Additionally, I&M proposes to

add text to T/S Bases 3/4.5.1 to reflect the guidance provided in NUREG-1431, "Standard Technical Specifications – Westinghouse Plants," Revision 1, for the surveillance requirement. The proposed Bases change notes that an active failure could not result in the undetected closure of an accumulator motor-operated isolation valve.

I&M proposes several administrative changes to the format of the revised pages as part of an ongoing effort to improve their appearance. For the T/S pages, these changes include adding "3/4 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENTS" to the header, adding the acronym "ECCS" in the header, adding "Page" in the footer, and deleting "NO." in the footer. For the T/S Bases pages, these changes include rearranging the order of the text in the header, deleting "NO." in the footer, and adding "Page" in the footer. An additional administrative change is proposed on page 3/4 5-1. The abbreviation "Std." is replaced with the word "Standard."

F. Bases for the Proposed Changes

The intent of T/S Surveillance Requirement 4.5.1.c remains to ensure that no single failure will isolate the accumulator. The basis for the surveillance is to ensure that an active failure could not result in the undetected closure of an accumulator motor-operated isolation valve. Deleting the words "by removal of the breaker from the circuit" allows power to be removed from the isolation valve operator without physical removal of the circuit breaker. Stating the requirement in this manner satisfies the Bases for the T/S while reflecting the actual plant design, which precludes ready removal of the breaker.

When the MCCBs are placed in the "OFF" position, the associated valves cannot spuriously operate. Placing the breaker switch to "OFF" disconnects the thermal and magnetic trip elements within the MCCB from the line terminal. MCCBs do not contain springs to close the breakers. Once opened, the breakers can only be closed by manually operating the manual switch handle.

In order for repositioning of the valve to occur while in the "OFF" position, the operator must close the MCCB coupled with either an active single failure or deliberate operator action in the control room. Placing the breaker in the "OFF" position is acceptable because two positive actions must occur for the valve to reposition.

The necessary protection against a single active failure is provided with the control power removed from the accumulator isolation valve motor-operator. Thus, physical removal of the breaker from the circuit is unnecessary. In addition, the proposed change to the surveillance requirement provides clear description on what is an acceptable method for removing power from the accumulator isolation valves.

The proposed changes provide a surveillance requirement that is consistent with plant design and NUREG-1431, "Standard Technical Specifications – Westinghouse Plants," Revision 1. NUREG-1431 states the use of pressurizer pressure for this surveillance requirement; however, CNP is designed to use RCS pressure indications at lower system pressures.

The NRC has approved similar changes to the accumulator isolation valve surveillance for other utilities with equivalent designs. For example, Commonwealth Edison has successfully implemented this requirement at Byron and Braidwood.

Changing the T/S text to read "reactor coolant system pressure" instead of "pressurizer pressure" provides consistency with the action statements, applicability, and the Bases. RCS pressure and pressurizer pressure instrumentation measure a similar parameter in the primary coolant system. Since the RCS is a closed-loop fluid system, pressure instruments should indicate approximately the same value. There is no significant difference between the instrument readings because they are corrected for range, height, and accuracy. There is no significant change in the margin of pressure between when the accumulators are required to be aligned at 1000 psig and the upper limit for nitrogen cover-pressure of 658 psig as specified in T/S 3.5.1.d.

Since there is no wide-range pressurizer pressure instrumentation and the pressurizer pressure narrow-range instruments are calibrated for a 1700-2500 psig range, RCS pressure indicators are used for T/S Surveillance Requirement 4.5.1.c. Using RCS pressure wide-range indicators is acceptable because they have a calibrated range of 0-5000 psig, which provides a more accurate indication of RCS pressure at the T/S Applicability requirement of 1000 psig.

The page format changes are administrative and are not intended to change the meaning of any requirement.

G. Impact of the Proposed T/S Change

There is no increase in the probability that an accumulator isolation valve will spuriously close by complying with the proposed T/S change. In addition, no new single failure modes are introduced by the proposed T/S change. Therefore, there is no increase in risk associated with this change.

H. Impact on Previous Submittals

No previous submittals affect T/S pages that are submitted in this request. If any future submittals affect these T/S pages, then I&M will coordinate changes to the pages with the NRC Project Manager to ensure proper T/S page control when the associated license amendment requests are approved.