UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 164 TO FACILITY OPERATING LICENSE NO. DPR-58

AND AMENDMENT NO. 149TO FACILITY OPERATING LICENSE NO. DPR-74

INDIANA MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-315 AND 50-316

1.0 INTRODUCTION

By letter dated August 7, 1990, the Indiana Michigan Power Company (the licensee) requested amendments to the Technical Specifications (TS) appended to Facility Operating License Nos. DPR-58 and DPR-74 for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2. The proposed amendments would decrease the surveillance frequency of specific safety-related pumps and valves for Unit 1 to be more consistent with Unit 2 surveillance requirements and the Inservice Testing (IST) Program. It would also modify Unit 2 surveillance frequency for auxiliary feedwater pumps to be more consistent with the IST Program. The amendments would also change references to the American Society of Mechanical Engineers (ASME) Code, Section XI and make specific editorial changes.

2.0 DISCUSSION AND EVALUATION

The licensee is proposing that all safety-related pumps in their TS be tested at a frequency specified in Specification 4.0.5. Specification 4.0.5 states that safety-related pumps shall be tested in accordance with ASME Code, Section XI unless written relief has been granted. The D. C. Cook IST program is based on the 1983 Edition of the ASME Code. This edition of the Code requires that testing of these pumps be conducted every three months during normal plant operation. The following is a list of the affected pumps and their current testing frequencies:

Pump	Testing Frequency
Residual Heat Removal	once per 31 days
Safety Injection	once per 31 days
Centrifugal Charging	once per 31 days

Containment Spray	once per 31 days
Essential Service Water	once per 31 days
Component Cooling Water	once per 31 days
Boric Acid Transfer	once per 7 days
Auxilliary Feedwater	once per 7 days

The ASME Code, Section XI, paragraph IWP-3230 specifies that if a measured pump parameter enters the alert range, as defined in Table IWP-3100-2, then the testing frequency is doubled until the cause of the deviation is determined and the condition corrected. In reviewing the licensee's current testing frequencies, a majority of the pumps are currently tested monthly. Under the proposed TS change, if degradation occurs and a pump parameter falls into the alert range, the licensee would commence testing at an increased frequency until the problem would require surveillance at a frequency similar to the current testing frequency. Entering the Code-specified required action range would require the licensee to declare the pump inoperable. This aspect is unchanged by the TS change.

The staff believes that the ASME Code, Section XI quarterly testing frequency, coupled will increased testing of pumps performing in the alert range, is adequate to detect and monitor pump condition. The NRC endorses the ASME Code, Section XI and references this Code in 10 CFR 50.55a as the requirements for IST of pumps. Accordingly, the proposed TS change is acceptable.

2.2 Valve Cycling Requirements

2.2.1 Quarterly Stroke Frequency

The licensee has proposed to delete valve cycling requirements applicable to the boration and spray additive systems. Technical Specification 4.1.2.1.a.1, 4.1.2.2.a.1, and 4.6.2.2.a.1 require specific valves in these systems to be tested through at least one complete cycle of full travel every 7 or 31 days, depending on the system. The licensee stated in their proposed TS change request that the valve cycling requirements in the TS are redundant to the requirements in the licensee's IST program. Elimination of the TS valve cycling requirements will result in a decrease of valve cycling frequency to once per quarter. This frequency is required by the 1983 Edition of the ASME Code, Section XI which is the basis for the licensee's current IST program.

The ASME Code, Section IWV-3411, specifies that Category A and B valves shall be tested every 3 months with some exceptions. If a valve stroke time exceeds the previous stroke time test as specified in IWV-3417a, then the valve testing frequency is increased to once per month until the problem has been corrected. Therefore, for valves with a degraded condition, the proposed TS would require surveillance at a frequency identical to that required by current TS. If the valve stroke time exceeds the licensee-specified limiting

value, the valve will be declared inoperable. This aspect is unchanged by the TS change.

The staff believes that the ASME Code, Section XI quarterly testing frequency, coupled with monthly testing of valves that exceed their previous stroke time test by a Code-specified percentage, is adequate to detect and monitor valve condition. The NRC endorses the ASME Code in 10 CFR 50.55a as the requirements for IST of valves. Accordingly, the proposed TS change is acceptable.

2.2.2 Cold Shutdown Stroke Frequency

The licensee is proposing to remove portions of TS Sections 4.1.2.2.c and 4.6.2.2.c.1 (boration and spray additive systems, respectively) that require each power-operated valve in the flow path that cannot be tested at power to be stroked at least once every 18 months. The licensee stated that the testing requirements in the TS are redundant to the requirements in their IST program.

Valves that are included in the licensee's IST program that cannot be tested at power are tested at cold shutdowns and have a potential to be tested more than once per 18 months, depending on operation of the plant and the number of valves to be tested during cold shutdown. Removal of this testing requirement from the TS will not have any effect on the testing frequency of the valves in the above referenced specifications. Therefore, the change is acceptable.

2.2.3 Boron Injection System

The licensee is proposing to add an additional requirement to the Unit 1 TS. Section 4.1.2.2.c would require the licensee to verify that each automatic valve in the boron injection flow paths actuates to its correct position on a refueling water storage tank (RWST) sequencing signal every 18 months. This TS requirement currently exists in the Unit 2 TS. Inclusion of this requirement enhances the current TS and does not relax any current TS requirements. Therefore, the change is acceptable.

2.2.4 Steam Generator Stop Valves

The licensee is proposing to remove the test frequency and acceptance requirements from TS Section 4.7.1.5 and replacing these requirements with a reference to Specification 4.0.5. These requirements specify that the steam generator stop valves are to be part-stroked quarterly and verified to close fully within five seconds while the plant is in hot standby with T_{avg} greater than or equal to 541°F.

Specification 4.0.5 references ASME Code, Section XI. In the licensee's IST program, a cold shutdown justification is included to test these specific valves (MRV-210, -220, -230, and -240) by part-stroking the valves quarterly

and by conducting full-stroke testing of the valves when the plant is in hot standby and the reactor coolant system (RCS) temperature is greater than or equal to 541°F. This testing conforms to the requirements of the Code.

Examination of the TS and the IST program shows the steam generator stop valve testing frequency and method in these two documents are identical. Removal of the requirements from the TS is acceptable, since the purpose of the testing is to satisfy IST requirements.

2.3 Reference Changes for ASME Code Testing

References to the 1974 version of the ASME Code, Section XI were written into the TS to fulfill IST requirements for the pressurizer code safety valves, the power operated relief valves (PORV's), and the residual heat removal (RHR) safety valve. Currently, the IST program references the 1983 Edition of the ASME Code, Section XI. The licensee is proposing to delete the reference to the 1974 Code in TS 4.4.3, 4.4.9.3.3, and 4.7.1.1 and add references to Specification 4.0.5. In addition, the licensee is proposing to restructure Specification 4.4.9.3.1, 4.4.9.3.2, and 4.4.9.3.3 to separate the requirements for the PORV's and RHR safety valve.

Reference to Specification 4.0.5 will facilitate updating of IST requirements in the licensee's TS as the Code and the licensee's IST program are updated.

Therefore, the staff views the subsitution of the reference to the 1974 ASME Code with a reference to Specification 4.0.5 as acceptable.

The changes proposed by the licensee in TS 4.4.9.3.2 and 4.4.9.3.3 are to separate the requirements for the PORV's and RHR safety valve. No requirements have been added or deleted as a result of theses changes; therefore, the staff finds the changes acceptable.

2.4 Editorial Changes

The licensee is proposing to delete the top three lines from TS page 3/4 6-15 which have been repeated from the bottom three lines of 3/4 6-14. The licensee is also proposing to replace mathematical symbols with words on all pages changed by the proposed TS amendment.

The licensee's proposed editorial changes do not affect the content of the TS and are being made for clarity. Therefore, the staff finds all the proposed editorial changes to be acceptable.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Michigan State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change the requirements with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 or changes in surveillance requirements. The staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that these amendments involve no significant hazards consideration and there has been no public comment on such finding (55 FR 51178). Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of these amendments.

5.0 CONCLUSION

The staff has concluded, based on the considerations discussed above that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: J. Calaccino

Date: April 22, 1992