



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
WASHINGTON, D.C. 20555-0001**

**SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION**  
**RELATED TO AMENDMENT NO. 232 TO FACILITY OPERATING LICENSE NO. DPR-58**  
**AND AMENDMENT NO. 215 TO FACILITY OPERATING LICENSE NO. DPR-74**  
**INDIANA MICHIGAN POWER COMPANY**  
**DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2**  
**DOCKET NOS. 50-315 AND 50-316**

**1.0 INTRODUCTION**

By letter dated October 8, 1998, the Indiana Michigan Power Company (the licensee) requested amendments to the Technical Specifications (TSs) appended to Facility Operating License Nos. DPR-58 and DPR-74 for the Donald C. Cook Nuclear Plant, Units 1 and 2. The proposed amendments would change the TSs for both units to place tighter restrictions on the allowed outage (AOT) time for the refueling water storage tank (RWST) water level instrumentation. In addition, the proposed change adds a required action to the TSs requiring the Residual Heat Removal (RHR) pump trip function from the RWST to be bypassed if the required number of RWST level instruments are not restored to operable within 72 hours.

**2.0 EVALUATION**

The RWST level instrumentation provides level indication in the control room for the operators to switch from the injection phase to the recirculation phase following a loss-of-coolant accident (LOCA). The instrumentation also provides a bi-stable input to trip the RHR pump when the RWST level falls below 20 percent to protect the RHR pump. The AOT of the RWST level instrumentation is required to provide the overall reliability of the instrument.

The proposed TS change is being requested in response to concerns raised during the architect engineering inspection performed by the Nuclear Regulatory Commission in late 1997. During the inspection, concerns were raised that the AOTs for the RWST level instruments were not as restrictive as other emergency core cooling systems (ECCS) sub-systems. The RWST water level instrumentation has no automatic engineered safety function but is used to initiate switchover from the injection to the recirculation phase following a LOCA.

The proposed TS change will reduce the AOT permitted by the TS action statement from the current TS time of 30 days if one or both instruments are out of service to 72 hours. In addition, the revised TS will also limit plant operation with both RWST level instruments out of service because this condition is outside of operation of the facility as defined in the TSs. Therefore, TS 3.0.3 would be applicable and require the unit to be in cold shutdown within 36 hours. Changing the AOT for the RWST level instrumentation from 30 days to 72 hours is conservative and will ensure that instruments are available on a greater frequency while the units are in

power operation. The proposed change brings the AOT for the RWST level instrumentation into alignment with the AOT constraints applied to other ECCS sub-systems.

The proposed TS change requires operators to bypass the RWST low-level trip of the RHR pumps within 1 hour of when an RWST level instrument becomes inoperable. Bypassing the low-level trip provided by the RWST level instrumentation ensures that the RHR pumps will be available to meet the Engineered Safety Features function of injecting water into the core following a design basis accident. The loss of the RHR pump protection will be mitigated by the operator's action to switch from injection to recirculation using the approved Emergency Operating Procedure, which causes the RHR pump suction to be realigned well before the low-level trip setpoint has been reached. The associated RHR pump can be considered operable with the RWST level instrumentation out of service once the tank low-level trip function has been bypassed.

The proposed TS changes reduce the AOT for the RWST level instrumentation, which will result in a more available instrument during power operation and brings the AOT for the RWST instrument into alignment with the AOT for other ECCS subsystems. In addition, the proposed TS requires the bypass of the low-level trip function of the RWST level instrumentation when an instrument is out of service to assure that the associated RHR pump will perform its intended function. Therefore, the staff finds that the proposed changes to the TSs 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**

These amendments change the requirements with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. 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 the amendments involve no significant hazards consideration and there has been no public comment on such finding (64 FR 47532 ). Accordingly, the 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 the 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: John Stang**

**Date: November 30, 1999**

November 30, 1999

Mr. Robert P. Powers, Senior Vice President  
Indiana Michigan Power Company  
Nuclear Generation Group  
500 Circle Drive  
Buchanan, MI 49107

SUBJECT: DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2 - ISSUANCE OF  
AMENDMENTS RE: TIGHTER RESTRICTIONS ON ALLOWED OUTAGE TIME  
FOR REFUELING WATER STORAGE TANK (RWST) WATER LEVEL  
INSTRUMENTATION (TAC NOS. MA3797 AND MA3798)

Dear Mr. Powers:

The U.S. Nuclear Regulatory Commission has issued the enclosed Amendment No. 232 to Facility Operating License No. DPR-58 and Amendment No. 215 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Units 1 and 2. The amendments consist of changes to the Technical Specifications (TSs) in response to your application dated October 8, 1998.

The amendments would change the TSs for both units to place tighter restrictions on the allowed outage time for the RWST water level instrumentation.

A copy of our related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's next biweekly Federal Register notice.

Sincerely,

Original signed by:

John F. Stang, Sr. Project Manager, Section 1  
Project Directorate III  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-315 and 50-316

Enclosures: 1. Amendment No. 232 to DPR-58  
2. Amendment No. 215 to DPR-74  
3. Safety Evaluation

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DATED: November 30, 1999

AMENDMENT NO. TO FACILITY OPERATING LICENSE NO. DPR-58, DONALD C. COOK  
NUCLEAR PLANT, UNIT 1

AMENDMENT NO. TO FACILITY OPERATING LICENSE NO. DPR-74, DONALD C. COOK  
NUCLEAR PLANT, UNIT 2

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