



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 230 TO FACILITY OPERATING LICENSE NO. DPR-58
AND AMENDMENT NO. 213 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 May 21, 1999, the Indiana Michigan Power Company (IM or 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, Units 1 and 2. The proposed amendments would change the TS to allow reactor coolant system temperature changes in certain Mode 5 and 6 action statements if the shutdown margin is sufficient to accommodate the expected temperature change. In addition, footnotes regarding additions of water from the refueling water storage tank to the reactor coolant system are clarified and relocated to action statements. Additional actions are added in Table 3.3-1, "Reactor Trip System Instrumentation," when the required source range neutron flux channel is inoperable. Corresponding changes are proposed for the Bases for TS 3/4.1.1, "Boration Control," and TS 3/4.1.2, "Boration Systems." Administrative changes are proposed to improve clarity. Finally, additions are made to shutdown margin TS surveillance requirements to address use of a boron penalty (requirement for additional boron) during residual heat removal system operation in Modes 4 and 5.

2.0 EVALUATION

- 2.1 Revisions allowing Temperature Changes and Reactor Coolant Additions, provided sufficient Shutdown Margin (SDM) is maintained, in TS 3/4.1.2.1, TS 3/4.1.2.3, TS 3/4.1.2.5, TS 3/4.1.2.7, and TS 3.8.1.2; and Revisions allowing Reactor Coolant Additions solely, provided sufficient SDM is maintained, in TS 3/4.4.2, TS 3/4.9.1, and TS 3/4.9.2

The licensee proposes changes to the TS allowing the heatup or cooldown of the reactor coolant system and allowing additions to the reactor coolant when certain TS action statements require the suspension of Core Alterations and positive reactivity additions. These changes are acceptable provided the SDM and boron concentration are sufficient to accommodate the changes. Boron concentration of the added reactor coolant and the resulting boron concentration from temperature changes must remain greater than the minimum required by TS 3.1.2.7.b.2. In these situations, operators must verify that SDM is maintained. A restriction is included, as an additional conservatism, to limit the cooldown or heatup rate to 50 °F/hr and increase the time for the addition of positive reactivity to allow time for the operator to detect decreases in SDM and prevent boron dilution events. These changes allow the flexibility

needed to reasonably respond to normal fluctuations in temperature and the need to maintain reactor coolant inventory while shut down. With the addition of the above restrictions, allowing temperature changes and reactor coolant additions during shutdown conditions, which require the suspension of Core Alterations and positive reactivity additions, are acceptable.

2.2 Revisions to Action 5 of Table 3.3-1 adding requirements to suspend operations involving positive reactivity additions and to close isolation valves for unborated water sources

Source range neutron flux monitors are used to determine changes in core reactivity. When the source range neutron flux monitors are inoperable, the licensee proposes to add requirements to Action 5 of Table 3.3-1 to suspend operations involving positive reactivity additions and to isolate unborated water sources, while allowing reactor coolant additions from the refueling water storage tank (RWST) provided the minimum boron concentration requirements are met. If the RWST minimum boron concentration requirements are not met, then the RWST must also be isolated. These additional requirements are conservative actions that are consistent with the improved Standard Technical Specifications (NUREG-1431), and are, therefore, acceptable.

2.3 Revisions adding the boron penalty factor as the seventh factor for determining SDM in TS 3/4.1.1.2.b and TS surveillance requirement (SR) 4.1.1.1.e and associated Bases sections

The boron penalty factor is an essential consideration in the determination of SDM in Modes 4 and 5. The boron penalty factor has been included in the calculation of SDM by IM through administrative controls. NRC Administrative Letter 98-10, "Dispositioning of Technical Specifications that are Insufficient to Assure Plant Safety," issued on December 29, 1998, informs licensees that administrative control of nonconservative TS is not a substitute for an appropriate corrective license amendment. The proposed change incorporates current corrective administrative controls into the TS and is acceptable.

2.4 Editorial changes

The licensee proposed various editorial changes to the TS. These changes have been reviewed, found to be editorial in nature, and are 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 and change the 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 the amendments involve no significant hazards consideration and there has been no public comment on such finding (64 FR 37574, dated July 12, 1999). 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: T. Tjader

Date: October 21, 1999