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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 76 TO FACILITY OPERATING LICENSE NO. DPR-58

AND AMENDMENT NO. 57 TO FACILITY OPERATING LICENSE NO. DPR-74

INDIANA AND MICHIGAN ELECTRIC COMPANY

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

DOCKET NOS. 50-315 AND 50-316

Introduction

By letter dated January 22, 1982 (AEP:NRC:00591) and modified by letter dated July 8, 1983, (AEP:NRC:00591A), Indiana and Michigan Electric Company proposed amendments to Appendix A of Operating License Nos. DPR-58 and DPR-74. The request for changes to Appendix A included: (1) changes to the surveillance requirements concerning nuclear instruments of Section 4.3.1.1, Table 4.3-1, Functional Units 3, 4, 5, and 6; and (2) changes to the Loss of Voltage and Degraded Grid Voltages relay setpoint tolerances specified by Section 3.3.2.1, Table 3.3-4, Functional Units 6 and 8.

Discussion of Change No. 1

Nuclear Instrumentation is required to provide the associated Engineered Safety Feature action or reactor trip when a channel parameter exceeds its setpoint. The surveillance requirements for these instruments ensure that the overall functional capability is maintained comparable to the original design standards.

For clarification and consistency with general surveillance requirements and practices, the licensee proposed the following changes to Appendix A (Technical Specifications), Section 4.3.1.1, Table 4.3.1 for both Units 1 and 2:

- For Units 1 and 2, it was requested that the surveillance requirements for the "Source Range, Neutron Flux Channels" (Functional Unit 6) be modified so that the surveillances are required in MODES 2 and 3 only when the plant is below the P-6 permissive setpoint when the detectors are energized.

- For Units 1 and 2, the licensee requested to add a 12-hour CHANNEL CHECK requirement to the Source Range, Neutron Flux Channel (Functional Unit 6). This was requested to make the specifications of Appendix A consistent with Standardized Westinghouse Technical Specifications and current practice.

- For Units 1 and 2, Note # (6)("Neutron Detectors may be excluded from Channel Calibration") was added under the Channel Calibration requirements for Power Range Neutron Flux, High Positive Rate, and the Power Range Neutron Flux, High Negative Rate (Functional Units 3 and 4).

For Unit 1 only, the licensee requested that the requirement to perform a Channel Calibration on the Intermediate and Source Range Neutron Flux Channel (Functional Units 5 and 6) at least once per 18 months and a monthly Channel Functional Test of the Source Range Neutron Flux Channel be added. These changes would make Unit 1 Specifications consistent with Unit 2 and the Standard Technical Specification.

For Unit 2 only, the licensee proposed the deletion of the requirement to perform surveillances of the Source Range Neutron Flux Channels (Functional Unit 6) while in MODE 6. While in MODE 6, a weekly surveillance is required by Specification 4.9.2. This is also noted as being consistent with the Unit 1 Specification and the Standard Technical Specifications.

Evaluation of Change No. 1

The licensee's request to modify both units Source Range Neutron Flux Channel Surveillance requirements applicability so that surveillances are only required while in MODES 2 and 3 below the P-6 setpoint is consistent with the equipment operability requirements and capability. Source Range Detector high voltage must be secured after overlap with the Intermediate Range Detector is observed and the P-6 permissive setpoint is reached, making any further surveillances unnecessary until reactor power is again below the P-6 setpoint and the Source Range Channels are again placed in service.

The second requested change to add a 12-hour CHANNEL CHECK is consistent with current practice and provides for routine verification of detector channel operability.

The third requested change will note that the Power Range Neutron Flux High Positive and Negative Rate CHANNEL CALIBRATION need not include the neutron detector. This change is consistent with the Standard Technical Specifications which recognize that a calibration cannot be easily performed on the netron detectors.

The changes requested for Unit 1 only to include CHANNEL CALIBRATION requirements for Intermediate and Source Range Neutron Flux channels and CHANNEL FUNCTIONAL TEST for the Source Range Nuetron Flux channels are consistent with current operating practice and provide assurance of the operability and accuracy of detector channels.

The deletion of the MODE 6 surveillance requirements for the Unit 2 Source Range Neutron Flux Channel is consistent with the Standard Technical Specification guidance and is adequately covered by the MODE 6 requirements contained in Specification 4.9.2.

We find that the changes to the surveillance requirements for Unit Nos. 1 and 2 Technical Specification 4.3.1.1, Table 4.3-1, as discussed above are acceptable. We agree that the change will result in a more consistent requirement for the conduct of surveillances on the affected Reactor Trip System Instrumentation.

Discussion of Change No. 2

The licensee proposed changing the Loss-of-Voltage relay and Degraded Grid Voltage relay trip tolerances bands since the present tolerances are extremely conservative and the relays do not repeat their settings within the specified tolerances.

Evaluation of Change No. 2

Loss-of-voltage relays for the 4160 volt busses are specified to actuate at 3196 $\pm$ 18 volts. This two-second relay provides for protection of the class IE loads from operation at reduced voltages. Due to difficulty in maintaining the specified tolerance, the licensee is requesting an expanded tolerance for the Loss-of-Voltage relays to 3196 + 18, -36 volts. This represents a low limit difference of .45% of the rated voltage for two seconds. This change would not pose a significantly increased hazard to motor operation while at the same time keeping the setpoint low to prevent unwanted automatic disconnection of the safety systems and challenges to the safety system power supplies (diesel generators).

Similar tolerance difficulties have been experienced with the Degraded Grid Voltage Relays which are specified to actuate at 3596 $\pm$ 18 volts after a two minute $\pm$ six second time delay. The proposed change to 3596 + 36, -18 volts is below the analyzed worst case continuous minimum bus voltage and does not present a significant increase in opportunity for unnecessary loss of auxiliary power supply.

We find that the licensee's proposal to change the tolerances on Table 3.3-4 of Section 3.6.3 of both Units 1 and 2 Technical Specifications as described above to be acceptable. We agree that the proposed changes are consistent with analyses performed by the licensee for Loss-of-Voltage and Degraded Grid Voltage events and will not adversely affect the health and safety of the public.

Environmental Consideration

We have determined that the amendment does not authorize a change in effluent types or total amounts nor an increase in power level and will not result in any significant environmental impact. Having made this determination, we have further concluded that the amendment involves an action which is insignificant from the standpoint of environmental impact and, pursuant to 10 CFR 51.5 (d)(4), that an environmental impact statement, or negative declaration and environmental impact appraisal need not be prepared in connection with the issuance of this amendment.

Conclusion

We have 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, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public.

Dated: November 22, 1983

Principal Contributor:
E. R. Swanson

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

November 22, 1983

Docket Nos. 50-315
and 50-316

Mr. John Dolan, Vice President
Indiana and Michigan Electric Company
c/o American Electric Power Service Corporation
1 Riverside Plaza
Columbus, Ohio 43216

Dear Mr. Dolan:

The Commission has issued the enclosed Amendment No. 76 to Facility Operating License No. DPR-58 and Amendment No. 57 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications in response to your application transmitted by letter dated January 22, 1982, as supplemented by letter dated July 3, 1983.

These amendments revise the Technical Specifications to upgrade the surveillance requirements for nuclear instrumentation to be consistent for both units and the Standard Technical Specifications and to change the loss of voltage and degraded grid voltage trip tolerance bands within the analyses previously performed for the Donald C. Cook Nuclear Plant.

A copy of the related Safety Evaluation is enclosed. The Notice of Issuance will be included in the Commission's next regular monthly Federal Register notice.

Sincerely,

David L. Wigginton, Project Manager
Operating Reactors Branch No. 1
Division of Licensing

Enclosures:
1. Amendment No. 76 to DPR-58
2. Amendment No. 57 to DPR-74
3. Safety Evaluation

cc w/enclosures:
See next page