Docket Nos.: 50-315
and 50-316

April 10, 1987

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.106 to Facility Operating License No. DPR-58 and Amendment No. 92 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2. The amendments consist of changes to the Technical Specifications in response to your application transmitted by letter dated October 11, 1985.

These amendments revise the Technical Specifications by adding the Reactor Vessel Level Instrumentation System and Core Exit Thermocouples to the post accident monitoring instrumentation.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next bi-weekly Federal Register notice.

Sincerely,

D. L. Wigginton, Project Manager
PWR Project Directorate #4
Division of PWR Licensing-A

Enclosures:
1. Amendment No. 106 to DPR-58
2. Amendment No. 92 to DPR-74
3. Safety Evaluation

cc: w/enclosures
See next page

*SEE PREVIOUS CONCURRENCE

PWR#4/DPWR-A	PWR#4/DPWR-A	RSB/DPWR-A	PWR#4/DPWR-A
*DWigginton/mac	MDuncan	*RKarsch	BJYoungblood
03/25/87	04/6/87	03/25/87	04/10/87

Mr. John Dolan
Indiana and Michigan Electric Company

Donald C. Cook Nuclear Plant

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

INDIANA AND MICHIGAN ELECTRIC COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.106
License No. DPR-58

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Indiana and Michigan Electric Company (the licensee) dated October 11, 1985, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-58 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 106, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The Technical Specifications are effective within 45 days of issuance.

4. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

Dave L. Wigginton, Project Manager
PWR Project Directorate #4
Division of PWR Licensing-A

Attachment:
Changes to the Technical Specifications

Date of Issuance: April 10, 1987

PWR#4/DPWR-A	PWR#4/DPWR-A	OGC-Bethesda	PWR#4/DPWR-A
DWigginton/mac	MDuncan	M. Rahman	BJYoungblood
04/6/87	04/6/87	04/09/87	04/10/87

TABLE 3.3-11

POST-ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE
1. Containment Pressure	2
2. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	2
3. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	2
4. Reactor Coolant Pressure - Wide Range	2
5. Pressurizer Water Level	2
6. Steam Line Pressure	2/Steam Generator
7. Steam Generator Water Level - Narrow Range	1/Steam Generator
8. Refueling Water Storage Tank Water Level	2
9. Boric Acid Tank Solution Level	1
10. Auxiliary Feedwater Flow Rate	1/Steam Generator*
11. Reactor Coolant System Subcooling Margin Monitor	1**
12. PORV Position Indicator - Limit Switches***	1/Valve
13. PORV Block Valve Position Indicator - Limit Switches	1/Valve
14. Safety Valve Position Indicator - Acoustic Monitor	1/Valve
15. Incore Thermocouples (Core Exit Thermocouples)	2/Core Quadrant
16. Reactor Coolant Inventory Tracking System (Reactor Vessel Level Indication)	One Train (3 channels/Train)

* Steam Generator Water Level Channels can be used as a substitute for the corresponding auxiliary feedwater flow rate channel instrument.

** PRODAC 250 subcooling margin readout can be used as a substitute for the subcooling monitor instrument.

*** Acoustic monitoring of PORV position (1 channel per three valves - headered discharge) can be used as a substitute for the PORV Indicator - Limit Switches instruments.

TABLE 4.3-7

POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Containment Pressure	M	R *
2. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	M	R
3. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	M	R
4. Reactor Coolant Pressure - Wide Range	M	R
5. Pressurizer Water Level	M	R *
6. Steam Line Pressure	M	R *
7. Steam Generator Water Level - Narrow Range	M	R *
8. RWST Water Level	M	R
9. Boric Acid Tank Solution Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. PORV Position Indicator - Limit Switches	M	R *
13. PORV Block Valve Position Indicator - Limit Switches	M	R
14. Safety Valve Position Indicator - Acoustic Monitor	M	R
15. Incore Thermocouples (Core Exit Thermocouples)	M	R(1)
16. Reactor Coolant Inventory Tracking System (Reactor Vessel Level Indication)	M(2)	R(3)

(1) Partial range channel calibration for sensor to be performed below P-12 in MODE 3.

(2) With one train of Reactor Vessel Level Indication inoperable, Subcooling Margin Indication and Core Exit Thermocouples may be used to perform a CHANNEL CHECK to verify the remaining Reactor Vessel Indication train OPERABLE.

(3) Completion of channel calibration for sensors to be performed below P-12 in MODE 3.

* The provisions of Specification 4.0.6 are applicable.

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

INDIANA AND MICHIGAN ELECTRIC COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 92
License No. DPR-74

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Indiana and Michigan Electric Company (the licensee) dated October 11, 1985, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-74 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 92, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The Technical Specifications are effective following the refueling outage currently scheduled for 1988.

4. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/S/

Dave L. Wigginton, Project Manager
PWR Project Directorate #4
Division of PWR Licensing-A

Attachment:
Changes to the Technical
Specifications

Date of Issuance: April 10, 1987

PWR#4/DPWR-A	PWR#4/DPWR-A	OGC-Bethesda	PWR#4/DPWR-A
DWigginton/mac	MDuncan	M. Karman	BJYoungblood
04/ 6 /87	04/ 6 /87	04/09/87	04/10/87

TABLE 3.3-10

POST-ACCIDENT MONITORING INSTRUMENTATION

INSTRUMENT	MINIMUM CHANNELS OPERABLE
1. Containment Pressure	2
2. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	2
3. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	2
4. Reactor Coolant Pressure - Wide Range	2
5. Pressurizer Water Level	2
6. Steam Line Pressure	2/Steam Generator
7. Steam Generator Water Level - Narrow Range	1/Steam Generator
8. Refueling Water Storage Tank Water Level	2
9. Boric Acid Tank Solution Level	1
10. Auxiliary Feedwater Flow Rate	1/Steam Generator*
11. Reactor Coolant System Subcooling Margin Monitor	1**
12. PORV Position Indicator - Limit Switches***	1/Valve
13. PORV Block Valve Position Indicator - Limit Switches	1/Valve
14. Safety Valve Position Indicator - Acoustic Monitor	1/Valve
15. Incore Thermocouples (Core Exit Thermocouples)	2/Core Quadrant
16. Reactor Coolant Inventory Tracking System (Reactor Vessel Level Indication)	One Train (3 channels/Train)

* Steam Generator Water Level Channels can be used as a substitute for the corresponding auxiliary feedwater flow rate channel instrument.

** PRODAC 250 subcooling margin readout can be used as a substitute for the subcooling monitor instrument.

*** Acoustic monitoring of PORV position (1 channel per three valves - headered discharge) can be used as a substitute for the PORV Indicator - Limit Switches instruments.

TABLE 4.3-10

POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

INSTRUMENT	CHANNEL CHECK	CHANNEL CALIBRATION
1. Containment Pressure	M	R
2. Reactor Coolant Outlet Temperature - T_{HOT} (Wide Range)	M	R
3. Reactor Coolant Inlet Temperature - T_{COLD} (Wide Range)	M	R
4. Reactor Coolant Pressure - Wide Range	M	R
5. Pressurizer Water Level	M	R
6. Steam Line Pressure	M	R
7. Steam Generator Water Level - Narrow Range	M	R
8. RWST Water Level	M	R
9. Boric Acid Tank Solution Level	M	R
10. Auxiliary Feedwater Flow Rate	M	R
11. Reactor Coolant System Subcooling Margin Monitor	M	R
12. PORV Position Indicator - Limit Switches	M	R
13. PORV Block Valve Position Indicator - Limit Switches *	M	R
14. Safety Valve Position Indicator - Acoustic Monitor	M	R
15. Incore Thermocouples (Core Exit Thermocouples)	M	R(1)
16. Reactor Coolant Inventory Tracking System (Reactor Vessel Level Indication)	M(2)	R(3)

(1) Partial range channel calibration for sensor to be performed below P-12 in MODE 3.

(2) With one train of Reactor Vessel Level Indication inoperable, Subcooling Margin Indication and Core Exit Thermocouples may be used to perform a CHANNEL CHECK to verify the remaining Reactor Vessel Indication train OPERABLE.

(3) Completion of channel calibration for sensors to be performed below P-12 in MODE 3.

* The provisions of Specification 4.0.6 are applicable.

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO.106 FACILITY OPERATING LICENSE NO. DPR-58

AMENDMENT NO. 92 FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NOS. 50-315 AND 50-316

Revise Appendix A as follows:

Remove Pages	Insert Pages
Unit 1	
3/4 3-55	3/4 3-55
3/4 3-56	3/4 3-56
Unit 2	
3/4 3-46	3/4 3-46
3/4 3-47	3/4 3-47

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 106TO FACILITY OPERATING LICENSE NO. DPR-58

AND AMENDMENT NO. 92 TO FACILITY OPERATING LICENSE NO. DPR-74

INDIANA AND MICHIGAN ELECTRIC COMPANY

DONALD C. COOK NUCLEAR PLANT, UNITS 1 AND 2

DOCKET NOS. 50-315 AND 50-316

INTRODUCTION

The staff evaluated the Indiana and Michigan Electric Company's proposed design for instrumentation to detect inadequate core cooling (ICCI) in an SER dated December 13, 1983. With the exception of the confirmatory items discussed below the staff determined that the proposed design was satisfactory.

The confirmatory items required by the staff fell into two categories; upgrades to the quality of the Core Exit Thermocouple (CET) system and schedular commitments for the system upgrade and, concerns regarding the environmental qualification of ICCI system components. The licensee's submittal dated August 20, 1984 committed to upgrade the CET system for Units 1 and 2. The installation on Unit 1 is now complete and Unit 2 will be completed during an outage scheduled for 1988. The environmental qualification issue has been resolved by the licensee's compliance with the environmental qualification rule, 10 CFR 50.49.

By letter dated October 11, 1985, the Indiana and Michigan Electric Company (the licensee) requested an amendment to the facility operating licenses for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2. The amendment would change the Technical Specifications by adding requirements for the Reactor Vessel Level Instrumentation System (RVLIS) and Core Exit Thermocouples (CET) in the Accident Monitoring Instrumentation section. The proposed change is in response to TMI Action Item II.F.2 of NUREG-0737 and Generic Letter 83-37.

By letter dated November 20, 1986, the licensee indicated that installation of the RVLIS equipment required by NUREG-0737 item II.F.2 is now complete. The installed equipment has been functionally tested and the system performs in accordance with design expectations and with design error tolerances. Furthermore, emergency guidelines have been developed and are ready to implement pending separate approval by the NRC.

EVALUATION

This evaluation covers the addition of the RVLIS and CET to the Technical Specifications. The surveillance requirements for Channel Check and Channel Calibration as specified in items 15 and 16 of Table 4.3-7 for Cook Unit 1 and Table 4.3-10 for Unit 2 are in accordance with NUREG-0737 and Generic

Letter 83-37 and are acceptable. The licensee has also proposed to add footnote 1 and 3 to indicate wher calibrations are to be performed for the RVLIS and CET and these are acceptable. Footnote 2 for both Units states that if one train of RVLIS is inoperable, the CET and subcooling margin can be used during a channel check to verify the remaining RVLIS train operable. This addition is also acceptable.

Generic Letter 83-37 dated November 1, 1983, provided typical technical specifications which the NRC would find acceptable. The Generic Letter did not preclude alternative requirements and was not meant to be used as a basis for finding different, existing action statements unacceptable. The Cook Technical Specifications were previously issued and found acceptable recognizing only the minimum channels operable for the accident instrumentation and with a 30 day requirement to restore the inoperable channel. The licensee proposes to maintain these requirements for the additional instrumentation (RVLIS and CET), and in order to maintain consistency with these and other accident instruments of equal or greater importance, we find the licensee's changes acceptable.

We have concluded, based on the considerations discussed above, that the proposed Technical Specification change for the ICCI system is generally in accoroance with the guidelines of G.L. 83-37. The proposed Technical Specifications forwarded by the licensee's letter dated October 11, 1985 are satisfactory.

IMPLEMENTATION

The Indiana and Michigan Electric Company has successfully implemented the ICCI requirements of NUREG-0737 Item II.F.2 on Unit 1 and will have completed implementation on Unit 2 in 1988 when the upgrade of their core exit thermocouples is completed. This is considered satisfactory. The NRC staff's review in this area is now complete. If the installation of the remaining core exit thermocouples in Unit 2 is not completed in the scheduled 1988 refueling outage, the licensee should notify the NRC before startup following the refueling outage.

ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of the facilities' components located within the restricted areas as defined in 10 CFR 20. The staff has determined that these 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. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 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.

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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributors: D. Wigginton
R. Karsch

Dated: April 10, 1987

Dated: April 10, 1987

AMENDMENT NO. 106TO FACILITY OPERATING LICENSE NO. DPR-58 - DONALD C. COOK, UNIT 1
AEMEDMENT NO. 92TO FACILITY OPERATING LICENSE NO. DPR-74 - DONALD C. COOK, UNIT 2

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