

REGULATORY DOCKET FILE COPY

Docket File
50-316

JULY 10 1980

Docket Nos. 50-316

Mr. John Dolan, Vice President
Indiana and Michigan Electric Company
Post Office Box 18
Bowling Green Station
New York, New York 10004

Dear Mr. Dolan:

The Commission has issued the enclosed Amendment No. 22 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Unit No. 2. The amendment consists of changes to the Technical Specifications in response to your application transmitted by letters dated February 22, 1980 and March 28, 1980.

The amendment revises: (1) the surveillance and monitoring requirements for the degraded voltage function; and (2) the surveillance requirements for onsite power service testing.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,
Original signed by:
S. A. Varga

Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Enclosures:

1. Amendment No. 22 to DPR-74
2. Safety Evaluation
3. Notice of Issuance

cc: w/enclosures
See next page

8008140228

OFFICE						
SURNAME						
DATE						

Distribution

Docket File 50-316 I&E (5)
 NRC PDR ACRS (16)
 Local PDR B. Scharf (10)
 TERA B. Jones (4)
 NSIC Attorney, OELD
 NRR Reading C. Miles
 ORB1 Reading R. Diggs
 H. Denton C. Stephens
 D. Eisenhut
 R. Purple
 R. Tedesco
 G. Lainas
 R. Tedesco
 J. Olshinski
 J. Heltemes
 T. Novak
 S. Varga
 S. Miner
 C. Parrish

#17	OFFICE ▶	DL:ORB1	DL:ORB1	DL:AD:OR	OELD	DL:ORB1
	SURNAME ▶	SMiner:jb	CSParrish	TMinovak	C Miles	SAVarga
46A21-27	DATE ▶	07/10/80	07/10/80	07/10/80	07/10/80	07/10/80



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

July 10, 1980

Docket Nos. 50-316

Mr. John Dolan, Vice President
Indiana and Michigan Electric Company
Post Office Box 18
Bowling Green Station
New York, New York 10004

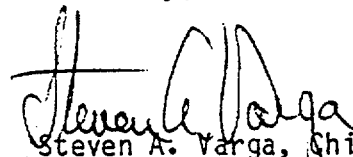
Dear Mr. Dolan:

The Commission has issued the enclosed Amendment No. 22 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Unit No. 2. The amendment consists of changes to the Technical Specifications in response to your application transmitted by letters dated February 22, 1980 and March 28, 1980.

The amendment revises: (1) the surveillance and monitoring requirements for the degraded voltage function; and (2) the surveillance requirements for onsite power service testing.

Copies of the Safety Evaluation and the Notice of Issuance are also enclosed.

Sincerely,


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Enclosures:

1. Amendment No. 22 to DPR-74
2. Safety Evaluation
3. Notice of Issuance

cc: w/enclosures
See next page

Mr. John Dolan
Indiana and Michigan Electric Company

- 2 -

July 10, 1980

cc: Mr. Robert W. Jurgensen
Chief Nuclear Engineer
American Electric Power
Service Corporation
2 Broadway
New York, New York 10004

Gerald Charnoff, Esquire
Shaw, Pittman, Potts and Trowbridge
1800 M Street, N.W.
Washington, D. C. 20036

Citizens for a Better Environment
59 East Van Buren Street
Chicago, Illinois 60605

Maude Preston Palenske Memorial
Library
500 Market Street
St. Joseph, Michigan 49085

Mr. D. Shaller, Plant Manager
Donald C. Cook Nuclear Plant
P. O. Box 458
Bridgman, Michigan 49106

Mr. Robert Masse
Resident Inspector
Donald C. Cook Nuclear Plant
U. S. Nuclear Regulatory Commission
P. O. Box 458
Bridgman, Michigan 29160

Mr. Wade Schuler, Supervisor
Lake Township
Baroda, Michigan 49101

Mr. William R. Rustem (2)
Office of the Governor
Room 1 - Capitol Building
Lansing, Michigan 48913

Honorable James Bemenek, Mayor
City of Bridgman, Michigan 49106

Director, Technical Assessment Division
Office of Radiation Programs (AW-459)
U. S. Environmental Protection Agency
Crystal Mall #2
Arlington, Virginia 20460

U. S. Environmental Protection Agency
Federal Activities Branch
Region V Office
ATTN: EIS COORDINATOR
230 South Dearborn Street
Chicago, Illinois 60604

Maurice S. Reizen, M.D.
Director
Department of Public Health
P. O. Box 30035
Lansing, Michigan 48909

William J. Scanlon, Esquire
2034 Pauline Boulevard
Ann Arbor, Michigan 48103



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. 22
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 February 22, 1980 and March 28, 1980, 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.

8008140235

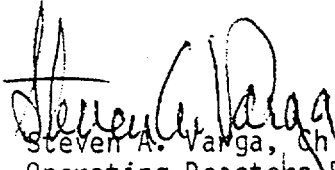
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-74 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 22, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

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

FOR THE NUCLEAR REGULATORY COMMISSION


Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 10, 1980

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 22 TO FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NO. 50-316

Revise Appendix A as follows:

Remove Pages

3/4 3-20a
3/4 3-25a
3/4 3-32a
3/4 8-3a

Insert Pages

3/4 3-20a
3/4 3-25a
3/4 3-32a
3/4 8-3a

TABLE 3.3-3 (Continued)
ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

<u>FUNCTIONAL UNIT</u>	<u>TOTAL NO. OF CHANNELS</u>	<u>CHANNELS TO TRIP</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>APPLICABLE MODES</u>	<u>ACTION</u>
6. MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS					
a. Steam Generator Water Level -- Low-Low	3/Stm. Gen.	2/Stm. Gen. any Stm. Gen.	2/Stm. Gen.	1, 2, 3	14*
b. 4 kv Bus Loss of Voltage	2/Bus	2/Bus	2/Bus	1, 2, 3	14*
7. TURBINE DRIVEN AUXILIARY FEEDWATER PUMPS					
a. Steam Generator Water Level -- Low-Low	3/Stm. Gen.	2/Stm. Gen. any 2 Stm. Gen.	2/Stm. Gen.	1, 2, 3	14*
8. LOSS OF POWER					
a. 4 kv Bus Loss of Voltage	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	14*
b. 4 kv Bus Degraded Voltage	3/Bus	2/Bus	2/Bus	1, 2, 3, 4	14*

TABLE 3.3-4 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
6. MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS		
a. Steam Generator Water Level -- Low-Low	> 10% of narrow range instrument span each steam generator	> 9% of narrow range instrument span each steam generator
b. 4 kv Bus Loss of Voltage	3196 volts with a 2-second delay	3196+18 volts with a 3+.2 second delay
7. TURBINE DRIVEN AUXILIARY FEEDWATER PUMPS		
a. Steam Generator Water Level -- Low-Low	> 10% of narrow range instrument span each steam generator	> 9% of narrow range instrument span each steam generator
8. LOSS OF POWER		
a. 4 kv Bus Loss of Voltage	3196 volts with a 2-second delay	3196+18 volts with a 2+.2 second delay
b. 4 kv Bus Degraded Voltage	3196 volts with a 2.0 min. time delay	3196+18 volts with a 2.0 minute + 6 second time delay

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION
SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES IN WHICH SURVEILLANCE REQUIRED</u>
7. TURBINE DRIVEN AUXILIARY FEEDWATER PUMPS				
a. Steam Generator Water Level--Low-Low	S	R	M	1, 2, 3
8. LOSS OF POWER				
a. 4 kv Bus Loss of Voltage	S	R	M	1, 2, 3, 4
b. 4 kv Bus Degraded Voltage	S	R	M	1, 2, 3, 4

ELECTRICAL POWER SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b) Verifying the diesel starts from ambient condition on the auto-start signal, energizes the emergency busses with permanently connected loads, energizes the auto-connected shutdown loads through the load sequencer and operates for ≥ 5 minutes while its generator is loaded with the shutdown loads.
- 6. Verifying that on an ESF actuation test signal (without loss of offsite power) the diesel generator starts on the auto-start signal and operates on standby for ≥ 5 minutes.
- 7. Verifying that on a simulated loss of the diesel generator (with offsite power not available), the loads are shed from the emergency busses and that subsequent loading of the diesel generator is in accordance with design requirements.
- 8. Simulating a loss of offsite power in conjunction with an ESF actuation test signal, and
 - a) Verifying de-energization of the emergency busses and load shedding from the emergency busses.
 - b) Verifying the diesel starts from ambient condition on the auto-start signal, energizes the emergency busses with permanently connected loads, energizes the auto-connected emergency (accident) loads through the load sequencer and operates for ≥ 5 minutes while its generator is loaded with the emergency loads.
 - c) Verifying that on diesel generator trip, the loads are shed from the emergency buses and the diesel re-starts on the auto-start signal following manual resetting of the diesel trip lockout relay, the emergency buses are energized with permanently connected loads, the auto-connected emergency loads are energized through the load sequencer and the diesel operates for ≥ 5 minutes while its generator is loaded with emergency loads.
 - d) Verifying that all diesel generator trips, except engine overspeed and generator differential, are automatically bypassed upon loss of voltage on the emergency bus and/or safety injection actuation signal.
- 9. Verifying the diesel generator operates for at least 24 hours. During the first 2 hours of this test, the diesel generator shall be loaded to 3850 kw and during the remaining 22 hours of this test, the diesel generator shall be loaded to 3500 kw. Within 5 minutes after completing this 24 hour test, repeat Specification 4.8.1.1.2.c.5.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 22 TO FACILITY OPERATING LICENSE NO. DPR-74

INDIANA AND MICHIGAN ELECTRIC COMPANY
DONALD C. COOK NUCLEAR PLANT UNIT NO. 1

DOCKET NO. 50-316

Introduction

By letter dated June 3, 1977, the criteria and staff positions regarding degraded grid voltage protection were transmitted to Indiana and Michigan Electric Company (I&MEC). In response to this, by letter dated July 22, 1977, I&MEC proposed degraded grid voltage protection design modifications and changes to the Technical Specifications for D. C. Cook Units 1 and 2. The proposal was reviewed by the Staff and our evaluation was included in Supplement No. 7 to the D. C. Cook Unit 2 Safety Evaluation Report. Subsequently, while reviewing the proposed modifications for Unit 1, we noted that the proposed modifications for Units 1 and 2 would not meet the requirements of IEEE-279.

Evaluation

By letters dated December 17, 1979, February 22, 1980 and May 28, 1980, the licensee has submitted the following revised proposed modification. Included in the submittals were the associated changes to the Technical Specifications.

- a. Voltage monitoring for the second level undervoltage protection is moved to 4 kV Class IE system from the 345 kV non-Class IE system to meet the requirements of IEEE-279-1971.
- b. Loss of voltage relay set point is changed to 80% of bus nominal voltage from 60%.
- c. Loss of voltage relays are arranged in two-out-of-three logic instead of two-out-of-two logic to accommodate single failure of a relay.

Based on our review of the information provided by I&MEC, we have determined that the modified design for Unit 2 corrects the deficiencies discovered in our review of Unit 1. The licensee has also submitted acceptable associated changes to the Technical Specifications. We, therefore, conclude that the D. C. Cook Unit 2 design is now in full conformance with our position on degraded grid voltage and is acceptable.

8008140238

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) because the amendment does not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) 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.

Date: July 10, 1980

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NO. 50-316INDIANA AND MICHIGAN ELECTRIC COMPANYNOTICE OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 22 to Facility Operating License No. DPR-74, issued to Indiana and Michigan Electric Company (the licensee), which revised Technical Specifications for operation of Donald C. Cook Nuclear Plant, Unit No. 2 (the facility) located in Berrien County, Michigan. The amendment is effective as of the date of issuance.

The amendment revises: (1) the surveillance and monitoring requirements for the degraded voltage function; and (2) the surveillance requirements for onsite power source testing.

The application for the amendment complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendment. Prior public notice of the amendment was not required since the amendment does not involve a significant hazards consideration.


- 2 -

The Commission has determined that the issuance of this amendment will not result in any significant environmental impact and that pursuant to 10 CFR §51.5(d)(4) an environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of this amendment.

For further details with respect to this action, see (1) the application for amendment dated February 22, 1980 and March 28, 1980, (2) Amendment No. 22 DPR-74, and (3) the Commission's related Safety Evaluation. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N.W., Washington, D.C. and at the Maude Reston Palenske Memorial Library, 500 Market Street, St. Joseph, Michigan 49085. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D.C. 20555, Attention: Director, Division of Licensing.

Dated at Bethesda, Maryland, this 10th day of July, 1980.

FOR THE NUCLEAR REGULATORY COMMISSION



Steven A. Varga, Chief
Operating Reactors Branch #1
Division of Licensing