

August 26, 1985

Docket Nos. 50-315
and 50-316

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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. 90 to Facility Operating License No. DPR-58 and Amendment No. 75 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 March 29, 1985.

These amendments revise the Technical Specifications for the reactor trip system instrumentation and the engineered safety feature actuation system instrumentation.

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

Sincerely,

/s/DWigginton

David L. Wigginton, Project Manager
Operating Reactors Branch #1
Division of Licensing

Enclosures:

1. Amendment No. 90 to DPR-58
2. Amendment No. 75 to DPR-74
3. Safety Evaluation

cc: w/enclosures
See next page

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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.90
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 March 29, 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:

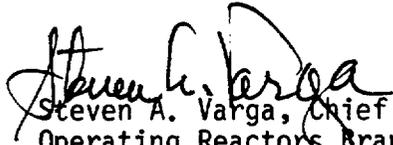
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(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No.90 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The change in Technical Specifications is to become effective within 45 days of issuance of the amendment. In the period between issuance of the amendment and the effective date of the new Technical Specifications, the licensee shall adhere to the Technical Specifications for the systems, components, or operation existing at the time. The period of time during changeover of systems, components or operation shall be minimized or compensated for by suitable temporary alternatives.
4. 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: August 26, 1985



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. 75
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 March 29, 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. 75, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The change in Technical Specifications is to become effective within 45 days of issuance of the amendment. In the period between issuance of the amendment and the effective date of the new Technical Specifications, the licensee shall adhere to the Technical Specifications for the systems, components, or operation existing at the time. The period of time during changeover of systems, components or operation shall be minimized or compensated for by suitable temporary alternatives.
4. 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: August 26, 1985

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 90 FACILITY OPERATING LICENSE NO. DPR-58

AMENDMENT NO. 75 FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NOS. 50-315 AND 50-316

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
<u>Unit 1</u>	
3/4 3-1	3/4 3-1
3/4 3-9*	3/4 3-9*
3/4 3-10	3/4 3-10
3/4 3-14	3/4 3-14
3/4 3-15	3/4 3-15
3/4 3-16	3/4 3-16
3/4 3-17	3/4 3-17
3/4 3-18	3/4 3-18
3/4 3-20	3/4 3-20
3/4 3-21	3/4 3-21
3/4 3-22	3/4 3-22
3/4 3-23	3/4 3-23
<u>Unit 2</u>	
3/4 3-5	3/4 3-5
3/4 3-6	3/4 3-6
3/4 3-21	3/4 3-21

*Included for convenience. No change.

3/4.3 INSTRUMENTATION

3/4.3.1 REACTOR TRIP SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.1.1 As a minimum, the reactor trip system instrumentation channels and interlocks of Table 3.3-1 shall be OPERABLE with RESPONSE TIMES as shown in Table 3.3-2.

APPLICABILITY: As shown in Table 3.3-1.

ACTION:

As shown in Table 3.3-1.

SURVEILLANCE REQUIREMENTS

4.3.1.1.1 Each reactor trip system instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-1.

4.3.1.1.2 The logic for the interlocks shall be demonstrated OPERABLE prior to each reactor startup unless performed during the preceding 92 days. The total interlock function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each channel affected by interlock operation.

4.3.1.1.3 The REACTOR TRIP SYSTEM RESPONSE TIME of each reactor trip function shall be demonstrated to be within its limit at least once per 18 months. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once every N times 18 months where N is the total number of redundant channels in a specific reactor trip function as shown in the "Total No. of Channels" column of Table 3.3-1.

TABLE 3.3-1 (Continued)

<u>DESIGNATION</u>	<u>CONDITION AND SETPOINT</u>	<u>FUNCTION</u>
P-7	With 2 of 4 Power Range Neutron Flux Channels \geq 11% of RATED THERMAL POWER or 1 of 2 Turbine impulse chamber pressure channels \geq 37 psig.	P-7 prevents or defeats the automatic block of reactor trip on: Low flow in more than one primary coolant loop, reactor coolant pump under-voltage and under-frequency, turbine trip, pressurizer low pressure, and pressurizer high level.
P-8	With 2 of 4 Power Range Neutron Flux channels \geq 51% of RATED THERMAL POWER.	P-8 prevents or defeats the automatic block of reactor trip on low coolant flow in a single loop.
P-10	With 3 of 4 Power range neutron flux channels $<$ 9% of RATED THERMAL POWER.	P-10 prevents or defeats the manual block of: Power range low setpoint reactor trip, Intermediate range reactor trip, and intermediate range rod stops. Provides input to P-7.

TABLE 3.3-2

REACTOR TRIP SYSTEM INSTRUMENTATION RESPONSE TIMES

<u>FUNCTIONAL UNIT</u>	<u>RESPONSE TIME</u>
1. Manual Reactor Trip	NOT APPLICABLE
2. Power Range, Neutron Flux	≤ 0.5 seconds*
3. Power Range, Neutron Flux, High Positive Rate	NOT APPLICABLE
4. Power Range, Neutron Flux, High Negative Rate	≤ 0.5 seconds*
5. Intermediate Range, Neutron Flux	NOT APPLICABLE
6. Source Range, Neutron Flux	NOT APPLICABLE
7. Overtemperature ΔT	≤ 6.0 seconds*
8. Overpower ΔT	NOT APPLICABLE
9. Pressurizer Pressure--Low	≤ 1.0 seconds
10. Pressurizer Pressure--High	≤ 1.0 seconds
11. Pressurizer Water Level--High	NOT APPLICABLE

* Neutron detectors are exempt from response time testing. Response time of the neutron flux signal portion of the channel shall be measured from detector output or input of first electronic component in channel.

D. C. COOK-UNIT 1

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Amendment No. 90

TABLE 4.3-1 (Continued)

NOTATION

- * - With the reactor trip system breakers closed and the control rod drive system capable of rod withdrawal.
- (1) - If not performed in previous 7 days.
- (2) - Heat balance only, above 15% of RATED THERMAL POWER. Adjust channel if absolute difference > 2 percent.
- (3) - Compare incore to excore axial imbalance above 15% of RATED THERMAL POWER. Recalibrate if absolute difference \geq 3 percent.
- (4) - Manual ESF functional input check every 18 months.
- (5) - Each train tested every other month.
- (6) - Neutron detectors may be excluded from CHANNEL CALIBRATION.
- (7) - Below P-6 (BLOCK OF SOURCE RANGE REACTOR TRIP) setpoint.

INSTRUMENTATION

3/4.3.2 ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.2.1 The Engineered Safety Feature Actuation System (ESFAS) instrumentation channels and interlocks shown in Table 3.3-3 shall be OPERABLE with their trip setpoints set consistent with the values shown in the Trip Setpoint column of Table 3.3-4 and with RESPONSE TIMES as shown in Table 3.3-5.

APPLICABILITY: As shown in Table 3.3-3.

ACTION:

- a. With an ESFAS instrumentation channel trip setpoint less conservative than the value shown in the Allowable Values column of Table 3.3-4, declare the channel inoperable and apply the applicable ACTION requirement of Table 3.3-3 until the channel is restored to OPERABLE status with the trip setpoint adjusted consistent with the Trip Setpoint value.
- b. With an ESFAS instrumentation channel inoperable, take the ACTION shown in Table 3.3-3.

SURVEILLANCE REQUIREMENTS

4.3.2.1.1 Each ESFAS instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-2.

4.3.2.1.2 The logic for the interlocks shall be demonstrated OPERABLE during the automatic actuation logic test. The total interlock function shall be demonstrated OPERABLE at least once per 18 months during CHANNEL CALIBRATION testing of each channel affected by interlock operation.

4.3.2.1.3 The ENGINEERED SAFETY FEATURES RESPONSE TIME of each ESFAS function shall be demonstrated to be within the limit at least once per 18 months. Each test shall include at least one logic train such that both logic trains are tested at least once per 36 months and one channel per function such that all channels are tested at least once per N times 18 months where N is the total number of redundant channels in a specific ESFAS function as shown in the "Total No. of Channels" Column of Table 3.3-3.

TABLE 3.3-3

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>
1. SAFETY INJECTION, TURBINE TRIP, FEEDWATER ISOLATION, AND MOTOR DRIVEN FEEDWATER PUMPS					
a. Manual Initiation	2	1	2	1, 2, 3, 4	18
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	13
c. Containment Pressure-High	3	2	2	1, 2, 3	14*
d. Pressurizer Pressure - Low	3	2	2	1, 2, 3#	14*
e. Differential Pressure Between Steam Lines - High				1, 2, 3##	
Four Loops Operating	3/steam line	2/steam line any steam line	2/steam line		14*
Three Loops Operating	3/operating steam line	1###/steam line, any operating steam line	2/operating steam line		15

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>
f. Steam Flow in Two Steam Lines-High				1, 2, 3 ^{##}	
Four Loops Operating	2/steam line	1/steam line any 2 steam lines	1/steam line		14*
Three Loops Operating	2/operating steam line	1 ^{###} /any operating steam line	1/operating steam line		15
COINCIDENT WITH EITHER					
T _{avg} --Low-Low				1, 2, 3 ^{##}	
Four Loops Operating	1 T _{avg} /loop	2 T _{avg} any loops	1 T _{avg} any 3 loops		14*
Three Loops Operating	1 T _{avg} /operating loop	1 ^{###} T _{avg} in any operating loop	1 T _{avg} in any two operating loops		15

D. C. COOK-UNIT 1

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Amendment No. 90

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>
OR, COINCIDENT WITH					
Steam Line Pressure-Low				1, 2, 3 ^{##}	
Four Loops Operating	1 pressure/loop	2 pressures any loops	1 pressure any 3 loops		14 *
Three Loops Operating	1 pressure/operating loop	1 ^{###} pressure in any operating loop	1 pressure in any 2 operating loops		15
2. CONTAINMENT SPRAY					
a. Manual	2	2	2	1, 2, 3, 4	18
b. Automatic Actuation Logic	2	1	2	1, 2, 3, 4	13
c. Containment Pressure--High-High	4	2	3	1, 2, 3	16

D. C. COOK-UNIT 1

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Amendment No. 90

TABLE J.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>
4. STEAM LINE ISOLATION					
a. Manual	1/steam line	1/steam line	1/operating steam line	1, 2, 3	18
b. Automatic Actuation Logic	2	1	2	1, 2, 3	13
c. Containment Pressure--High-High	4	2	3	1, 2, 3	16
d. Steam Flow in Two Steam Lines--High				1, 2, 3 ^{##}	
Four Loops Operating	2/steam line	1/steam line any 2 steam lines	1/steam line		14*
Three Loops Operating	2/operating steam line	1 ^{###} /any operating steam line	1/operating steam line		15

D. C. COOK-UNIT 1

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Amendment No. 90

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>
COINCIDENT WITH EITHER T _{avg} --Low-Low				1, 2, 3 ^{##}	
Four Loops Operating	1 T _{avg} /loop	2 T _{avg} any loops	1 T _{avg} any 3 loops		14*
Three Loops Operating	1 T _{avg} /operating loop	1 ^{###} T _{avg} in any operating loop	1 T _{avg} in any two operating loops		15
OR, COINCIDENT WITH Steam Line Pressure-Low				1, 2, 3 ^{##}	
Four Loops Operating	1 pressure/loop	2 pressures any loops	1 pressure any 3 loops		14*
Three Loops Operating	1 pressure/operating loop	1 ^{###} pressure in any operating loop	1 pressure in any 2 operating loops		15
5. TURBINE TRIP & FEEDWATER ISOLATION					
a. Steam Generator Water Level--High-High	3/loop	2/loop in any operating loop	2/loop in each operating loop	1, 2, 3	14*

D. C. COOK-UNIT 1

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Amendment No. 90

TABLE 3.3-3 (Continued)

TABLE NOTATION

Trip function may be bypassed in this MODE below P-11.

Trip function may be bypassed in this MODE below P-12.

The channel(s) associated with the protective functions derived from the out of service Reactor Coolant Loop shall be placed in the tripped mode.

*The provisions of Specification 3.0.4 are not applicable.

ACTION STATEMENTS

ACTION 13 - With the number of OPERABLE Channels one less than the Total Number of Channels, be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.1.

ACTION 14 - With the number of OPERABLE Channels one less than the Total Number of Channels, operations may proceed until performance of the next required CHANNEL FUNCTIONAL TEST provided the inoperable channel is placed in the tripped condition within 1 hour.

ACTION 15 - With a channel associated with an operating loop inoperable, restore the inoperable channel to OPERABLE status within 2 hours or be in HOT SHUTDOWN within the following 12 hours; however, one channel associated with an operating loop may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.1.

ACTION 16 - With the number of OPERABLE Channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the bypassed condition and the Minimum Channels OPERABLE requirement is met; one additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.1.

TABLE 3.3-3 (Continued)

- ACTION 17 - With less than the Minimum Channels OPERABLE, operation may continue provided the containment purge and exhaust valves are maintained closed.
- ACTION 18 - With the number of OPERABLE Channels one less than the Total Number of Channels, restore the inoperable channel to OPERABLE status within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- ACTION 19 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:
- a. The inoperable channel is placed in the tripped condition within 1 hour.
 - b. The Minimum Channels OPERABLE requirements is met; however, one additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.

ENGINEERED SAFETY FEATURES INTERLOCKS

<u>DESIGNATION</u>	<u>CONDITION AND SETPOINT</u>	<u>FUNCTION</u>
P-11	With 2 of 3 pressurizer pressure channels \geq 1915 psig.	P-11 prevents or defeats manual block of safety injection actuation on low pressurizer pressure.
P-12	With 3 of 4 T_{avg} channels \geq 544°F.	P-12 prevents or defeats manual block of safety injection actuation high steam line flow and low steam line pressure.
	With 2 of 4 T_{avg} channels $<$ 540°F.	Allows manual block of safety injection actuation on high steam line flow and low steam line pressure. Causes steam line isolation on high steam flow. Affects steam dump blocks.

TABLE 3.3-1 (Continued)

TABLE NOTATION

*With the reactor trip system breakers in the closed position and the control rod drive system capable of rod withdrawal.

**The channel(s) associated with the protective functions derived from the out of service Reactor Coolant Loop shall be placed in the tripped condition.

#The provisions of Specification 3.0.4 are not applicable.

##High voltage to detector may be de-energized above P-6.

ACTION STATEMENTS

ACTION 1 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, be in HOT STANDBY within 6 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1.

ACTION 2 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

a. The inoperable channel is placed in the tripped condition within 1 hour.

b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.1.1.1.

c. Either, THERMAL POWER is restricted to $\leq 75\%$ of RATED THERMAL POWER and the Power Range, Neutron Flux trip setpoint is reduced to $\leq 85\%$ of RATED THERMAL POWER within 4 hours; or, the QUADRANT POWER TILT RATIO is monitored at least once per 12 hours per Specification 4.2.4.c.

ACTION 3 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

TABLE 3.3-1 (Continued)

- a. Below P-6, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 Setpoint.
- b. Above P-6 but below 5% of RATED THERMAL POWER, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above 5% of RATED THERMAL POWER.
- c. Above 5% of RATED THERMAL POWER, POWER OPERATION may continue.

ACTION 4 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement and with the THERMAL POWER level:

- a. Below P-6, restore the inoperable channel to OPERABLE status prior to increasing THERMAL POWER above the P-6 Setpoint.
- b. Above P-6, operation may continue.

ACTION 5 - With the number of channels OPERABLE one less than required by the Minimum Channels OPERABLE requirement, verify compliance with the SHUTDOWN MARGIN requirements of Specification 3.1.1.1 or 3.1.1.2, as applicable, within 1 hour and at least once per 12 hours thereafter.

ACTION 6 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed provided the following conditions are satisfied:

- a. The inoperable channel is placed in the tripped condition within 1 hour.
- b. The Minimum Channels OPERABLE requirement is met; however, the inoperable channel may be bypassed for up to 2 hours for surveillance testing of the other channels per Specification 4.3.1.1.1.

ACTION 7 - With the number of OPERABLE channels one less than the Total Number of Channels, STARTUP and/or POWER OPERATION may proceed until performance of the next required CHANNEL FUNCTIONAL TEST provided the inoperable channel is placed in the tripped condition within 1 hour.

TABLE 3.3-3 (Continued)

TABLE NOTATION

- # Trip function may be bypassed in this MODE below P-11.
- ## Trip function may be bypassed in this MODE below P-12.
- ### The channel(s) associated with the protective functions derived from the out of service Reactor Coolant Loop shall be placed in the tripped mode.
- * The provisions of Specification 3.0.4 are not applicable.

ACTION STATEMENTS

- ACTION 13 - With the number of OPERABLE Channels one less than the Total Number of Channels, be in HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours; however, one channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.1.
- ACTION 14 - With the number of OPERABLE Channels one less than the Total Number of Channels, operation may proceed until performance of the next required CHANNEL FUNCTIONAL TEST provided the inoperable channel is placed in the tripped condition within 1 hour.
- ACTION 15 - With a channel associated with an operating loop inoperable, restore the inoperable channel to OPERABLE status within 2 hours or be in HOT SHUTDOWN within the following 12 hours; however, one channel associated with an operating loop may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.1.
- ACTION 16 - With the number of OPERABLE Channels one less than the Total Number of Channels, operation may proceed provided the inoperable channel is placed in the bypassed condition and the Minimum Channels OPERABLE requirement is met; one additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.1.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 90 TO FACILITY OPERATING LICENSE NO. DPR-58
AND AMENDMENT NO. 75 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 March 29, 1985, Indiana and Michigan Electric Company (the licensee) requested changes to the Reactor Trip System (RTS) Instrumentation and Engineered Safety Feature Actuation Instrumentation (ESFAS) sections of the Technical Specifications (TS) for D. C. Cook Units 1 and 2. The changes fall into three general categories:

1. Changes to establish conformance between the Unit 1 TS, the Unit 2 TS, and the Westinghouse Standard Technical Specifications, NUREG-0452, Revision 4, (STS).
2. Clarifying editorial changes.
3. Changes which would extend the period of the time that one channel of the RTS can be bypassed for surveillance testing.

The proposed changes affect Unit 1 TS pages 3/4 3-1, 3/4 3-10, 3/4 3-14, 3/4 3-15, 3/4 3-16, 3/4 3-17, 3/4 3-18, 3/4 3-20, 3/4 3-21, 3/4 3-22, and 3/4 3-23 and Unit 2 TS pages 3/4 3-5, 3/4 3-6, and 3/4 3-21.

This safety evaluation is a review of the requested changes and their impact on the operation and administration of plant activities.

Summary of Evaluation

The changes proposed by the licensee, discussed in detail below, establish conformance with STS requirements, establish consistency between Unit 1 and Unit 2 TS, or clarify existing requirements through editorial change. As such, the changes do not adversely affect the safety of the plant nor the general public.

The staff agrees with the changes as described in the proposed amendments and finds them acceptable.

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Evaluation

Proposed Change to TS 4.3.1.1.1 for Unit 1

Description of Change

This TS currently reads as follows: "Each reactor trip system instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations during the modes and at the frequencies shown in Table 4.3-1."

The licensee has proposed to change the phrase "during the modes" to "for the modes".

Evaluation

This editorial change clarifies Reactor Trip System (RTS) surveillance requirements in that the proposed change more clearly reflects the necessity for completing specified tests prior to entering the mode in which the related functions are required to be operable. The change also establishes conformance with the Unit 2 TS. As such, it has previously been evaluated and found acceptable for Unit 2.

The staff finds the proposed change acceptable.

Proposed Change to TS Table 3.3-2 for Unit 1

Description of Change

The footnote at the end of TS Table 3.3-2 currently states, "Neutron detectors are exempt from response time testing. Response time shall be measured from detector output or input of the first electronic component in channel."

The proposed change would revise the second sentence of this footnote to read as follows: "Response time of the neutron flux signal portion of the channel shall be measured from detector output or input of the first electronic component in channel."

Evaluation

The proposed change clarifies which portions of the RTS neutron flux monitoring instrumentation are subject to time response testing. The wording of the proposed revision is identical to that contained in both the Unit 2 TS and the STS. As such, it has been previously reviewed and found acceptable.

The staff finds the proposed change acceptable.

Proposed Change to TS Table 4.3-1 for Unit 1

Description of Change

The proposed change adds a requirement to adjust the power range neutron flux instrumentation if it indicates a power level greater than 2% different than that obtained by heat balance above 15% power.

Evaluation

The proposed change adds an adjustment criterion which was not previously contained in the Unit 1 TS. The 2% value is consistent with that contained in the Unit 2 TS and the STS. As such, it has been previously evaluated and found acceptable.

The staff finds the proposed change acceptable.

Proposed Change to TS 4.3.2.1.1 for Unit 1

Description of Change

The existing specification states: "Each ESFAS instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION AND CHANNEL FUNCTIONAL TEST operations during the modes and at the frequencies shown in Table 4.3-2."

The proposed change reads as follows: "Each ESFAS instrumentation channel shall be demonstrated OPERABLE by the performance of the CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST operations for the MODES and at the frequencies shown in Table 4.3-2."

Evaluation

This editorial change clarifies ESF Actuation System (ESFAS) surveillance requirements in that the proposed change more clearly reflects the necessity for completing specified tests prior to entering the mode in which the related functions are required to be operable. The change also establishes conformance with the Unit 2 TS. As such, it has been previously evaluated and found acceptable for Unit 2.

The staff finds the proposed change acceptable.

Proposed Changes to TS Table 3.3-3 for Unit 1

Description of Changes

The following changes are proposed:

- a. The ACTION requirements are changed for the following ESFAS functions to indicate that the provisions of TS 3.0.4 are not APPLICABLE:
 1. Safety Injection, Turbine Trip, Feedwater Isolation, and Motor Driven Auxiliary Feedwater Pump actuation on:
 - (a) Containment Pressure - High
 - (b) Pressurizer Pressure - Low
 - (c) Steam Line Differential Pressure High with Four Loops Operating
 - (d) High Steam Flow in Two Lines with Four Loops Operating
 - (e) High Steam Flow in Two Lines Coincident with Low-Low T_{avg} with Four Loops Operating
 - (f) High Steam Flow in Two Lines Coincident with Low Steam Line Pressure with Four Loops Operating
 2. Steam Line Isolation on:
 - (a) High Steam Flow in Two Lines with Four Loops Operating
 - (b) High Steam Flow in Two Lines Coincident with Low-Low T_{avg} with Four Loops Operating
 - (c) High Steam Flow in Two Lines Coincident with Low Steam Line Pressure with Four Loops Operating
 3. Turbine Trip and Feedwater Isolation on:
 - (a) High-High Steam Generator Water Level
- b. The wording of ACTION 13 is changed to allow the bypassing of one channel of those ESFAS channels subject to ACTION 13 for two hours for surveillance testing pursuant to TS 4.3.2.11 instead of one hour as presently allowed.
- c. The wording of ACTION 14 is changed to delete reference to ESF Interlocks P-11 and P-12 and to authorize continued operation with an inoperable channel in the tripped condition with the next required CHANNEL FUNCTIONAL TEST provided that the inoperable channel is tripped within one hour, and the number of OPERABLE channels does not decrease to more than one below the total number specified.
- d. The wording of ACTION 16 is changed to delete reference to ESF interlocks P-11 and P-12, and to authorize continued operation with the number of OPERABLE channels one less than the total number of channels provided the minimum number of OPERABLE channels requirement is met and the inoperable channel is bypassed in one hour. Additional allowance is granted to place another channel in an inoperable status for up to 2 hours for TS 4.3.2.1.1 surveillance.

Evaluation

The proposed changes were reviewed against the requirements contained in the STS and the current Unit 2 TS, both of which have been previously reviewed and found acceptable with the following results:

1. The changes described in a. above are consistent with the requirements in STS and are acceptable to the staff.
2. The change described in b. above, allowing increased time for surveillance testing, is consistent with STS requirements and is acceptable to the staff.
3. The change described in c. above, is consistent with the current wording of the Unit 2 TS and STS. ACTION 14 applies to the same ESFAS instrumentation in both Unit 1 and Unit 2. As such, the proposed change is acceptable to the staff.
4. The change described in d. above is consistent with Unit 2 TS and STS. ACTION 16 applies to the same ESFAS instrumentation in both Unit 1 and Unit 2. As such, the proposed change is acceptable to the staff.

Proposed Changes to TS Table 3.3-1 for Unit 2

Description of Changes

The following changes are proposed:

1. ACTION 1 is revised to allow the bypassing of one channel for two hours for surveillance testing instead of one hour.
2. ACTIONS 2b and 6b are revised to allow the inoperable channel to be bypassed for up to two hours to support surveillance testing instead of allowing an additional channel to be bypassed for surveillance testing.
3. ACTION 2c is revised to specify that the allowance to monitor QUADRANT POWER TILT RATIO once per 12 hours be performed in accordance with Specification 4.2.4.c. The existing ACTION 2c does not specify how to monitor the QUADRANT POWER TILT RATIO.

Evaluation

The proposed changes have been reviewed and found acceptable to the staff for the following reasons:

1. The change described in 1. above establishes consistency with existing wording in the Unit 1 TS. As such, the wording has been previously reviewed and found acceptable.
2. The changes described in 2. above establish consistency with existing wording in the Unit 1 TS. As such, the wording has been previously reviewed and found acceptable.

3. Addition of the reference to TS 4.2.4.c adds a previously lacking degree of specifics to ACTION 2c. TS 4.2.4.c specifies use of the movable incore detectors to confirm power level and indicated QUADRANT POWER TILT RATIO consistency. As such, this TS requires physical measurements of incore conditions. This is a direct and valid method to monitor QUADRANT POWER TILT RATIO.

Proposed Changes to TS Table 3.3-3 for Unit 2

Description of Changes

The licensee has proposed the following changes to TS Table 3.3-2:

1. ACTION 13 is revised to allow one channel to be bypassed for surveillance testing per Specification 4.3.2.1.1 for two hours instead of one hour.
2. ACTION 16 is revised to allow continued operation with an inoperable channel provided the inoperable channel is bypassed and the minimum channels OPERABLE requirement is met.

Evaluation

The staff finds the proposed changes acceptable for the following reasons:

1. The change described in 1. above, allowing increased time for surveillance testing, is consistent with STS requirements.
2. The change described in 2. above establishes consistency between the Unit 2 TS and the corresponding STS ACTION requirement.

Environmental Consideration

These amendments involve changes in the installation or use of a facility component located within the restricted areas as defined in 10 CFR Part 20 and changes to 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 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 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

The staff has further 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.

Acknowledgement

This evaluation was prepared by W. G. Guldemon.

Dated: August 26, 1985