

JUNE 21 1979

DISCLOSURE
Docket Files 50-315
and 50-316

Docket Nos. 50-315
and 50-316

NRC PDR (2)
Local PDR
NRR Rdg
ORBI Rdg
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Mr. John Dolan, Vice President
Indiana and Michigan Electric Company
Indiana and Michigan Power Company
Post Office Box 18
Bowling Green Station
New York, New York 10004

Dear Mr. Dolan:

In response to your application dated June 6, 1979, the Commission has issued the enclosed Amendment Nos. 29 and 31 to Facility Operating License Nos. DPR-58 and DPR-74 for the Donald C. Cook Nuclear Plant Units 1 and 2, respectively.

The amendments revise the Technical Specifications to require actuation of safety injection based on two out of three channels of low pressurizer pressure and, in addition, change the P-11 permissive setpoint for Unit 2 to provide additional operating margin without inadvertent actuation of the safety injection systems.

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

Sincerely,

Original Signed By

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Enclosures:

1. Amendment No. 29 to DPR-58
2. Amendment No. 31 to DPR-74
3. Safety Evaluation
4. Notice of Issuance

cc: w/enclosures

DOR:AD:S&P
RHVollmer
06/ /79

OELD
06/ /79

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OFFICE	See next page	DOR:ORBI	DOR:ORBI	DOR:ORBI	DOR:PSB	DOR:ORBI
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UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D. C. 20555

June 21, 1979

Docket Nos. 50-315
and 50-316

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

Dear Mr. Dolan:

In response to your application dated June 6, 1979, the Commission has issued the enclosed Amendment Nos. 29 and 11 to Facility Operating License Nos. DPR-58 and DPR-74 for the Donald C. Cook Nuclear Plant Units 1 and 2, respectively.

The amendments revise the Technical Specifications to require actuation of safety injection based on two out of three channels of low pressurizer pressure and, in addition, change the P-11 permissive setpoint for Unit 2 to provide additional operating margin without inadvertent actuation of the safety injection systems.

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

Sincerely,

A handwritten signature in cursive script, appearing to read "A. Schwencer", is written over the typed name.

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Enclosures:

1. Amendment No. 29 to DPR-58
2. Amendment No. 11 to DPR-74
3. Safety Evaluation
4. Notice of Issuance

cc: w/enclosures
See next page

Mr. John Dolan
Indiana and Michigan Electric Company
Indiana and Michigan Power Company

-2-

June 21, 1979

cc: Mr. Robert W. Jurgensen
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Mr. Wade Schuler, Supervisor
Lake Township
Baroda, Michigan 49101

Mr. William R. Rustem (2)
Office of the Governor
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Honorable James Bemeneck, Mayor
City of Bridgman, Michigan 49106

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

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



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

INDIANA AND MICHIGAN ELECTRIC COMPANY

INDIANA AND MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 29
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 and Indiana & Michigan Power Company (the licensees) dated June 6, 1979 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 Specification

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 29, are hereby incorporated in the license. The licensees 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

A handwritten signature in cursive script, appearing to read 'A. Schwencer', is written over the typed name.

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 21, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 29

FACILITY OPERATING LICENSE NO. DPR-58

DOCKET NO. 50-315

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided for document completeness.

Pages

3/4 3-16

3/4 3-23

3/4 3-24

3/4 3-28

3/4 3-31

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 during 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 AND FEEDWATER ISOLATION					
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)

- b. Above P-11 or P-12, demonstrate that the Minimum Channels OPERABLE requirement is met within 1 hour; operation may continue with the inoperable channel bypassed and one additional channel may be bypassed for up to 2 hours for surveillance testing per Specification 4.3.2.1.

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.

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 3.3-4

ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
1. SAFETY INJECTION AND FEEDWATER ISOLATION		
a. Manual Initiation	Not Applicable	Not Applicable
b. Automatic Actuation Logic	Not Applicable	Not Applicable
c. Containment Pressure--High	≤ 1.1 psig	≤ 1.2 psig
d. Pressurizer Pressure--Low	≥ 1815 psig	≥ 1805 psig
e. Differential Pressure Between Steam Lines--High	≤ 100 psi	≤ 112 psi
f. Steam Flow in Two Steam Lines-- High Coincident with T_{avg} --Low-Low or Steam Line Pressure--Low	$\leq 1.42 \times 10^6$ lbs/hr from 0% load to 20% load. Linear from 1.42×10^6 lbs/hr at 20% load to 3.88×10^6 lbs/hr at 100% load $T_{avg} \geq 541^\circ\text{F}$ ≥ 600 psig steam line pressure	$\leq 1.56 \times 10^6$ lbs/hr from 0% load to 20% load. Linear from 1.56×10^6 lbs/hr at 20% load to 3.93×10^6 lbs/hr at 100% load. $T_{avg} \geq 539^\circ\text{F}$ ≥ 580 psig steam line pressure

TABLE 3.3-5

ENGINEERED SAFETY FEATURES RESPONSE TIMES

<u>INITIATING SIGNAL AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS</u>
1. <u>Manual</u>	
a. Safety Injection (ECCS)	Not Applicable
Feedwater Isolation	Not Applicable
Reactor Trip (SI)	Not Applicable
Containment Isolation-Phase "A"	Not Applicable
Containment Purge and Exhaust Isolation	Not Applicable
Auxiliary Feedwater Pumps	Not Applicable
Essential Service Water System	Not Applicable
Containment Air Recirculation Fan	Not Applicable
b. Containment Spray	Not Applicable
Containment Isolation-Phase "B"	Not Applicable
Containment Purge and Exhaust Isolation	Not Applicable
c. Containment Isolation-Phase "A"	Not Applicable
Containment Purge and Exhaust Isolation	Not Applicable
d. Steam Line Isolation	Not Applicable
2. <u>Containment Pressure-High</u>	
a. Safety Injection (ECCS)	$\leq 27.0^*$
b. Reactor Trip (from SI)	≤ 3.0
c. Feedwater Isolation	≤ 8.0
d. Containment Isolation-Phase "A"	$\leq 18.0^{\#}/28.0^{##}$
e. Containment Purge and Exhaust Isolation	Not Applicable
f. Auxiliary Feedwater Pumps	Not Applicable
g. Essential Service Water System	$\leq 13.0^{\#}/48.0^{##}$

TABLE 3.3-5 (Continued)

<u>ENGINEERED SAFETY FEATURES RESPONSE TIMES</u>	
<u>INITIATING SIGNAL AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS</u>
3. <u>Pressurizer Pressure-Low</u>	
a. Safety Injection (ECCS)	≤ 27.0*/13.0#
b. Reactor Trip (from SI)	≤ 3.0
c. Feedwater Isolation	≤ 8.0
d. Containment Isolation-Phase "A"	≤ 18.0#
e. Containment Purge and Exhaust Isolation	Not Applicable
f. Auxiliary Feedwater Pumps	Not Applicable
g. Essential Service Water System	≤ 48.0*/13.0#
4. <u>Differential Pressure Between Steam Lines-High</u>	
a. Safety Injection (ECCS)	≤ 13.0#/23.0##
b. Reactor Trip (from SI)	≤ 3.0
c. Feedwater Isolation	≤ 8.0
d. Containment Isolation-Phase "A"	≤ 18.0#/28.0##
e. Containment Purge and Exhaust Isolation	Not Applicable
f. Auxiliary Feedwater Pumps	Not Applicable
g. Essential Service Water System	≤ 13.0#/48.0##
5. <u>Steam Flow in Two Steam Lines - High Coincident</u> <u>with T_{avg} --Low-Low</u>	
a. Safety Injection (ECCS)	≤ 15.0#/25.0##
b. Reactor Trip (from SI)	≤ 5.0
c. Feedwater Isolation	≤ 10.0
d. Containment Isolation-Phase "A"	≤ 20.0#/30.0##
e. Containment Purge and Exhaust Isolation	Not Applicable
f. Auxiliary Feedwater Pumps	Not Applicable
g. Essential Service Water System	≤ 15.0#/50.0##
h. Steam Line Isolation	≤ 10.0

TABLE 4.3-2

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>
1. SAFETY INJECTION AND FEEDWATER ISOLATION				
a. Manual Initiation	N.A.	N.A.	M(1)	1, 2, 3, 4
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3, 4
c. Containment Pressure-High	S	R	M(3)	1, 2, 3
d. Pressurizer Pressure--Low	S	R	M	1, 2, 3
e. Differential Pressure Between Steam Lines--High	S	R	M	1, 2, 3
f. Steam Flow in Two Steam Lines--High Coincident with T _{avg} --Low or Steam Line Pressure--Low	S	R	M	1, 2, 3
2. CONTAINMENT SPRAY				
a. Manual Initiation	N.A.	N.A.	M(1)	1, 2, 3, 4
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3, 4
c. Containment Pressure--High- High	S	R	M(3)	1, 2, 3

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>
3. CONTAINMENT ISOLATION				
a. Phase "A" Isolation				
1) Manual	N.A.	N.A.	M(1)	1, 2, 3, 4
2) From Safety Injection Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3, 4
b. Phase "B" Isolation				
1) Manual	N.A.	N.A.	M(1)	1, 2, 3, 4
2) Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3, 4
3) Containment Pressure-- High-High	S	R	M(3)	1, 2, 3
c. Purge and Exhaust Isolation				
1) Manual	N.A.	N.A.	M(1)	1, 2, 3, 4
2) Containment Radio- activity-High	S	R	M	1, 2, 3, 4



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

INDIANA AND MICHIGAN ELECTRIC COMPANY

INDIANA AND MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 11
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 and Indiana & Michigan Power Company (the licensees) dated June 6, 1979 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 Specification

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 11, are hereby incorporated in the license. The licensees 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

A handwritten signature in cursive script, appearing to read 'A. Schwencer', is written over the typed name.

A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 21, 1979

ATTACHMENT TO LICENSE AMENDMENT NO. 11

FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NO. 50-316

Replace the following pages of the Appendix "A" Technical Specifications with the enclosed pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change. The corresponding overleaf pages are also provided to maintain document completeness.

Pages

3/4 3-15
3/4 3-22
3/4 3-23
3/4 3-27
3/4 3-30

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 AUXILIARY 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 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 oper- ating loop	1 pressure in any 2 operating loops		15

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 1 hour 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 demonstrated within 1 hour; 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.

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 2010 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 3.3-4ENGINEERED SAFETY FEATURE ACTUATION SYSTEM INSTRUMENTATION TRIP SETPOINTS.

<u>FUNCTIONAL UNIT</u>	<u>TRIP SETPOINT</u>	<u>ALLOWABLE VALUES</u>
1. SAFETY INJECTION, TURBINE TRIP, FEEDWATER ISOLATION AND MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS		
a. Manual Initiation	Not Applicable	Not Applicable
b. Automatic Actuation Logic	Not Applicable	Not Applicable
c. Containment Pressure--High	≤ 1.1 psig	≤ 1.2 psig
d. Pressurizer Pressure--Low	≥ 1900 psig	≥ 1890 psig
e. Differential Pressure Between Steam Lines--High	≤ 100 psi	≤ 112 psi
f. Steam Line Pressure--Low	≥ 600 psig steam line pressure	≥ 580 psig steam line pressure

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>
2. CONTAINMENT SPRAY		
a. Manual Initiation	Not Applicable	Not Applicable
b. Automatic Actuation Logic	Not Applicable	Not Applicable
c. Containment Pressure--High-High	≤ 2.9 psig	≤ 3.0 psig
3. CONTAINMENT ISOLATION		
a. Phase "A" Isolation		
1. Manual	Not Applicable	Not Applicable
2. From Safety Injection Automatic Actuation Logic	Not Applicable	Not Applicable
b. Phase "B" Isolation		
1. Manual	Not Applicable	Not Applicable
2. Automatic Actuation Logic	Not Applicable	Not Applicable
3. Containment Pressure--High-High	≤ 2.9 psig	≤ 3.0 psig
c. Purge and Exhaust Isolation		
1. Manual	Not Applicable	Not Applicable
2. Containment Radioactivity--High	$\leq 2 \times$ background	$\leq 2 \times$ background

TABLE 3.3-5 (Continued)

ENGINEERED SAFETY FEATURES RESPONSE TIMES

<u>INITIATING SIGNAL AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS</u>
3. <u>Pressurizer Pressure-Low</u>	
a. Safety Injection (ECCS)	$\leq 24.0^*/12.0\#$
b. Reactor Trip (from SI)	≤ 2.0
c. Feedwater Isolation	≤ 8.0
d. Containment Isolation-Phase "A"	$\leq 18.0\#$
e. Containment Purge and Exhaust Isolation	Not Applicable
f. Motor Driven Auxiliary Feedwater Pumps	≤ 60.0
g. Essential Service Water System	$\leq 48.0^*/13.0\#$
4. <u>Differential Pressure Between Steam Lines-High</u>	
a. Safety Injection (ECCS)	$\leq 13.0\#/23.0\#\#$
b. Reactor Trip (from SI)	≤ 3.0
c. Feedwater Isolation	≤ 8.0
d. Containment Isolation-Phase "A"	$\leq 18.0\#/28.0\#\#$
e. Containment Purge and Exhaust Isolation	Not Applicable
f. Motor Driven Auxiliary Feedwater Pumps	≤ 60.0
g. Essential Service Water System	$\leq 13.0\#/48.0\#\#$
5. <u>Steam Flow in Two Steam Lines - High Coincident with T_{avg} --Low-Low</u>	
a. Safety Injection (ECCS)	Not Applicable
b. Reactor Trip (from SI)	Not Applicable
c. Feedwater Isolation	Not Applicable
d. Containment Isolation-Phase "A"	Not Applicable
e. Containment Purge and Exhaust Isolation	Not Applicable
f. Auxiliary Feedwater Pumps	Not Applicable
g. Essential Service Water System	Not Applicable
h. Steam Line Isolation	Not Applicable

TABLE 3.3-5 (Continued)
ENGINEERED SAFETY FEATURES RESPONSE TIMES

<u>INITIATING SIGNAL AND FUNCTION</u>	<u>RESPONSE TIME IN SECONDS</u>
6. <u>Steam Line Pressure--Low</u>	
a. Safety Injection (ECCS)	$\leq 12.0\#/24.0\#\#$
b. Reactor Trip (from SI)	≤ 2.0
c. Feedwater Isolation	≤ 8.0
d. Containment Isolation-Phase "A"	$\leq 18.0\#/28.0\#\#$
e. Containment Purge and Exhaust Isolation	Not Applicable
f. Motor Driven Auxiliary Feedwater Pumps	≤ 60.0
g. Essential Service Water System	$\leq 14.0\#/48.0\#\#$
h. Steam Line Isolation	≤ 8.0
7. <u>Containment Pressure--High-High</u>	
a. Containment Spray	≤ 45.0
b. Containment Isolation-Phase "B"	Not Applicable
c. Steam Line Isolation	≤ 7.0
d. Containment Air Recirculation Fan	≤ 600.0
8. <u>Steam Generator Water Level--High-High</u>	
a. Turbine Trip-Reactor Trip	Not Applicable
b. Feedwater Isolation	Not Applicable
9. <u>Steam Generator Water Level--Low-Low</u>	
a. Motor Driven Auxiliary Feedwater Pumps	≤ 60.0
b. Turbine Driven Auxiliary Feedwater Pumps	≤ 60.0
10. <u>4160 volt Emergency Bus Loss of Voltage</u>	
a. Motor Driven Auxiliary Feedwater Pumps	≤ 60.0

TABLE 3.3-5 (Continued)

TABLE NOTATION

- * Diesel generator starting and sequence loading delays included. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps, SI and RHR pumps.
- # Diesel generator starting and sequence loading delays not included. Offsite power available. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps.
- ## Diesel generator starting and sequence loading delays included. Response time limit includes opening of valves to establish SI path and attainment of discharge pressure for centrifugal charging pumps.

TABLE 4.3-2

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>
1. SAFETY INJECTION, TURBINE TRIP AND FEEDWATER ISOLATION				
a. Manual Initiation	N.A.	N.A.	M(1)	1, 2, 3, 4
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3, 4
c. Containment Pressure-High	S	R	M(3)	1, 2, 3
d. Pressurizer Pressure--Low	S	R	M	1, 2, 3
e. Differential Pressure Between Steam Lines--High	S	R	M	1, 2, 3
f. Steam Line Pressure--Low	S	R	M	1, 2, 3
2. CONTAINMENT SPRAY				
a. Manual Initiation	N.A.	N.A.	M(1)	1, 2, 3, 4
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	1, 2, 3, 4
c. Containment Pressure--High- High	S	R	M(3)	1, 2, 3

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NOS. 29 AND 11 TO FACILITY OPERATING LICENSE NOS. DPR-58 AND DPR-74 INDIANA AND MICHIGAN ELECTRIC COMPANY INDIANA AND MICHIGAN POWER COMPANY DONALD C. COOK NUCLEAR PLANT DOCKET NOS. 50-315 AND 50-316

INTRODUCTION

The licensee, Indiana and Michigan Power Company, in its submittal of June 6, 1979, proposed certain modifications to the safety injection actuation system logics for Donald C. Cook Nuclear Plant, Units 1 and 2 in response to Item 3 of IE Bulletin 79-06A dated April 14, 1979. The applicant also proposed a change to the P-11 permissive setpoint for Unit 2.

DISCUSSION

Since the date of licensing until the issuance of IE Bulletin 79-06A safety injection was initiated, in addition to other parameters, based on coincident trip of one-of-three matched pairs of low pressurizer level and low pressurizer pressure trips.. Item 3 of IE Bulletin 79-06A directed all facilities using pressurizer water level coincident with pressurizer pressure for automatic initiating of safety injection to trip the low pressurizer level setpoint bistables so that when pressurizer pressure reaches the low setpoint, safety injection would be initiated regardless of the pressurizer level.

Because of the concern that this action has resulted in placing D. C. Cook Nuclear Plant Units 1 and 2 in a condition (one-out-of-three trip) which is more susceptible to spurious actuation of the safety injection system, the licensee has proposed the following modifications and Technical Specification changes to alleviate this situation. The Unit 2 Technical Specification for the P-11 setpoint is being changed to correct an omission which has existed since the plant was initially licensed.

EVALUATION

The proposed modification to the safety injection actuation system consists of removing the pressurizer level signal from each of the pressurizer level/pressure channel trips and converting the system to a two-out-of-three logic based on the pressurizer low pressure trips. The instrumentation logic receives pressurizer pressure signals from three pressure transmitters and initiates a safety injection actuation when two of the three signals reach the low pressure setpoint of 1900 psig. This modification does not involve a change in the setpoint. These modifications will satisfy the requirements of IEEE 279-1971, and other applicable standards. The modifications will be implemented during the current outage, which will continue through at least June 21, 1979.

The other change to the Unit 2 Technical Specification increases the P-11 setpoint by 95 psi (4.92%) to 2010 psig. The reason for this change is that the present setpoint (1915 psig) provides only a 15 psig margin between the bypass permissive and the scram point. (In Unit 1, an 85 psi margin

is provided). The difference in margin resulted from using the same P-11 setpoint in both units in spite of the fact that different scram points are used. The licensee has stated that the differences in setpoint result from the assumed differences in transmitter accuracy.

ENVIRONMENTAL CONSIDERATION

We have determined that the amendments do not authorize any change to 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 amendments involve 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 these amendments.

CONCLUSION

Based on our review of the licensee's submittal, we conclude that the modifications to the safety injection actuation system logic satisfy the requirements of IEEE 279-1971 and that the changes in Technical Specifications are correct; and therefore, are acceptable.

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve an increase in the probability or consequences of accidents previously considered and do not involve a 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 these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: June 21, 1979

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKET NOS. 50-315 AND 50-316

INDIANA AND MICHIGAN ELECTRIC COMPANY

INDIANA AND MICHIGAN POWER COMPANY

NOTICE OF ISSUANCE OF AMENDMENT TO FACILITY

OPERATING LICENSE

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment Nos. 29 and 11 to Facility Operating License Nos. DPR-58 and DPR-74 issued to Indiana and Michigan Electric Company, which revised the Appendix A Technical Specifications for operation of the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2 (the facilities), located in Berrien County, Michigan.

These changes to the Technical Specifications authorize the deletion of the low pressurizer pressure water level coincidence logic for safety injection actuation and conversion to a two out of three channel logic on low pressurizer pressure only (for safety injection actuation). Also the P-11 setpoint in Unit 2 has been changed to provide additional operating margin without inadvertent actuation of the safety injection system.

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's regulations. The Commission has made

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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 amendments.

The Commission has determined that the issuance of these amendments 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 these amendments.

For further details with respect to this action, see (1) the application for amendments dated June 6, 1979, (2) Amendment Nos. 29 and 11 to Facility Operating License Nos. DPR-58 and DPR-74, and (3) the Commission's 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. Josephs, 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 Operating Reactors.

Dated at Bethesda, Maryland this 21st Day of June.

FOR THE NUCLEAR REGULATORY COMMISSION



A. Schwencer, Chief
Operating Reactors Branch #1
Division of Operating Reactors