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SEP 09 1982

Docket Nos. 50-316  
 and 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. 60 to Facility Operating License No. DPR-58 and Amendment No. 43 to Facility Operating License No. DPR-74 for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications in response to your application transmitted by letter dated August 20, 1982.

These amendments revise the Technical Specifications to reflect installation of a new Radiation Monitoring System (RMS). The revised Technical Specifications will not be effective upon entry into hot shutdown during startup from the 1982 refueling outages for Units 1 and 2.

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

Sincerely,

ORIGINAL SIGNED

Ramon L. Cilimberg, Project Manager  
 Operating Reactors Branch #1,  
 Division of Licensing

Enclosures:

1. Amendment No. 60 to DPR-58
2. Amendment No. 43 to DPR-74
3. Safety Evaluation
4. Notice of Issuance

cc w/enclosures:  
 See next page

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 PDR ADCK 05000315  
 P PDR

*for SV  
 9/9/82*

OFFICE	ORB#1:DL	ORB#1:DL	ORB#1:DL	AD/OR:DL	OELD	ORAB
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DATE	09/8/82	09/9/82:ds	09/9/82	09/9/82	09/9/82	09/9/82

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Indiana and Michigan Electric Company

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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. 60  
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 August 20, 1982, 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. 60, 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

*Marshall Spotswood*  
for Steven A. Varga, Chief  
Operating Reactors Branch #1  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: September 9, 1982

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 60 TO FACILITY OPERATING LICENSE NO. DPR-58

DOCKET NO. 50-315

Revise Appendix A as follows:

Remove Pages

3/4 3-19  
3/4 3-20\*  
3/4 3-26  
3/4 3-35  
3/4 3-36  
3/4 3-37  
3/4 3-38  
3/4 4-13\*  
3/4 4-14  
3/4 9-9\*  
3/4 9-10

Insert Pages

3/4 3-19  
3/4 3-20\*  
3/4 3-26  
3/4 3-35  
3/4 3-36  
3/4 3-37  
3/4 3-38  
3/4 4-13\*  
3/4 4-14  
3/4 9-9\*  
3/4 9-10

\*Included for convenience

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>
3. CONTAINMENT ISOLATION					
a. Phase "A" Isolation					
1) Manual	2	1	2	1,2,3,4	18
2) From Safety Injection Automatic Actuation Logic	2	1	2	1,2,3,4	13
b. Phase "B" Isolation					
1) Manual	2	2	2	1,2,3,4	18
2) Automatic Actuation Logic	2	1	2	1,2,3,4	13
3) Containment Pressure-High-High	4	2	3	1,2,3	16
c. Purge and Exhaust Isolation					
1) Manual	2	1	2	1,2,3,4	17
2) Containment Radioactivity-High Train A	3	1	2	1,2,3,4	17
3) Containment Radioactivity-High Train B	3	1	2	1,2,3,4	17

D. C. COOK-UNIT 1

3/4 3-19

Amendment No. 60

TABLE J.J-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 <sup>##</sup>	
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 <sup>###</sup> /any operating steam line	1/operating steam line		15

D. C. COOK-UNIT 1

3/4 3-20

Amendment No. 60

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 Radioactivity -- High Train A	$\leq 2 \times$ normal channel reading	$\leq 2 \times$ normal channel reading
3. Containment Radioactivity -- High Train B	$\leq 2 \times$ normal channel reading	$\leq 2 \times$ normal channel reading
4. STEAM LINE ISOLATION		
a. Manual	Not Applicable	Not Applicable
b. Automatic Actuation Logic	Not Applicable	Not Applicable
c. Containment Pressure -- High-High	$\leq 2.9$ psig	$\leq 3$ psig
d. Steam Flow in Two Steam Lines -- High Coincident with T <sub>avg</sub> -- Low-Low or Steam Line Pressure -- Low	$\leq 1.42 \times 10^6$ lbs/hr from 0% load to 20% load. Linear from $1.42 \times 10^6$ lbs/hr at 20% load to $3.88 \times 10^6$ lbs/hr at 100% load.	$\leq 1.56 \times 10^6$ lbs/hr from 0% load to 20% load. Linear from $1.56 \times 10^6$ lbs/hr at 20% load to $3.93 \times 10^6$ lbs/hr at 100% load.
	T <sub>avg</sub> $\geq 541^\circ\text{F}$	T <sub>avg</sub> $\geq 539^\circ\text{F}$
	$\geq 600$ psig steam line pressure	$\geq 580$ psig steam line pressure
5. TURBINE TRIP AND FEED WATER ISOLATION		
a. Steam Generator Water Level -- High-High	$\leq 67\%$ of narrow range instrument span each steam generator	$\leq 68\%$ of narrow range instrument span each steam generator

D. C. COOK - UNIT 1

3/4 3-26

Amendment No. 60

INSTRUMENTATION

3/4.3.3 MONITORING INSTRUMENTATION

RADIATION MONITORING INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

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3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-6.

ACTION:

- a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.
- b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

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4.3.3.1 Each radiation monitoring 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 4.3-3.

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

<u>OPERATION MODE/INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>ALARM/TRIP SETPOINT</u>	<u>MEASUREMENT RANGE</u>	<u>ACTION</u>
1. MODES 1,2,3, & 4				
a. AREA MONITOR				
i. Upper Containment	1	$\leq 2$ x normal channel reading	$10^{-1}$ to $10^4$ mR/hr	19
b. PROCESS MONITORS				
i. Particulate	1	$\leq 2$ x normal channel reading	$1.5 \times 10^{-4}$ to $1.5$ uCi	20
ii. Noble Gas	1	$\leq 2$ x normal channel reading	$10^{-7}$ to $10^{-2}$ uCi/cc	20
2. MODE 6				
a. TRAIN A	any 2/3 Channels			22
i. Containment Area Radiation Channel-VRS-1101		$\leq 2$ x normal channel reading	$10^{-1}$ to $10^4$ mR/hr	
ii. Particulate Channel-ERS-1301		$\leq 2$ x normal channel reading	$1.5 \times 10^{-4}$ to $1.5$ uCi	
iii. Noble Gas Channel-ERS-1305		$\leq 2$ x normal channel reading	$10^{-7}$ to $10^{-2}$ uCi/cc	
b. TRAIN B	any 2/3 Channels			22
i. Containment Area Radiation Channel-VRS-1201		Same as 2.a	Same as 2.a	
ii. Particulate Channel-ERS-1401		Same as 2.a	Same as 2.a	
iii. Noble Gas Channel-ERS-1405		Same as 2.a	Same as 2.a	
3. *				
a. Spent Fuel Storage	1	$\leq 15$ mR/hr	$10^{-1}$ to $10^4$ mR/hr	19

\* With fuel in storage pool or building.

TABLE 3.3-6 (Continued)  
TABLE NOTATION

- ACTION 19 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, perform area surveys of the monitored area with portable monitoring instrumentation at least once per day.
- ACTION 20 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, comply with the ACTION requirements of Specification 3.4.6.1.
- ACTION 22 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, comply with the ACTION requirements of Specification 3.9.9. This ACTION is not required during the performance of containment integrated leak rate test.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>OPERATING MODE/INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. MODES 1, 2, 3, & 4				
a. AREA MONITOR				
i. Upper Containment	S	R	M	1, 2, 3 & 4
b. PROCESS MONITORS				
i. Particulate	S	R	M	1, 2, 3 & 4
ii. Noble Gas	S	R	M	1, 2, 3 & 4
2. MODE 6				
a. TRAIN A				
i. Containment Area Radiation Channel	S	R	M	6
ii. Particulate Channel	S	R	M	6
iii. Noble Gas Channel	S	R	M	6
b. TRAIN B				
i. Containment Area Radiation Channel	S	R	M	6
ii. Particulate Channel	S	R	M	6
iii. Noble Gas Channel	S	R	M	6
3. *				
a. SPENT FUEL STORAGE	S	R	M	*

\* With fuel in the storage pool or building.

D. C. COOK - UNIT 1

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Amendment No. 60

TABLE 4.4-2

STEAM GENERATOR TUBE INSPECTION

1ST SAMPLE INSPECTION			2ND SAMPLE INSPECTION		3RD SAMPLE INSPECTION	
Sample Size	Result	Action Required	Result	Action Required	Result	Action Required
A minimum of S Tubes per S. G.	C-1	None	N/A	N/A	N/A	N/A
	C-2	Plug defective tubes and inspect additional 2S tubes in this S. G.	C-1	None	N/A	N/A
			C-2	Plug defective tubes and inspect additional 4S tubes in this S. G.	C-1	None
					C-2	Plug defective tubes
					C-3	Perform action for C-3 result of first sample
	C-3	Perform action for C-3 result of first sample	N/A	N/A		
	C-3	Inspect all tubes in this S. G., plug defective tubes and inspect 2S tubes in each other S. G.  Prompt notification to NRC pursuant to specification 6.9.1	All other S. G.s are C-1	None	N/A	N/A
			Some S. G.s C-2 but no additional S. G. are C-3	Perform action for C-2 result of second sample	N/A	N/A
			Additional S. G. is C-3	Inspect all tubes in each S. G. and plug defective tubes. Prompt notification to NRC pursuant to specification 6.9.1	N/A	N/A

$S = 3 \frac{N}{n} \%$  Where N is the number of steam generators in the unit, and n is the number of steam generators inspected during an inspection

REACTOR COOLANT SYSTEM

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

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3.4.6.1 The following Reactor Coolant System leakage detection systems shall be OPERABLE:

- a. One of the containment atmosphere particulate radioactivity monitoring channels (ERS-1301 or ERS-1401),
- b. The containment sump level and flow monitoring system, and
- c. Either the containment humidity monitor or one of the containment atmosphere gaseous radioactivity monitoring channels (ERS-1305 or ERS-1405).

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only two of the above required leakage detection systems OPERABLE, operation may continue for up to 30 days provided grab samples of the containment atmosphere are obtained and analyzed at least once per 24 hours when the required gaseous and/or particulate radioactivity monitoring channels are inoperable; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

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4.4.6.1 The leakage detection systems shall be demonstrated OPERABLE by:

- a. Containment atmosphere particulate and gaseous (if being used) monitoring system-performance of CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST at the frequencies specified in Table 4.3-3,
- b. Containment sump level and flow monitoring system-performance of CHANNEL CALIBRATION at least once per 18 months,
- c. Containment humidity monitor (if being used) - performance of CHANNEL CALIBRATION at least once per 18 months.

REFUELING OPERATIONS

COOLANT CIRCULATION

LIMITING CONDITION FOR OPERATION

3.9.8 At least one residual heat removal loop shall be in operation.

APPLICABILITY: MODE 6.

ACTION:

- a. With less than one residual heat removal loop in operation, except as provided in b. below, suspend all operations involving an increase in the reactor decay heat load or a reduction in boron concentration of the Reactor Coolant System. Close all containment penetrations providing direct access from the containment atmosphere to the outside atmosphere within 4 hours.
- b. The residual heat removal loop may be removed from operation for up to 1 hour per 8 hour period during the performance of CORE ALTERATIONS in the vicinity of the reactor pressure vessel hot legs.
- c. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.8 A residual heat removal loop shall be determined to be in operation and circulating reactor coolant at a flow rate of  $\geq 3000$  gpm at least once per 24 hours.

REFUELING OPERATIONS

CONTAINMENT PURGE AND EXHAUST ISOLATION SYSTEM

LIMITING CONDITION FOR OPERATION

---

3.9.9 The Containment Purge and Exhaust isolation system shall be OPERABLE.

APPLICABILITY: MODE 6.

ACTION:

With the Containment Purge and Exhaust isolation system inoperable, close each of the Purge and Exhaust penetrations providing direct access from the containment atmosphere to the outside atmosphere. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

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4.9.9 The Containment Purge and Exhaust isolation system shall be demonstrated OPERABLE within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS by verifying that Containment Purge and Exhaust isolation occurs on manual initiation and on a high radiation signal from each of the Containment radiation instrumentation monitors.



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. 43  
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 August 20, 1982, 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. 43, 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

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

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: September 9, 1982

ATTACHMENT TO LICENSE AMENDMENT

AMENDMENT NO. 43 TO FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NO. 50-316

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
3/4 3-17*	3/4 3-17*
3/4 3-18	3/4 3-18
3/4 3-24	3/4 3-24
3/4 3-33*	3/4 3-33*
3/4 3-34	3/4 3-34
3/4 3-35	3/4 3-35
3/4 3-36	3/4 3-36
3/4 3-37	3/4 3-37
3/4 3-38*	3/4 3-38*
3/4 4-13*	3/4 4-13*
3/4 4-14	3/4 4-14
3/4 9-9	3/4 9-9
3/4 9-10*	3/4 9-10*

\*Included for convenience

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>
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

This Technical Specification will not be effective until after the 1982 refueling outage.

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>
3. CONTAINMENT ISOLATION					
a. Phase "A" Isolation					
1) Manual	2	1	2	1,2,3,4	18
2) From Safety Injection Automatic Actuation Logic	2	1	2	1,2,3,4	13
b. Phase "B" Isolation					
1) Manual	2	2	2	1,2,3,4	18
2) Automatic Actuation Logic	2	1	2	1,2,3,4	13
3) Containment Pressure-High-High	4	2	3	1,2,3	16
c. Purge and Exhaust Isolation					
1) Manual	2	1	2	1,2,3,4	17
2) Containment Radioactivity-High Train A	3	1	2	1,2,3,4	17
3) Containment Radioactivity-High Train B	3	1	2	1,2,3,4	17

This Technical Specification will not be effective until after the 1982 refueling outage.

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>
<b>2. CONTAINMENT SPRAY</b>		
a. Manual Initiation	Not Applicable	Not Applicable
b. Automatic Actuation Logic	Not Applicable	Not Applicable
c. Containment Pressure--High-High	$\leq 2.9$ psig	$\leq 3.0$ psig
<b>3. CONTAINMENT ISOLATION</b>		
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	$\leq 2.9$ psig	$\leq 3.0$ psig
c. Purge and Exhaust Isolation		
1. Manual	Not Applicable	Not Applicable
2. Containment Radioactivity --High Train A	$\leq 2$ x normal channel reading	$\leq 2$ x normal channel reading
3. Containment Radioactivity --High Train B	$\leq 2$ x normal channel reading	$\leq 2$ x normal channel reading

This Technical Specification will not be effective until after the 1982 refueling outage.

D. C. COOK - UNIT 2

3/4 3-24

Amendment No. 43

TABLE 4.3-2 (Continued)

. TABLE NOTATION

- (1) Manual actuation switches shall be tested at least once per 18 months during shutdown. All other circuitry associated with manual safeguards actuation shall receive a CHANNEL FUNCTIONAL TEST at least once per 31 days.
- (2) Each train or logic channel shall be tested at least every other 31 days.
- (3) The CHANNEL FUNCTIONAL TEST shall include exercising the transmitter by applying either a vacuum or pressure to the appropriate side of the transmitter.

This Technical Specification will not be effective until after the 1982 refueling outage.

## INSTRUMENTATION

### 3/4.3.3 MONITORING INSTRUMENTATION

#### RADIATION MONITORING INSTRUMENTATION

#### LIMITING CONDITION FOR OPERATION

---

3.3.3.1 The radiation monitoring instrumentation channels shown in Table 3.3-6 shall be OPERABLE with their alarm/trip setpoints within the specified limits.

APPLICABILITY: As shown in Table 3.3-6.

ACTION:

- a. With a radiation monitoring channel alarm/trip setpoint exceeding the value shown in Table 3.3-6, adjust the setpoint to within the limit within 4 hours or declare the channel inoperable.
- b. With one or more radiation monitoring channels inoperable, take the ACTION shown in Table 3.3-6.
- c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

#### SURVEILLANCE REQUIREMENTS

---

4.3.3.1 Each radiation monitoring 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 4.3-3.

This Technical Specification will not be effective until after the 1982 refueling outage.

TABLE 3.3-6

RADIATION MONITORING INSTRUMENTATION

<u>OPERATION MODE/INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>HIGH ALARM/TRIP SETPOINT</u>	<u>MEASUREMENT RANGE</u>	<u>ACTION</u>
1. MODES 1,2,3, & 4*				
a. AREA MONITOR				
i. Upper Containment	1	$\leq 2$ x normal channel reading	$10^{-1}$ to $10^4$ mR/hr	19
b. PROCESS MONITORS				
i. Particulate	1	$\leq 2$ x normal channel reading	$1.5 \times 10^{-4}$ to 1.5 uCi	20
ii. Noble Gas	1	$\leq 2$ x normal channel reading	$10^{-7}$ to $10^{-2}$ uCi/cc	20
2. MODE 6				
a. TRAIN A	any 2/3 Channels			22
i. Containment Area Radiation Channel-VRS-1101		$\leq 2$ x normal channel reading	$10^{-1}$ to $10^4$ mR/hr	
ii. Particulate Channel-ERS-1301		$\leq 2$ x normal channel reading	$1.5 \times 10^{-4}$ to 1.5 uCi	
iii. Noble Gas Channel-ERS-1305		$\leq 2$ x normal channel reading	$10^{-7}$ to $10^{-2}$ uCi/cc	
b. TRAIN B	any 2/3 Channels			22
i. Containment Area Radiation Channel-VRS-1201		Same as 2.a	Same as 2.a	
ii. Particulate Channel-ERS-1401		Same as 2.a	Same as 2.a	
iii. Noble Gas Channel ERS-1405		Same as 2.a	Same as 2.a	
3. **				
a. Spent Fuel Storage	1	$\leq 15$ mR/hr	$10^{-1}$ to $10^4$ mR/hr	19

\* With fuel in storage pool or building.

This Technical Specification will not be effective until after the 1982 refueling outage.

D. C. COOK - UNIT 2

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TABLE 3.3-6 (Continued)  
TABLE NOTATION

- ACTION 19 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, perform area surveys of the monitored area with portable monitoring instrumentation at least once per day.
- ACTION 20 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, comply with the ACTION requirements of Specification 3.4.6.1.
- ACTION 22 - With the number of channels OPERABLE less than required by the Minimum Channels Operable requirement, comply with the ACTION requirements of Specification 3.9.9. This ACTION is not required during the performance of containment integrated leak rate test.

This Technical Specification will not be effective until after the 1982 refueling outage.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>OPERATING MODE/INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. MODES 1, 2, 3, & 4				
a. AREA MONITOR				
i. Upper Containment	S	R	M	1, 2, 3 & 4
b. PROCESS MONITORS				
i. Particulate	S	R	M	1, 2, 3 & 4
ii. Noble Gas	S	R	M	1, 2, 3 & 4
2. MODE 6				
a. TRAIN A				
i. Containment Area Radiation Channel	S	R	M	6
ii. Particulate Channel	S	R	M	6
iii. Noble Gas Channel	S	R	M	6
b. TRAIN B				
i. Containment Area Radiation Channel	S	R	M	6
ii. Particulate Channel	S	R	M	6
iii. Noble Gas Channel	S	R	M	6
3. *				
a. SPENT FUEL STORAGE	S	R	M	*

\* With fuel in the storage pool or building.

This Technical Specification will not be effective until after the 1982 refueling outage.

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Amendment No. 43

## INSTRUMENTATION

### MOVABLE INCORE DETECTORS

#### LIMITING CONDITION FOR OPERATION

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- 3.3.3.2 The movable incore detection system shall be OPERABLE with:
- At least 75% of the detector thimbles,
  - A minimum of 2 detector thimbles per core quadrant, and
  - Sufficient movable detectors, drive, and readout equipment to map these thimbles.

APPLICABILITY: When the movable incore detection system is used for:

- Recalibration of the excore neutron flux detection system,
- Monitoring the QUADRANT POWER TILT RATIO, or
- Measurement of  $F_{\Delta H}^N$ ,  $F_Q(Z)$  and  $F_{xy}$

#### CAUTION:

With the movable incore detection system inoperable, do not use the system or the above applicable monitoring or calibration functions. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

## SURVEILLANCE REQUIREMENTS

---

4.3.3.2 The movable incore detection system shall be demonstrated OPERABLE by normalizing each detector output when required for:

- Recalibration of the excore neutron flux detection system, or
- Monitoring the QUADRANT POWER TILT RATIO, or
- Measurement of  $F_{\Delta H}^N$ ,  $F_Q(Z)$ , and  $F_{xy}$ .

This Technical Specification will not be effective until after the 1982 refueling outage.

This Technical Specification will not be effective until after the 1982 refueling outage.

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Amendment No. 43

TABLE 4.4-2

STEAM GENERATOR TUBE INSPECTION

1ST SAMPLE INSPECTION			2ND SAMPLE INSPECTION		3RD SAMPLE INSPECTION	
Sample Size	Result	Action Required	Result	Action Required	Result	Action Required
A minimum of S Tubes per S. G.	C-1	None	N/A	N/A	N/A	N/A
	C-2	Plug defective tubes and inspect additional 2S tubes in this S. G.	C-1	None	N/A	N/A
			C-2	Plug defective tubes and inspect additional 4S tubes in this S. G.	C-1	None
					C-2	Plug defective tubes
			C-3	Perform action for C-3 result of first sample	N/A	N/A
	C-3	Inspect all tubes in this S. G., plug defective tubes and inspect 2S tubes in each other S. G.  Prompt notification to NRC pursuant to specification 6.9.1	All other S. G.s are C-1	None	N/A	N/A
			Some S. G.s C-2 but no additional S. G. are C-3	Perform action for C-2 result of second sample	N/A	N/A
			Additional S. G. is C-3	Inspect all tubes in each S. G. and plug defective tubes. Prompt notification to NRC pursuant to specification 6.9.1	N/A	N/A

$S = 3 \frac{N}{n} \%$  Where N is the number of steam generators in the unit, and n is the number of steam generators inspected during an inspection

## REACTOR COOLANT SYSTEM

### 3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

#### LEAKAGE DETECTION SYSTEMS

#### LIMITING CONDITION FOR OPERATION

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3.4.6.1 The following Reactor Coolant System leakage detection systems shall be OPERABLE:

- a. One of the containment atmosphere particulate radioactivity monitoring channels (ERS-1301 or ERS-1401),
- b. The containment sump level and flow monitoring system, and
- c. Either the containment humidity monitor or one of the containment atmosphere gaseous radioactivity monitoring channels (ERS-1305 or ERS-1405).

APPLICABILITY: MODES 1, 2, 3 and 4.

#### ACTION:

With only two of the above required leakage detection systems OPERABLE, operation may continue for up to 30 days provided grab samples of the containment atmosphere are obtained and analyzed at least once per 24 hours when the required gaseous and/or particulate radioactivity monitoring channels are inoperable; otherwise, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

#### SURVEILLANCE REQUIREMENTS

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4.4.6.1 The leakage detection systems shall be demonstrated OPERABLE by:

- a. Containment atmosphere particulate and gaseous (if being used) monitoring system-performance of CHANNEL CHECK, CHANNEL CALIBRATION and CHANNEL FUNCTIONAL TEST at the frequencies specified in Table 4.3-3,
- b. Containment sump level and flow monitoring system-performance of CHANNEL CALIBRATION at least once per 18 months,
- c. Containment humidity monitor (if being used) - performance of CHANNEL CALIBRATION at least once per 18 months.

This Technical Specification will not be effective until after the 1982 refueling outage.

## REFUELING OPERATIONS

### CONTAINMENT PURGE AND EXHAUST ISOLATION SYSTEM

#### LIMITING CONDITION FOR OPERATION

3.9.9 The Containment Purge and Exhaust isolation system shall be OPERABLE.

APPLICABILITY: MODE 6.

#### ACTION:

With the Containment Purge and Exhaust isolation system inoperable, close each of the Purge and Exhaust penetrations providing direct access from the containment atmosphere to the outside atmosphere. The provisions of Specification 3.0.3 are not applicable.

#### SURVEILLANCE REQUIREMENTS

4.9.9 The Containment Purge and Exhaust isolation system shall be demonstrated OPERABLE within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS by verifying that Containment Purge and Exhaust isolation occurs on manual initiation and on a high radiation signal from each of the Containment radiation instrumentation monitors.

This Technical Specification will not be effective until after the 1982 refueling outage.

## REFUELING OPERATIONS

### WATER LEVEL - REACTOR VESSEL

#### LIMITING CONDITION FOR OPERATION

---

3.9.10 At least, 23 feet of water shall be maintained over the top of irradiated fuel assemblies seated within the reactor pressure vessel.

APPLICABILITY: During movement of fuel assemblies or control rods within the reactor pressure vessel while in MODE 6.

#### ACTION:

With the requirements of the above specification not satisfied, suspend all operations involving movement of fuel assemblies or control rods within the pressure vessel. The provisions of Specification 3.0.3 are not applicable.

#### SURVEILLANCE REQUIREMENTS

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4.9.10 The water level shall be determined to be at least its minimum required depth within 2 hours prior to the start of and at least once per 24 hours thereafter during movement of fuel assemblies or control rods.

This Technical Specification will not be effective until after the 1982 refueling outage.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 60 TO FACILITY OPERATING LICENSE NO. DPR-58  
AND AMENDMENT NO. 43 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 August 20, 1982, the Indiana and Michigan Electric Company (the licensee) proposed changes to the Technical Specifications appended to Facility Operating License Nos. DPR-58 and DPR-74 for the Donald C. Cook Nuclear Plant Unit Nos. 1 and 2. The proposed changes reflect the design of the new upper and lower containment volume radiation monitors. The acceptability of these changes from a safety standpoint are discussed below.

Discussion and Evaluation

The licensee has changed the design of the upper and lower containment volume radiation monitors to minimize equipment failures of the type experienced with the original monitoring equipment. The new design provides for Train A and Train B monitors, each train being capable of automatically isolating seven containment purge and exhaust valves. Train A will be capable of isolating seven inboard purge and exhaust valves and Train B will be capable of isolating seven outboard valves. Each train consists of three channels and requires one channel to trip. The licensee has proposed changes which are applicable to each train separately. The proposed changes are similar to the present Technical Specifications and measurement ranges are consistent with the present Technical Specifications. The lower containment monitors will also be used for leak detection functions during plant operation and the Technical Specifications have been changed accordingly.

We conclude that the proposed Technical Specification changes are acceptable.

Environmental Consideration

We have determined that the amendments do 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 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

We have concluded, based on the considerations discussed above, that: (1) because the amendments do not involve a significant increase in the probability or consequences of an accident previously evaluated, do not create the possibility of an accident of a type different from any evaluated previously, and do not involve a significant reduction in a margin of safety, 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 the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: September 9, 1982

Principal Contributors:  
R. Cilimberg  
C. Patel

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NOS. 50-315 AND 50-316INDIANA AND MICHIGAN ELECTRIC COMPANYNOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY  
OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. 60 to Facility Operating License No. DPR-58, and Amendment No. 43 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 Nos. 1 and 2 (the facilities) located in Berrien County, Michigan. The amendments are effective as of the date of issuance.

The amendments revise the Technical Specifications to reflect installation of a new Radiation Monitoring 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 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 amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

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.

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For further details with respect to this action, see (1) the application for amendments dated August 20, 1982, (2) Amendment Nos. 60 and 43 to License Nos. DPR-58 and 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 9th day of September, 1982.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Marshall Grotenhuis, Acting Chief  
Operating Reactors Branch #1  
Division of Licensing