

August 6, 1990

Docket Nos. 50-315  
and 50-316

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Mr. Milton P. Alexich, Vice President  
Indiana Michigan Power Company  
c/o American Electric Power Service Corporation  
1 Riverside Plaza  
Columbus, Ohio 43216

Dear Mr. Alexich:

SUBJECT: AMENDMENT NOS.144 AND131 TO FACILITY OPERATING LICENSE NOS. DPR-58  
AND DPR-74: (TAC NOS. 69513 AND 69514)

The Commission has issued the enclosed Amendment No.144 to Facility Operating License No. DPR-58 and Amendment No.131 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 dated September 15, 1988.

These amendments remove references to obsolete surveillance interval extensions from the Technical Specifications (TS). The references are no longer required and their removal will make the TS more readable.

A copy of our related Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

/s/

Timothy Colburn, Project Manager  
Project Directorate III-1  
Division of Reactor Projects - III,  
IV, V & Special Projects  
Office of Nuclear Reactor Regulation

Enclosures:

1. Amendment No. 144 to DPR-58
2. Amendment No. 131 to DPR-74
3. Safety Evaluation

cc w/enclosures:  
See next page

See previous concurrence\* *TBC*  
 LA/PD31:DRSP\* PM/PD31:DRSP  
 PShuttleworth TColburn  
 6/29/90 8 / / 90

D/PD31:DRSP\* OGC\*  
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COOK AMEND 69513/4



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

August 6, 1990

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and 50-316

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Indiana Michigan Power Company  
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1 Riverside Plaza  
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Mr. Milton Alexich  
Indiana Michigan Power Company

Donald C. Cook Nuclear Plant

cc:  
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Monitoring Section Office  
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Department of Public Health  
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Post Office Box 30035  
Lansing, Michigan 48909



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

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-315

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 144  
License No. DPR-58

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Indiana Michigan Power Company (the licensee) dated September 15, 1988, 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:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 144, 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

*Timothy H. Colburn*  
Robert Pierson, Director *for*  
Project Directorate III-1  
Division of Reactor Projects - III,  
IV, V & Special Projects  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: August 6, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 144

FACILITY OPERATING LICENSE NO. DPR-58

DOCKET NO. 50-315

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

REMOVE

3/4 0-3  
3/4 3-1  
3/4 3-12  
3/4 3-13  
3/4 3-15  
3/4 3-31 through 3-33a  
3/4 3-42  
3/4 3-48  
3/4 3-54  
3/4 3-56  
3/4 4-14  
3/4 4-36  
3/4 5-2  
3/4 5-5  
3/4 5-8  
3/4 6-10  
3/4 6-13  
3/4 6-15  
3/4 6-27  
3/4 6-30  
3/4 6-33  
3/4 6-34  
3/4 6-38  
3/4 7-6  
3/4 7-15  
3/4 7-17  
3/4 7-22  
3/4 7-25  
3/4 7-28  
3/4 7-45

INSERT

3/4 0-3  
3/4 3-1  
3/4 3-12  
3/4 3-13  
3/4 3-15  
3/4 3-31 through 3-33a  
3/4 3-42  
3/4 3-48  
3/4 3-54  
3/4 3-56  
3/4 4-14  
3/4 4-36  
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3/4 6-34  
3/4 6-38  
3/4 7-6  
3/4 7-15  
3/4 7-17  
3/4 7-22  
3/4 7-25  
3/4 7-28  
3/4 7-45

### 3/4.0 APPLICABILITY

#### SURVEILLANCE REQUIREMENTS

- b. Surveillance intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

ASME Boiler And Pressure Vessel Code and applicable Addenda terminology for inservice inspection and testing criteria	Required frequencies for performing inservice inspection and testing activities
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Yearly or annually	At least once per 366 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.

4.0.6 Amendments 100, 107 and 108 granted extensions for certain surveillances required to be performed on or before July 31, 1987, and until the end of the Cycle 9-10 refueling outage. For these specific surveillances under this section, the specified time intervals required by Specification 4.0.2 will be determined with the new initiation date established by the surveillance date during the Unit 1 1987 refueling outage.

4.0.7 Amendment 121 granted extensions for certain surveillances required to be performed on or before April 1, 1989, until the end of the Cycle 10-11 refueling outage. For these specific surveillances under this extension, the specified time intervals required by Specification 4.0.2 will be determined with the new initiation date established by the surveillance date during the Unit 1 1989 refueling outage.

### 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 4.3-1

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODE IN WHICH SURVEILLANCE REQUIRED</u>
1. Manual Reactor Trip				
A. Shunt Trip Function	N.A.	N.A.	S/U(1)(10)	1, 2, 3*, 4*, 5*
B. Undervoltage Trip Function	N.A.	N.A.	S/U(1)(10)	1, 2, 3*, 4*, 5*
2. Power Range, Neutron Flux	S	D(2,8), M(3,8) and Q(6,8)	M and S/U(1)	1, 2 and *
3. Power Range, Neutron Flux, High Positive Rate	N.A.	R(6)	M	1, 2
4. Power Range, Neutron Flux, High Negative Rate	N.A.	R(6)	M	1, 2
5. Intermediate Range, Neutron Flux	S	R(6,8)	S/U(1)	1, 2, and *
6. Source Range, Neutron Flux	S	R(6,14)	M(14) and S/U(1)	2(7), 3(7), 4 and 5
7. Overtemperature delta T	S	R(9)	M	1, 2
8. Overpower delta T	S	R(9)	M	1, 2
9. Pressurizer Pressure-- Low	S	R	M	1, 2
10. Pressurizer Pressure-- High	S	R	M	1, 2
11. Pressurizer Water Level-- High	S	R	M	1, 2
12. Loss of Flow-Single Loop	S	R(8)	M	1

TABLE 4.3-1 (Continued)

REACTOR TRIP SYSTEM INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODE IN WHICH SURVEILLANCE REQUIRED</u>
13.Loss of Flow-Two Loops	S	R(8)	N.A.	1
14.Steam Generator Water Level--Low-Low	S	R	M	1, 2
15.Steam/Feedwater Flow Mismatch and Low Steam Generator Water Level	S	R	M	1, 2
16.Undervoltage-Reactor Coolant Pumps	N.A.	R	M	1
17.Underfrequency-Reactor Coolant Pumps	N.A.	R	M	1
18.Turbine Trip				
A.Low Fluid Oil Pressure	N.A.	N.A.	S/U(1)	1, 2
B.Turbine Stop Valve Closure	N.A.	N.A.	S/U(1)	1, 2
19.Safety Injection Input from ESF	N.A.	N.A.	M(4)	1, 2
20.Reactor Coolant Pump Breaker Position Trip	N.A.	N.A.	R	N.A.
21.Reactor Trip Breaker				
A. Shunt Trip Function	N.A.	N.A.	M(5)(11) and S/U(1)(11)	1, 2, 3*, 4*, 5*
B. Undervoltage Trip Function	N.A.	N.A.	M(5)(11) and S/U(1)(11)	1, 2, 3*, 4*, 5*
22.Automatic Trip Logic	N.A.	N.A.	M(5)	1, 2, 3*, 4*, 5*
23.Reactor Trip Bypass Breaker	N.A.	N.A.	M(12) and S/U(1)(13)	1, 2, 3*, 4*, 5*

## 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 4.3-2

ENGINEERED SAFETY FEATURED ACTUATION SYSTEM INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODE IN WHICH SURVEILLANCE REQUIRED</u>
1. SAFETY INJECTION, TURBINE TRIP, FEEDWATER ISOLATION, AND MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS				
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 Tavg --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 FEATURED ACTUATION SYSTEM INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODE IN WHICH SURVEILLANCE REQUIRED</u>
<b>3. CONTAINMENT ISOLATION</b>				
<b>a. Phase "A" Isolation</b>				
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>b. Phase "B" Isolation</b>				
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
<b>c. Purge and Exhaust Isolation</b>				
1) Manual	N.A.	N.A.	M(1)	1,2,3,4
2) Containment Radioactivity-High	S	R	M	1,2,3,4

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURED ACTUATION SYSTEM INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>	<u>MODE IN WHICH SURVEILLANCE REQUIRED</u>
<b>4. STEAM LINE ISOLATION</b>				
a. Manual	N.A.	N.A.	M(1)	1,2,3
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	1,2,3
c. Containment Pressure--High-High	S	R	M(3)	1,2,3
d. Steam Flow in Two Steam Lines--High Coincident with Tavg--Low-Low Pressure--Low	S	R	M	1,2,3
<b>5. TURBINE TRIP &amp; FEEDWATER ISOLATION</b>				
a. Steam Generator Water Level--High-High	S	R	M	1,2,3
<b>6. MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS</b>				
a. Steam Generator Water Level--Low-Low	S	R	M	1,2,3
b. 4 kv Bus Loss of Voltage	S	R	M	1,2,3
c. Safety Injection	N.A.	N.A.	M(2)	1,2,3
d. Loss of Main Feed Pumps	N.A.	N.A.	R	1,2,3

TABLE 4.3-2 (Continued)

ENGINEERED SAFETY FEATURED ACTUATION SYSTEM INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

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

TABLE 4.3-4

SEISMIC MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT CHANNEL</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>CHANNEL FUNCTIONAL TEST</u>
1. STRONG MOTION TRIAXIAL ACCELEROGRAPHS			
a. Reactor Pit Floor			
1. Time History Recorder	M	R	M
2. Seismic Trigger	NA	R	NA
b. Top of Crane Wall			
1. Time History Recorder	M	R	M
c. Free Field			
1. Time History Recorder	M	R	M
2. Seismic Trigger	NA	R	NA
2. PEAK RECORDING ACCELEROGRAPHS			
a. Containment Spring Line	NA	R	NA
b. Diesel Generator Room Floor	NA	R	NA
c. Spent Fuel Pool	NA	R	NA

TABLE 4.3-6

REMOTE SHUTDOWN MONITORING INSTRUMENTATION  
SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL</u> <u>CHECK</u>	<u>CHANNEL</u> <u>CALIBRATION</u>
1. Reactor Trip Breaker Indication	N.A.	N.A.
2. Pressurizer Pressure	M	R
3. Pressurizer Level	M	R
4. Steam Generator Level	M	R
5. Steam Generator Pressure	M	R

INSTRUMENTATION

POST-ACCIDENT INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.8 The post-accident monitoring instrumentation channels shown in Table 3.3-11 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With the number of OPERABLE post-accident monitoring channels less than required by Table 3.3-11, either restore the inoperable channel to OPERABLE status within 30 days, or be in HOT SHUTDOWN within the next 12 hours.
- b. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.8 Each post-accident monitoring instrumentation channel shall be demonstrated OPERABLE by performance of the CHANNEL CHECK and CHANNEL CALIBRATION operations at the frequencies shown in Table 4.3-7.

TABLE 4.3-7

POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

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

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

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

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

\*\* The requirements for these instruments will become effective after the level transmitters are modified or replaced and become operational. The schedule for modification or replacement of the transmitters is described in the Bases.

REACTOR COOLANT SYSTEM

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

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

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.

REACTOR COOLANT SYSTEM

LIMITING CONDITION FOR OPERATION (Continued)

2. With two or more block valves inoperable,  
within 1 hour either (1) restore a total of at least two block valves to OPERABLE status, or (2) close the block valves and remove power from the block valves, or (3) close the associated PORVs and remove power from their associated solenoid valves; and apply the portions of ACTION a.2 or a.3 above for inoperable PORVs, relating to OPERATIONAL MODE, as appropriate.
- c. With PORVs and block valves not in the same line inoperable,\*  
within 1 hour either (1) restore the valves to OPERABLE status or (2) close and de-energize the other valve in each line. Apply the portions of ACTION a.2 or a.3 above, relating to OPERATIONAL MODE, as appropriate for two or three lines unavailable.
- d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.11.1 Each of the three PORVs shall be demonstrated OPERABLE:

- a. At least once per 31 days by performance of a CHANNEL FUNCTIONAL TEST, excluding valve operation, and
- b. At least once per 18 months by performance of a CHANNEL CALIBRATION.

4.4.11.2 Each of the three block valves shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel. The block valve(s) do not have to be tested when ACTION 3.4.11.a or 3.4.11.c is applied.

4.4.11.3 The emergency power supply for the PORVs and block valves shall be demonstrated OPERABLE at least once per 18 months by operating the valves through a complete cycle of full travel while the emergency buses are energized by the onsite diesel generators and onsite plant batteries. This testing can be performed in conjunction with the requirements of Specifications 4.8.1.1.2.b and 4.8.2.3.2.d.

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\* PORVs isolated to limit RCS leakage through their seats and the block valves shut to isolate this leakage are not considered inoperable.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 31 days and within 6 hours after each solution volume increase of greater than or equal to 1% of tank volume by verifying the boron concentration of the accumulator solution.
- c. At least once per 31 days when the RCS pressure is above 2000 psig, by verifying that power to the isolation valve operator is disconnected by removal of the breaker from the circuit.
- d. Verifying at least once per 18 months that each accumulator isolation valve opens automatically upon receipt of a safety injection test signal.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- d. At least once per 18 months by:
1. Verifying automatic isolation and interlock action of the RHR system from the Reactor Coolant System when the Reactor Coolant System pressure is above 600 psig.
  2. A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or abnormal corrosion.
- e. At least once per 18 months, during shutdown, by:
1. Verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection test signal.
  2. Verifying that each of the following pumps start automatically upon receipt of a safety injection signal:
    - a) Centrifugal charging pump
    - b) Safety injection pump
    - c) Residual heat removal pump
- f. By verifying that each of the following pumps develops the indicated discharge pressure on recirculation flow when tested pursuant to Specification 4.0.5 at least once per 31 days on a STAGGERED TEST BASIS.
- |                               |                                    |
|-------------------------------|------------------------------------|
| 1. Centrifugal charging pump  | Greater than or equal to 2405 psig |
| 2. Safety Injection pump      | Greater than or equal to 1345 psig |
| 3. Residual heat removal pump | Greater than or equal to 165 psig  |
- g. By verifying the correct position of each mechanical stop for the following Emergency Core Cooling System throttle valves:
1. Within 4 hours following completion of each valve stroking operation or maintenance on the valve when the ECCS subsystems are required to be OPERABLE.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS

4.5.3.1 The ECCS subsystem shall be demonstrated OPERABLE per the applicable Surveillance Requirements of 4.5.2.

4.5.3.2 All charging pumps and safety injection pumps, except the above required OPERABLE charging pump, shall be demonstrated inoperable, by verifying that the motor circuit breakers have been removed from their electrical power supply circuits, at least once per 12 hours whenever the temperature of one or more of the RCS cold legs is less than or equal to 170° F as determined at least once per hour when any RCS cold leg temperature is between 170° F and 200° F.

## CONTAINMENT SYSTEMS

### 3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

#### CONTAINMENT SPRAY SYSTEM

##### LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent containment spray systems shall be OPERABLE with each spray system capable of taking suction from the RWST and transferring suction to the containment sump.

APPLICABILITY: MODES 1, 2, 3 and 4.

##### ACTION:

With one containment spray system inoperable, restore the inoperable spray system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable spray system to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

##### SURVEILLANCE REQUIREMENTS

4.6.2.1 Each containment spray system shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.
- b. By verifying, that on recirculation flow, each pump develops a discharge pressure of greater than or equal to 255 psig at a flow of greater than or equal to 700 gpm, when tested pursuant to Specification 4.0.5 at least once per 31 days on a STAGGERED TEST BASIS.
- c. At least once per 18 months during shutdown, by:
  1. Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure -- High-High test signal.
  2. Verifying that each spray pump starts automatically on a Containment Pressure -- High-High test signal.
- d. At least once per 5 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 18 months during shutdown, by:
  - 1. Cycling each power operated (excluding automatic) valve in the flow path that is not testable during plant operation, through at least one complete cycle of full travel.
  - 2. Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure -- High-High signal.
  
- d. At least once per 5 years by verifying a water flow rate of at least 20 gpm (greater than or equal to 20 gpm) but not to exceed 50 gpm (less than or equal to 50 gpm) from the spray additive tank test line to each containment spray system with the spray pump operating on recirculation with a pump discharge pressure greater than or equal to 255 psig.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

valve or its associated actuator, control or power circuit by performance of the cycling test, above, and verification of isolation time.

4.6.3.1.2 Each isolation valve specified in Table 3.6-1 shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

- a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.
- b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.
- c. Verifying that on a Containment Purge and Exhaust isolation signal, each Purge and Exhaust valve actuates to its isolation position.

4.6.3.1.3 The isolation time of each power operated or automatic valve of Table 3.6-1 shall be determined to be within its limit when tested pursuant to Specification 4.0.5.

CONTAINMENT SYSTEMS  
SURVEILLANCE REQUIREMENTS (Continued)

shall be constituted of one basket each from Radial Rows 1, 2, 4, 6, 8 and 9 (or from the same row of an adjacent bay if a basket from a designated row cannot be obtained for weighing) within each bay. If any basket is found to contain less than 1220 pounds of ice, a representative sample of 20 additional baskets from the same bay shall be weighed. The minimum average weight of ice from the 20 additional baskets and the discrepant basket shall not be less than 1220 pounds/basket at a 95% level of confidence.

The ice condenser shall also be subdivided into 3 groups of baskets, as follows: Group 1 - bays 1 through 8, Group 2 - bays 9 through 16, and Group 3 - bays 17 through 24. The minimum average ice weight of the sample baskets from Radial Rows 1, 2, 4, 6, 8 and 9 in each group shall not be less than 1220 pounds/basket at a 95% level of confidence.

The minimum total ice condenser ice weight at a 95% level of confidence shall be calculated using all ice basket weights determined during this weighing program and shall not be less than 2,371,450 pounds.

3. Verifying, by a visual inspection of at least two flow passages per ice condenser bay, that the accumulation of frost or ice on flow passages between ice baskets, past lattice frames, through the intermediate and top deck floor grating, or past the lower inlet plenum support structures and turning vanes is restricted to a nominal thickness of 3/8 inches. If one flow passage per bay is found to have an accumulation of frost or ice greater than this thickness, a representative sample of 20 additional flow passages from the same bay shall be visually inspected. If these additional flow passages are found acceptable, the surveillance program may proceed considering the single deficiency as unique and acceptable. More than one restricted flow passage per bay is evidence of abnormal degradation of the ice condenser.
- c. At least once per 40 months by lifting and visually inspecting the accessible portions of at least two ice baskets from each 1/3 of the ice condenser and verifying that the ice baskets are free of detrimental structural wear, cracks, corrosion or other damage. The ice baskets shall be raised at least 12 feet for this inspection.

CONTAINMENT SYSTEMS

ICE CONDENSER DOORS

LIMITING CONDITION FOR OPERATION

3.6.5.3 The ice condenser inlet doors, intermediate deck doors, and top deck doors shall be closed and OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one or more ice condenser doors open or otherwise inoperable, POWER OPERATION may continue for up to 14 days provided the ice bed temperature is monitored at least once per 4 hours and the maximum ice bed temperature is maintained less than or equal to 27°F; otherwise, restore the doors to their closed positions or OPERABLE status (as applicable) within 48 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.3.1 Inlet Doors - Ice condenser inlet doors shall be:

- a. Continuously monitored and determined closed by the inlet door position monitoring system, and
- b. Demonstrated OPERABLE during shutdown at least once per 9 months by:
  1. Verifying that the torque required to initially open each door is less than or equal to 675 inch pounds.
  2. Verifying that opening of each door is not impaired by ice, frost or debris.
  3. Testing a sample of at least 50% of the doors and verifying that the torque required to open each door is less than 195 inch-pounds when the door is 40 degrees open. This torque is defined as the "door opening torque" and is equal to the nominal door torque plus a frictional

CONTAINMENT SYSTEMS

INLET DOOR POSITION MONITORING SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.5.4 The inlet door position monitoring system shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the inlet door position monitoring system inoperable, POWER OPERATION may continue for up to 14 days, provided the ice bed temperature monitoring system is OPERABLE and the maximum ice bed temperature is less than or equal to 27°F when monitored at least once per 4 hours; otherwise, restore the inlet door position monitoring system to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.5.4 The inlet door position monitoring system shall be determined OPERABLE by:

- a. Performing a CHANNEL CHECK at least once per 12 hours,
- b. Performing a CHANNEL FUNCTIONAL TEST at least once per 18 months, and
- c. Verifying that the monitoring system correctly indicates the status of each inlet door as the door is opened and reclosed during its testing per Specification 4.6.5.3.1.

## CONTAINMENT SYSTEMS

### DIVIDER BARRIER PERSONNEL ACCESS DOORS AND EQUIPMENT HATCHES

#### LIMITING CONDITION FOR OPERATION

3.6.5.5 The personnel access doors and equipment hatches between the containment's upper and lower compartments shall be OPERABLE and closed.

APPLICABILITY: MODES 1, 2, 3 and 4.

#### ACTION:

With a personnel access door or equipment hatch inoperable or open except for personnel transit entry and  $T_{avg}$  greater than  $200^{\circ}\text{F}$ , restore the door or hatch to OPERABLE status or to its closed position (as applicable) within 1 hour or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

#### SURVEILLANCE REQUIREMENTS

4.6.5.5.1 The personnel access doors and equipment hatches between the containment's upper and lower compartments shall be determined closed by a visual inspection prior to increasing the Reactor Coolant System  $T_{avg}$  above  $200^{\circ}\text{F}$  and after each personnel transit entry when the Reactor Coolant System  $T_{avg}$  is above  $200^{\circ}\text{F}$ .

4.6.5.5.2 The personnel access doors and equipment hatches between the containment's upper and lower compartments shall be determined OPERABLE by visually inspecting the seals and sealing surfaces of these penetrations and verifying no detrimental misalignments, cracks or defects in the sealing surfaces, or apparent deterioration of the seal material:

- a. Prior to final closure of the penetration each time it has been opened, and
- b. At least once per 10 years for penetrations containing seals fabricated from resilient materials.

CONTAINMENT SYSTEMS

DIVIDER BARRIER SEAL

LIMITING CONDITION FOR OPERATION

3.6.5.9 The divider barrier seal shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the divider barrier seal inoperable, restore the seal to OPERABLE status prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.5.9 The divider barrier seal shall be determined OPERABLE at least once per 18 months during shutdown by:

- a. Removing two divider barrier seal test coupons and verifying that the physical properties of the test coupons are within the acceptable range of values shown in Table 3.6-2.
- b. Visually inspecting at least 95 percent of the seal's entire length and:
  1. Verifying that the seal and seal mounting bolts are properly installed, and
  2. Verifying that the seal material shows no visual evidence of deterioration due to holes, ruptures, chemical attack, abrasion, radiation damage, or changes in physical appearances.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verifying that each motor driven pump develops an equivalent discharge pressure of  $\geq 1375$  psig at 60°F on recirculation flow.
2. Verifying that the steam turbine driven pump develops a discharge pressure of  $\geq 1285$  psig at 60°F and at a flow of  $\geq 700$  gpm when the secondary steam supply pressure is greater than 310 psig. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.
3. Verifying that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position.
4. Verifying that each automatic valve in the flow path is in the fully open position whenever the auxiliary feedwater system is placed in automatic control or when above 10% RATED THERMAL POWER. This requirement is not applicable for those portions of the auxiliary feedwater system being used intermittently to maintain steam generator water level.

b. At least once per 18 months during shutdown by:

1. Verifying that each automatic valve in the flow path actuates to its correct position upon receipt of the appropriate engineered safety features actuation test signal required by Specification 3/4.3.2.
2. Verifying that each auxiliary feedwater pump starts as designed automatically upon receipt of the appropriate engineered safety features actuation test signal required by Specification 3/4.3.2.
3. Verifying that the unit cross-tie valves can cycle full travel. Following cycling, the valves will be verified to be in their closed positions.

PLANT SYSTEMS

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.3.1 At least two independent component cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one component cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.3.1 At least two component cooling water loops shall be demonstrated OPERABLE:

- a. At least once per 31 days verifying that each valve (manual, power operated or automatic) servicing safety-related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.
- b. At least once per 18 months during shutdown, by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection test signal.
- c. At least once per 31 days on a STAGGERED TEST BASIS, by verifying that each pump develops at least 93% of the discharge pressure for the applicable flow rate as determined from the manufacturer's Pump Performance Curve.

PLANT SYSTEMS

3/4.7.4 ESSENTIAL SERVICE WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.4.1 At least two independent essential service water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one service water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.4.1 At least two essential service water loops shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed, or otherwise secured in position, is in its correct position.
- b. At least once per 18 months during shutdown, by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection test signal.
- c. At least once per 31 days on a STAGGERED TEST BASIS, by verifying that each pump develops at least 93% of the discharge pressure for the applicable flow rate as determined from the manufacturer's Pump Performance Curve.

PLANT SYSTEMS  
SURVEILLANCE REQUIREMENTS (Continued)

- e. At least once per 18 months by:
1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the ventilation system at a flow rate of 6000 cfm plus or minus 10%.
  2. Verifying that on a Safety Injection Signal from either Unit 1 or Unit 2, or on a containment phase A isolation signal, the system automatically diverts its inlet flow through the HEPA filters and charcoal adsorber bank and that either fan can then be manually started in the recirculation mode.
  3. Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/16 inch W. G. relative to the outside atmosphere at a system flow rate of 6000 cfm plus or minus 10%.
- f. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the ventilation system at a flow rate of 6000 cfm plus or minus 10%.
- g. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the ventilation system at a flow rate of 6000 cfm plus or minus 10%.

PLANT SYSTEM  
SURVEILLANCE REQUIREMENTS (Continued)

- b) Emptying a longitudinal sample from an adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed.

Subsequent to reinstalling the adsorber tray used for obtaining the carbon sample, the system shall be demonstrated OPERABLE by also verifying that the charcoal adsorbers remove less than or equal to 99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1980 while operating the ventilation system at a flow rate of 25,000 cfm plus or minus 10%:

- d. At least once per 18 months by:
1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the ventilation system at a flow rate of 25,000 cfm plus or minus 10%.
  2. Deleted.
  3. Verifying that the standby fan starts automatically on a Containment Pressure--High-High Signal and directs its exhaust flow through the HEPA filters and charcoal adsorber banks on a Containment Pressure--High-High Signal.
- e. After each complete or partial replacement of HEPA filter band by verifying that the HEPA filter banks remove greater than or equal to 99% of the DOP when they are tested in-place in accordance with ANSI N510-1980 while operating the ventilation system at a flow rate of 25,000 cfm plus or minus 10%.
- f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1980 while operating the ventilation system at a flow rate of 25,000 cfm plus or minus 10%.

PLANT SYSTEMS

3/4.7.8 SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.8 All snubbers listed in Table 3.7-4 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4. (MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES).

ACTION:

With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.8.c on the supported component or declare the supported system inoperable and follow the appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.8 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 4.0.5.

a. Visual Inspections

The first inservice visual inspection of snubbers shall be performed after four months but within 10 months of commencing POWER OPERATION and shall include all snubbers listed in Table 3.7-4. If less than two (2) snubbers are found inoperable during the first inservice visual inspection, the second inservice visual inspection shall be performed 12 months plus or minus 25% from the date of the first inspection. Otherwise, subsequent visual inspections shall be performed in accordance with the following schedule:

<u>No. Inoperable Snubbers per Inspection Period</u>	<u>Subsequent Visual Inspection Period*#</u>
0	18 months plus or minus 25%
1	12 months plus or minus 25%
2	6 months plus or minus 25%
3,4	124 days plus or minus 25%
5,6,7	62 days plus or minus 25%
8 or more	31 days plus or minus 25%

The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule.

\* The inspection interval shall not be lengthened more than one step at a time.

# The provisions of Specification 4.0.2 are not applicable.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4.7.9.2 Each of the above required water spray and/or sprinkler systems shall be demonstrated to be OPERABLE:

- a. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel as provided by Technical Specification 4.7.9.1.1.d.
- b. At least once per 18 months:
  1. By performing a system functional test which includes simulated automatic actuation of the system, and:
    - a) Verifying that the automatic valves in the flow path actuate to their correct positions on a test signal, and
    - b) Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel,
  2. By inspection of deluge and preaction type system spray headers to verify their integrity.
  3. By inspection of each open head deluge nozzle to verify no blockage.
- c. At least once per 3 years by performing an air flow test through each open head deluge header and verifying each open head deluge nozzle is unobstructed.



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

INDIANA MICHIGAN POWER COMPANY

DOCKET NO. 50-316

DONALD C. COOK NUCLEAR PLANT, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 131  
License No. DPR-74

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Indiana Michigan Power Company (the licensee) dated September 15, 1988, 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.

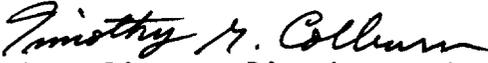
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. DPR-74 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 131, 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

  
Robert Pierson, Director *for*  
Project Directorate III-1  
Division of Reactor Projects - III,  
IV, V & Special Projects  
Office of Nuclear Reactor Regulation

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: August 6, 1990

ATTACHMENT TO LICENSE AMENDMENT NO. 131

FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NO. 50-316

Revise Appendix A Technical Specifications by removing the pages identified below and inserting the attached pages. The revised pages are identified by amendment number and contain marginal lines indicating the area of change.

REMOVE

3/4 0-3  
3/4 1-22  
3/4 3-1  
3/4 3-14  
3/4 3-32  
3/4 3-47  
3/4 4-14  
3/4 4-33  
3/4 5-2  
3/4 5-4  
3/4 5-5  
3/4 5-8  
3/4 6-10  
3/4 6-12  
3/4 6-14  
3/4 6-47  
3/4 7-6  
3/4 7-12  
3/4 7-13  
3/4 7-16a  
3/4 7-19a through 21  
3/4 7-40  
3/4 9-4

INSERT

3/4 0-3  
3/4 1-22  
3/4 3-1  
3/4 3-14  
3/4 3-32  
3/4 3-47  
3/4 4-14  
3/4 4-33  
3/4 5-2  
3/4 5-4  
3/4 5-5  
3/4 5-8  
3/4 6-10  
3/4 6-12  
3/4 6-14  
3/4 6-47  
3/4 7-6  
3/4 7-12  
3/4 7-13  
3/4 7-16a  
3/4 7-19a through 21  
3/4 7-40  
3/4 9-4

3/4.0 APPLICABILITY

SURVEILLANCE REQUIREMENTS

- b. Surveillance Intervals specified in Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda for the inservice inspection and testing activities required by the ASME Boiler and Pressure Vessel Code and applicable Addenda shall be applicable as follows in these Technical Specifications:

<u>ASME Boiler And Pressure Vessel Code and applicable Addenda terminology for inservice inspection and testing criteria</u>	<u>Required frequencies for performing inservice inspection and testing activities</u>
Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Yearly or annually	At least once per 366 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.
- 4.0.6 Amendment 78 granted extensions for certain surveillances required to be performed on or before March 31, 1986, until the end of the Cycle 5-6 refueling outage. For these specific surveillances under this section, the specified time intervals required by Specification 4.0.2 will be determined with the new initiation date established by the surveillance date during the Unit 2 1986 refueling outage.
- 4.0.7 Amendments 97 and 99 granted extensions for certain surveillances required to be performed on or before July 1, 1988, until the end of the Cycle 6-7 refueling outage. For these specific surveillances under this section, the specified time intervals required by Specification 4.0.2 will be determined with the new initiation date established by the surveillance date during the Unit 2 1988 refueling outage.

REACTIVITY CONTROL SYSTEMS

POSITION INDICATOR CHANNELS-SHUTDOWN

LIMITING CONDITION FOR OPERATION

3.1.3.3 At least one rod position indicator channel (excluding demand position indication) shall be OPERABLE for each shutdown or control rod not fully inserted.

APPLICABILITY: MODES 3\*#, 4\*# and 5\*#

ACTION:

With less than the above required position indicator channel(s) OPERABLE, immediately open the reactor trip system breakers.

SURVEILLANCE REQUIREMENTS

4.1.3.3 Each of the above required rod position indicator channel(s) shall be determined to be OPERABLE by performance of a CHANNEL FUNCTIONAL TEST at least once per 18 months.

\*With the reactor trip system breakers in the closed position.

#See Special Test Exception 3.10.5.

### 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 during 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.

## 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 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>
4. STEAM LINE ISOLATION				
a. Manual	N.A.	N.A.	M(1)	1,2,3
b. Automatic Actuation Logic	N.A.	N.A.	M(2)	1,2,3
c. Containment Pressure--High-High	S	R	M(3)	1,2,3
d. Steam Flow in Two Steam Lines--High Coincident with Tavg--Low-Low	S	R	M	1,2,3
e. Steam Line Pressure--Low	S	R	M	1,2,3
5. TURBINE TRIP AND FEEDWATER ISOLATION				
a. Steam Generator Water Level--High-High	S	R	M	1,2,3 and \$
6. MOTOR DRIVEN AUXILIARY FEEDWATER PUMPS				
a. Steam Generator Water Level--Low-Low	S	R	M	1,2,3
b. 4 kV Bus Loss of Voltage	S	R	M	1,2,3
c. Safety Injection	N.A.	N.A.	M(2)	1,2,3
d. Loss of Main Feed Pumps	N.A.	N.A.	R	1,2

TABLE 4.3-10  
POST-ACCIDENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

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

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

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

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

(4) The core exit thermocouples will not be installed until the 1988 refueling outage; therefore, surveillances will not be required until that time. See license amendment dated April 10, 1987.

\* The requirements for these instruments will become effective after the level transmitters are modified or replaced and become operational. The schedule for modification or replacement of the transmitters is described in the Bases.

REACTOR COOLANT SYSTEM

3/4.4.6 REACTOR COOLANT SYSTEM LEAKAGE

LEAKAGE DETECTION SYSTEMS

LIMITING CONDITION FOR OPERATION

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-2301 or ERS-2401),
- 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-2305 or ERS-2405).

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

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.

REACTOR COOLANT SYSTEM

LIMITING CONDITION FOR OPERATION (Continued)

2. With two or more block inoperable,

Within 1 hour either (1) restore a total of at least two block valves to OPERABLE status, or (2) close the block valves to OPERABLE status, or (3) close the associated PORVs and remove power from their associated solenoid valves; and apply the portions of ACTION a.2 or a.3 above for inoperable PORVs, relating to OPERATIONAL MODE, as appropriate.

- c. With PORVs and block valves not in the same line inoperable,\*

within 1 hour either (1) restore the valves to OPERABLE status or (2) close and de-energize the other valve in each line. Apply the portions of ACTION a.2 or a.3 above, relating to OPERATIONAL MODE, as appropriate for two or three lines unavailable.

- d. The provisions of Specification 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.4.11.1 Each of the three PORVs shall be demonstrated OPERABLE:

- a. At least once per 31 days by performance of a CHANNEL FUNCTIONAL TEST, excluding valve operation, and
- b. At least once per 18 months by performance of a CHANNEL CALIBRATION.

4.4.11.2 Each of the three block valves shall be demonstrated OPERABLE at least once per 92 days by operating the valve through one complete cycle of full travel. The block valve(s) do not have to be tested when ACTION 3.4.11.a or 3.4.11.c is applied.

4.4.11.3 The emergency power supply for the PORVs and block valves shall be demonstrated OPERABLE at least once per 18 months by operating the valves through a complete cycle of full travel while the emergency buses are energized by the onsite diesel generators and onsite plant batteries. This testing can be performed in conjunction with the requirements of Specifications 4.8.1.1.2.c and 4.8.2.3.2.d.

\*PORVs isolated to limit RCS leakage through their seats and the block valves shut to isolate this leakage are not considered inoperable.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 31 days and within 6 hours after each solution volume increase greater than or equal to 1% of tank volume by verifying the boron concentration of the accumulator solution.
- c. At least once per 31 days when the RCS pressure is above 2000 psig by verifying that power to the isolation valve operator is disconnected by removal of the breaker from the circuit.
- d. At least once per 18 months by verifying that each accumulator isolation valve opens automatically upon receipt of a safety injection test signal.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS

4.5.2 Each ECCS subsystem shall be demonstrated OPERABLE:

- a. At least once per 12 hours by verifying that the following valves are in the indicated positions with power to the valve operators removed:

<u>Valve Number</u>	<u>Valve Function</u>	<u>Valve Position</u>
a. IMO-390	a. RWST to RHR	a. Open
b. IMO-315	b. Low head SI to Hot Leg	b. Closed
c. IMO-325	c. Low head SI to Hot Leg	c. Closed
d. IMP-262*	d. Mini flow line	d. Open
e. IMO-263*	e. Mini flow line	e. Open
f. IMO-261*	f. SI Suction	f. Open
g. ICM-305*	g. Sump Line	g. Closed
h. ICM-306*	h. Sump Line	h. Closed

- b. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked, sealed, or otherwise secured in position, is in its correct position.
- c. By a visual inspection which verifies that no loose debris (rags, trash, clothing, etc.) is present in the containment which could be transported to the containment sump and cause restriction of the pump suction during LOCA conditions. This visual inspection shall be performed:
1. For all accessible areas of the containment prior to establishing CONTAINMENT INTEGRITY, and
  2. Of the areas affected within containment at the completion of each containment entry when CONTAINMENT INTEGRITY is established.

\*These valves must change position during the switchover from injection to recirculation flow following LOCA.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- d. At least once per 18 months by:
1. Verifying automatic isolation and interlock action of the RHR system from the Reactor Coolant System when the Reactor Coolant System pressure is above 600 psig.
  2. A visual inspection of the containment sump and verifying that the subsystem suction inlets are not restricted by debris and that the sump components (trash racks, screens, etc.) show no evidence of structural distress or corrosion.
- e. At least once per 18 months, during shutdown, by:
1. Verifying that each automatic valve in the flow path actuates to its correct position on a Safety Injection test signal.
  2. Verifying that each of the following pumps start automatically upon receipt of a safety injection test signal:
    - a) Centrifugal charging pump
    - b) Safety injection pump
    - c) Residual heat removal pump
- f. By verifying that each of the following pumps develops the indicated discharge pressure on recirculation flow when tested pursuant to Specification 4.0.5:
- |                               |                                    |
|-------------------------------|------------------------------------|
| 1. Centrifugal charging pump  | Greater than or equal to 2405 psig |
| 2. Safety Injection pump      | Greater than or equal to 1445 psig |
| 3. Residual heat removal pump | Greater than or equal to 195 psig  |
- g. By verifying the correct position of each mechanical stop for the following Emergency Core Cooling System throttle valves:
1. Within 4 hours following completion of each valve stroking operation or maintenance on the valve when the ECCS sub-systems are required to be OPERABLE.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS

4.5.3.1 The ECCS subsystem shall be demonstrated OPERABLE per the applicable Surveillance Requirements of 4.5.2.

4.5.3.2 All charging pumps and safety injection pumps, except the above required OPERABLE charging pump, shall be demonstrated inoperable, by verifying that the motor circuit breakers have been removed from their electrical power supply circuits, at least once per 12 hours whenever the temperature of one or more of the RCS cold legs is less than or equal to 152°F as determined at least once per hour when any RCS cold leg temperature is between 152°F and 200°F.

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent containment spray systems shall be OPERABLE with each spray system capable of taking suction from the RWST and transferring suction to the containment sump.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With one containment spray system inoperable, restore the inoperable spray system to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours; restore the inoperable spray system to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each containment spray system shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path that is not locked sealed, or otherwise secured in position, is in its correct position.
- b. By verifying, that on recirculation flow, each pump develops a discharge pressure of greater than or equal to 255 psig at a flow of greater than or equal to 700 gpm, when tested pursuant to Specification 4.0.5.
- c. At least once per 18 months during shutdown, by:
  1. Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure--High-High test signal.
  2. Verifying that each spray pump starts automatically on a Containment Pressure--High-High test signal.
- d. At least once per 5 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 18 months during shutdown, by verifying that each automatic valve in the flow path actuates to its correct position on a Containment Pressure--High-High test signal.
- d. At least once per 5 years by verifying a water flow rate of at least 20 gpm (greater than or equal to 20 gpm) but not to exceed 50 gpm (less than or equal to 50 gpm) from the spray additive tank test line to each containment spray system with the spray pump operating on recirculation with a pump discharge pressure greater than or equal to 255 psig.

CONTAINMENT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4.6.3.1.2 Each isolation valve specified in Table 3.6-1 shall be demonstrated OPERABLE during the COLD SHUTDOWN or REFUELING MODE at least once per 18 months by:

- a. Verifying that on a Phase A containment isolation test signal, each Phase A isolation valve actuates to its isolation position.
- b. Verifying that on a Phase B containment isolation test signal, each Phase B isolation valve actuates to its isolation position.
- c. Verifying that on a Containment Purge and Exhaust isolation signal, each Purge and Exhaust valve actuates to its isolation position.

4.6.3.1.3 The isolation time of each power operated or automatic valve of Table 3.6-1 shall be determined to be within its limit when tested pursuant to Specification 4.0.5

CONTAINMENT SYSTEMS

DIVIDER BARRIER SEAL

LIMITING CONDITION FOR OPERATION

3.6.5.9 The divider barrier seal shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With the divider barrier seal inoperable, restore the seal to OPERABLE status prior to increasing the Reactor Coolant System temperature above 200°F.

SURVEILLANCE REQUIREMENTS

4.6.5.9 The divider barrier seal shall be determined OPERABLE at least once per 18 months during shutdown by:

- a. Removing two divider barrier seal test coupons and verifying that the physical properties of the test coupons are within the acceptable range of values shown in Table 3.6-2.
- b. Visually inspecting at least 95 percent of the seal's entire length and:
  1. Verifying that the seal and seal mounting bolts are properly installed, and
  2. Verifying that the seal material shows no visual evidence of deterioration due to holes, ruptures, chemical attack, abrasion, radiation damage, or changes in physical appearances.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4.7.1.2 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

a. At least once per 31 days by:

1. Verifying that each motor driven pump develops an equivalent discharge pressure of  $\geq 1240$  psig at  $60^{\circ}\text{F}$  on recirculation flow.
2. Verifying that the steam turbine driven pump develops an equivalent discharge pressure of  $\geq 1180$  psig at  $60^{\circ}\text{F}$  and at a flow of  $\geq 700$  gpm when the secondary steam supply pressure is greater than 310 psig. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3.
3. Verifying that each non-automatic valve in the flow path that is not locked, sealed, or otherwise secured in position is in its correct position.
4. Verifying that each automatic valve in the flow path is in the fully open position whenever the auxiliary feedwater system is placed in automatic control or when above 10% RATED THERMAL POWER. This requirement is not applicable for those portions of the Auxiliary Feedwater System being used intermittently to maintain steam generator level.

b. At least once per 18 months during shutdown by:

1. Verifying that each automatic valve in the flow path actuates to its correct position upon receipt of the appropriate engineered safety features actuation test signal required by Specification 3/4.3.2.
2. Verifying that each auxiliary feedwater pump starts as designed automatically upon receipt of the appropriate engineered safety features actuation test signal required by Specification 3/4.3.2.
3. Verifying that the unit cross-tie valves can cycle full travel. Following cycling, the valves will be verified to be in their closed positions.

PLANT SYSTEMS

3/4.7.3 COMPONENT COOLING WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.3.1 At least two independent component cooling water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one component cooling water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.3.1 At least two component cooling water loops shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed, or otherwise secured in its position, is in its correct position.
- b. At least once per 18 months during shutdown, by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection test signal.

PLANT SYSTEMS

3/4.7.4 ESSENTIAL SERVICE WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.4.1 At least two independent essential service water loops shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4.

ACTION:

With only one service water loop OPERABLE, restore at least two loops to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.4.1 At least two essential service water loops shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying that each valve (manual, power operated or automatic) servicing safety related equipment that is not locked, sealed, or otherwise secured in its position, is in its correct position.
- b. At least once per 18 months during shutdown, by verifying that each automatic valve servicing safety related equipment actuates to its correct position on a Safety Injection test signal.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- e. At least once per 18 months by:
1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the ventilation system at a flow rate of 6000 cfm plus or minus 10%.
  2. Verifying that on a Safety Injection Signal from either Unit 1 or Unit 2, or on a containment phase A isolation signal, the system automatically diverts its inlet flow through the HEPA filters and charcoal adsorber bank and that either fan can then be manually started in the recirculation mode.
  3. Verifying that the system maintains the control room at a positive pressure of greater than or equal to 1/16 inch W. G. relative to the outside atmosphere at a system flow rate of 6000 cfm plus or minus 10%.
- f. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99% of the DOP when they are tested in-place in accordance with ANSI N510-1975 while operating the ventilation system at a flow rate of 6000 cfm plus or minus 10%.
- g. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1975 while operating the ventilation system at a flow rate of 6000 cfm plus or minus 10%.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b) Emptying a longitudinal sample from an adsorber tray, mixing the adsorbent thoroughly, and obtaining samples at least two inches in diameter and with a length equal to the thickness of the bed.

Subsequent to reinstalling the adsorber tray used for obtaining the carbon sample, the system shall be demonstrated OPERABLE by also verifying that the charcoal adsorbers remove greater than or equal to 99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1980 while operating the ventilation system at a flow rate of 25,000 cfm plus or minus 10%.

- d. At least once per 18 months by:
  - 1. Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6 inches Water Gauge while operating the ventilation system at a flow rate of 25,000 cfm plus or minus 10%.
  - 2. Deleted.
  - 3. Verifying that the standby fan starts automatically on a Containment Pressure--High-High Signal and directs its exhaust flow through the HEPA filters and charcoal adsorber banks on a Containment Pressure--High-High Signal.
- e. After each complete or partial replacement of a HEPA filter bank by verifying that the HEPA filter banks remove greater than or equal to 99% of the DOP when they are tested in-place in accordance with ANSI N510-1980 while operating the ventilation system at a flow rate of 25,000 cfm plus or minus 10%.
- f. After each complete or partial replacement of a charcoal adsorber bank by verifying that the charcoal adsorbers remove greater than or equal to 99% of a halogenated hydrocarbon refrigerant test gas when they are tested in-place in accordance with ANSI N510-1980 while operating the ventilation system at a flow rate of 25,000 cfm plus or minus 10%.

PLANT SYSTEMS

3/4.7.7 SNUBBERS

LIMITING CONDITION FOR OPERATION

3.7.7.1 All snubbers listed in Table 3.7-9 shall be OPERABLE.

APPLICABILITY: MODES 1, 2, 3 and 4. (MODES 5 and 6 for snubbers located on systems required OPERABLE in those MODES).

ACTION:

With one or more snubbers inoperable, within 72 hours replace or restore the inoperable snubber(s) to OPERABLE status and perform an engineering evaluation per Specification 4.7.7.1.c on the supported component or declare the supported system inoperable and follow the appropriate ACTION statement for that system.

SURVEILLANCE REQUIREMENTS

4.7.7.1 Each snubber shall be demonstrated OPERABLE by performance of the following augmented inservice inspection program and the requirements of Specification 4.0.5.

a. Visual Inspection

The first inservice visual inspection of snubbers shall be performed after four months but with 10 months of commencing POWER OPERATION and shall include all snubbers listed in Table 3.7-9. If less than two (2) snubbers are found inoperable during the first inservice visual inspection, the second inservice visual inspection shall be performed 12 months plus or minus 25% from the date of the first inspection. Otherwise, subsequent visual inspections shall be performed in accordance with the following schedule:

<u>No. Inoperable Snubbers per Inspection Period</u>	<u>Subsequent Visual Inspection Period*#</u>
0	18 months plus or minus 25%
1	12 months plus or minus 25%
2	6 months plus or minus 25%
3,4	124 days plus or minus 25%
5,6,7	62 days plus or minus 25%
8 or more	31 days plus or minus 25%

The snubbers may be categorized into two groups: Those accessible and those inaccessible during reactor operation. Each group may be inspected independently in accordance with the above schedule.

\* The inspection interval shall not be lengthened more than one step at a time.

# The provisions of Specification 4.0.2 are not applicable.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

b. Visual Inspection Acceptance Criteria

Visual inspections shall verify (1) that there are no visible indications of damage or impaired OPERABILITY, (2) attachments to the foundation or supporting structure are secure, and (3) in those locations where snubber movement can be manually induced without disconnecting the snubber, that the snubber has freedom of movement and is not frozen up. Snubbers which appear inoperable as a result of visual inspections may be determined OPERABLE for the purpose of establishing the next visual inspection interval, providing that (1) the cause of the rejection is clearly established and remedied for that particular snubber and for other snubbers that may be generically susceptible; and (2) the affected snubber is functionally tested in the as found condition and determined OPERABLE per Specifications 4.7.7.1.d as applicable. However, when the fluid port of a hydraulic snubber is found to be uncovered, the snubber shall be determined inoperable and cannot be determined OPERABLE via functional testing for the purpose of establishing the next visual inspection interval. All snubbers connected to an inoperable common hydraulic fluid reservoir shall be counted as inoperable snubbers.

c. Functional Tests

At least once per 24 months during shutdown, a representative sample (14%) of the total of each type of snubber in use in the plant shall be functionally tested either in place or in a bench test. For each snubber that does not meet the functional test acceptance criteria of Specification 4.7.7.1.d an additional 10% of that type of snubber shall be functionally tested.

The representative sample selected for functional testing shall include the various configurations, operating environments and the range of size and capacity of snubbers. At least 25% of the snubbers in the representative sample shall include snubbers from the following three categories:

1. The first snubber away from each reactor vessel nozzle
2. Snubbers within 5 feet of heavy equipment (valve, pump, turbine, motor, etc.)
3. Snubbers within 10 feet of the discharge from a safety relief valve

Snubbers identified in Table 3.7-9 as "Especially Difficult to Remove" or in "High Radiation Zones During Shutdown" shall also be included in the representative sample.\*

\* Permanent or other exemptions from functional testing for individual snubbers in these categories may be granted by the Commission only if a justifiable basis for exemption is presented and/or snubber life destructive testing was performed to qualify snubber operability for all design conditions at either the completion of their fabrication or at a subsequent date.

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

4.7.9.2 Each of the above required water spray and/or sprinkler systems shall be demonstrated to be OPERABLE:

- a. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel as provided by Technical Specification 4.7.9.1.1.d.
- b. At least once per 18 months:
  1. By performing a system functional test which includes simulated automatic actuation of the system, and:
    - a) Verifying that the automatic valves in the flow path actuate to their correct positions on a test signal, and
    - b) Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel,
  2. By inspection of deluge and preaction type system spray headers to verify their integrity.
  3. By inspection of each open head deluge nozzle to verify no blockage.
- c. At least once per 3 years by performing an air flow test through each open head deluge header and verifying each open head deluge nozzle is unobstructed.

REFUELING OPERATIONS

CONTAINMENT BUILDING PENETRATIONS

LIMITING CONDITION FOR OPERATION

3.9.4 The containment building penetrations shall be in the following status:

- a. The equipment door closed and held in place by a minimum of four bolts,
- b. A minimum of one door in each airlock is closed, and
- c. Each penetration providing direct access from the containment atmosphere to the outside atmosphere shall be either:
  1. Closed by an isolation valve, blind flange, or manual valve, or
  2. Be capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve.

APPLICABILITY: During CORE ALTERATIONS or movement of irradiated fuel within the containment.

ACTION:

With the requirements of the above specification not satisfied, immediately suspend all operations involving CORE ALTERATIONS or movement of irradiated fuel in the containment building. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.9.4 Each of the above required containment building penetrations shall be determined to be either in its closed/isolated condition or capable of being closed by an OPERABLE automatic Containment Purge and Exhaust isolation valve within 100 hours prior to the start of and at least once per 7 days during CORE ALTERATIONS or movement of irradiated fuel in the containment building by:

- a. Verifying the penetrations are in their closed/isolated condition, or
- b. Testing the Containment Purge and Exhaust isolation valves per the applicable portions of Specification 4.6.3.1.2.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 144 TO FACILITY OPERATING LICENSE NO. DPR-58  
AND AMENDMENT NO. 131 TO FACILITY OPERATING LICENSE NO. DPR-74

INDIANA MICHIGAN POWER COMPANY

DONALD C. COOK NUCLEAR PLANT, UNIT NOS. 1 AND 2

DOCKET NOS. 50-315 AND 50-316

1.0 INTRODUCTION

By letter dated September 15, 1988, the Indiana Michigan Power Company (the licensee) proposed changes to the D. C. Cook, Units 1 and 2 Technical Specifications (TS). These changes would remove obsolete references to previously granted surveillance interval extensions from the TS. These changes were proposed by the staff in order to improve the readability of the TS.

2.0 EVALUATION

The proposed changes would remove only obsolete references to surveillance interval extensions. The licensee does not propose any new extensions, nor any modifications to the previous extensions proposed. However, the licensee does propose to change specific pages of the TS to reference the amendment numbers corresponding to the surveillance interval extensions. These references are necessary because several surveillance interval "time clocks" were reset by these prior amendments, and the licensee wishes to retain documentation of these changes.

The proposed changes do not affect any pending surveillance interval extension; and as such, the deletion of obsolete surveillance interval extensions will not affect plant operational requirements in any way. Therefore, these changes are completely of an administrative nature and have no effect on overall plant safety. The staff finds that these proposed changes are acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve changes in requirements with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes in surveillance requirements. We have 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.

#### 4.0 CONCLUSION

We have concluded, based on the considerations discussed above, that (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public.

Date: August 6, 1990

Principal Contributor: R. Stransky, PD31