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

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March 16, 1984

Docket Nos. 50-315
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.79 to Facility Operating License No. DPR-58 and Amendment No. 61 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 2, 1982.

These amendments revise the Technical Specifications for fire protection systems to incorporate the updated and revised wording of the Standardized Technical Specifications for Westinghouse plants and to substitute the use of the closed circuit television in the lower containment in place of a continuous fire watch whenever the reactor coolant pump sprinklers are inoperable.

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

Sincerely,

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

Enclosures:
1. Amendment No. 79 to DPR-58
2. Amendment No. 61 to DPR-74
3. Safety Evaluation

cc: w/enclosures
See next page

ORB#1:DL	ORB#1:DL	C-ORB#1:DL	OELD	AD:ORP:DL	CHEB
CParrish	DWigginton;ps	SVarga	W. Shields	GLainas	R. EBERLY
3/7/84	3/12/84	3/12/84	3/15/84	3/15/84	3/12/84

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PDR ADOCK 05000315
P PDR

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cc: w/enclosures
See next page

cc: Mr. M. P. Alexich
Vice President
Nuclear Engineering
American Electric Power Service
Corporation
1 Riverside Plaza
Columbus, Ohio 43215

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

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

W. G. Smith, Jr., Plant Manager
Donald C. Cook Nuclear Plant
Post Office Box 458
Bridgman, Michigan 49106

U.S. Nuclear Regulatory Commission
Resident Inspectors Office
7700 Red Arrow Highway
Stevensville, Michigan 49127

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

Honorable Jim Catania, Mayor
City of Bridgman, Michigan 49106

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

Maurice S. Reizen, M.D.
Director
Department of Public Health
Post Office Box 30035
Lansing, Michigan 48109

The Honorable Tom Corcoran
United States House of Representatives
Washington, DC 20515

James G. Keppler
Regional Administrator - Region III
U.S. Nuclear Regulatory Commission
799 Roosevelt Road
Glen Ellyn, IL 60137

J. Feinstein
American Electric Power Service
1 Riverside Plaza
Columbus, Ohio 43216

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. 79
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 2, 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:

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PDR ADOCK 05000315
P PDR

(2) Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 79 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The change in Technical Specifications is to become effective within 60 days of issuance of the amendment. In the period between issuance of the amendment and the effective date of the new Technical Specifications, the licensee shall adhere to the Technical Specifications for the systems, components, or operation existing at the time. The period of time during changeover of systems, components or operation shall be minimized or compensated for by suitable temporary alternatives. The new Technical Specifications apply to existing fire protection systems and components and all those that are installed, fully implemented, and declared operable by plant management in accordance with the ongoing fire protection program.

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

FOR THE NUCLEAR REGULATORY COMMISSION

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 16, 1984

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. 61
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 2, 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. 61 , are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

3. The change in Technical Specifications is to become effective within 60 days of issuance of the amendment. In the period between issuance of the amendment and the effective date of the new Technical Specifications, the licensee shall adhere to the Technical Specifications for the systems, components, or operation existing at the time. The period of time during changeover of systems, components or operation shall be minimized or compensated for by suitable temporary alternatives. The new Technical Specifications apply to existing fire protection systems and components and all those that are installed, fully implemented, and declared operable by plant management in accordance with the ongoing fire protection program.

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

FOR THE NUCLEAR REGULATORY COMMISSION

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 16, 1984

ATTACHMENT TO LICENSE AMENDMENTS

AMENDMENT NO. 79 FACILITY OPERATING LICENSE NO. DPR-58

AMENDMENT NO. 61 FACILITY OPERATING LICENSE NO. DPR-74

DOCKET NOS. 50-315 AND 50-316

Revise Appendix A as follows:

Remove Pages	Insert Pages
Unit 1	
3/4 3-51	3/4 3-51
3/4 3-52	3/4 3-52
3/4 3-53	3/4 3-53
3/4 7-41	3/4 7-41
3/4 7-42	3/4 7-42
3/4 7-43	3/4 7-43
3/4 7-44	3/4 7-44
3/4 7-45	3/4 7-45
3/4 7-46	3/4 7-46
3/4 7-48	3/4 7-48
3/4 7-49	3/4 7-49
3/4 7-50	3/4 7-50
3/4 7-51	3/4 7-51
3/4 7-52	3/4 7-52
B 3/4 3-4	B 3/4 3-4
B 3/4 7-8	B 3/4 7-8
Unit 2	
3/4 3-49*	3/4 3-49*
3/4 3-50	3/4 3-50
3/4 3-51	3/4 3-51
3/4 3-52	3/4 3-52
3/4 7-35*	3/4 7-35*
3/4 7-36	3/4 7-36
3/4 7-37	3/4 7-37
3/4 7-38	3/4 7-38
3/4 7-39	3/4 7-39
3/4 7-40	3/4 7-40
3/4 7-41	3/4 7-41
3/4 7-43	3/4 7-43
3/4 7-44	3/4 7-44
3/4 7-45	3/4 7-45
3/4 7-46	3/4 7-46
3/4 7-47	3/4 7-47
B 3/4 3-3	B 3/4 3-3
B 3/4 7-7	B 3/4 7-7
---	3/4 7-45a

* Included for convenience only. No changes on this page.

FIRE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.7 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3-10 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the fire detection instrument(s) is required to be OPERABLE.

ACTION:

With the number of OPERABLE fire detection instrument(s) less than the minimum number OPERABLE requirement of Table 3.3-10:

a. Within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside the containment, then inspect the containment at least once per 8 hours or monitor the containment air temperature at least once per hour at the locations listed in Specification 4.6.1.5.

b. Restore the inoperable instrument(s) to OPERABLE status within 14 days, or in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the instrument(s) to OPERABLE status.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.7.1 Each of the above required fire detection instruments which are accessible during plant operation shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST. Fire detectors which are not accessible during plant operation shall be demonstrated OPERABLE by the performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

4.3.3.7.2 The NFPA Standard 72D Class B supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 6 months.

TABLE 3.3-10

FIRE DETECTION INSTRUMENTATION

INSTRUMENT LOCATION	MINIMUM INSTRUMENTS OPERABLE**		
	SMOKE (IONIZATION)	HEAT (THERMISTOR)	OPTICAL (INFRARED)
1a. Outside Containment			
Quadrant 1 Cable Tunnel	3		2
Quadrant 2 Cable Tunnel	5		3
Quadrant 3N Cable Tunnel	3		2
Quadrant 3M Cable Tunnel	3		2
Quadrant 3S Cable Tunnel	2		2
Quadrant 4 Cable Tunnel	5		4
1b. Inside Containment			
Quadrant 1		14	
Quadrant 2		3	
Quadrant 3		18	
Quadrant 4		11	
1-HV-CFT-1 Charcoal Filters		1	
1-HV-CFT-2 Charcoal Filters		1	
2. Control Room	24		
3. Cable Spreading Rooms			
Switchgear Cable Vault	10		8
Auxiliary Cable Vault	5		
Control Room Cable Vault (Zone 17)	24		
Control Room Cable Vault (Zone 18)	25		
4. Diesel Generator			
Diesel Generator Room 1AB		1	
Diesel Generator Room 1CD		1	
5. Diesel Fuel Oil Room		1	

** The fire detection instruments located within the Containment are not required to be OPERABLE during the performance of Type A Containment Leakage Rate tests.

TABLE 3.3-10 (Cont'd)

FIRE DETECTION INSTRUMENTATION

INSTRUMENT LOCATION	MINIMUM INSTRUMENTS OPERABLE**		
	SMOKE (IONIZATION)	HEAT (THERMISTOR)	OPTICAL (INFRARED)
6. Auxiliary Building			
Elevation 573 ft.*	5		
Elevation 587 ft.*	42		
Elevation 609 ft.*	22		
Elevation 633 ft.*	31		
Elevation 650 ft.*	26		
4 Kv Switchgear	3		5
Engineered Safety Switchgear	7		4
CRD, Transformer, Switchgear	6		4
1-HV-AES-1 Charcoal Filters		1	
1-HV-AES-2 Charcoal Filters		1	
12-HV-AFX Charcoal Filters*		1	
1-HV-CPR Charcoal Filters		1	
1-HV-CIPX Charcoal Filters		1	
1-HV-ACRF Charcoal Filters		1	
7. Fuel Storage			
New Fuel Storage Room*	3		

*Shared system with D.C. COOK - UNIT 2

** The fire detection instruments located within the Containment are not required to be OPERABLE during the performance of Type A Containment Leakage Rate tests.

3/4.7.9 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.9.1 The fire suppression water system shall be OPERABLE with:

a. Two* high demand pumps, one of which shall be a diesel driven pump, with their discharge aligned to the fire suppression header.

b. An OPERABLE flow path capable of taking suction from Lake Michigan and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves and the first valve ahead of the hose standpipe or spray system riser or water flow alarm device on each sprinkler, required to be OPERABLE per Specifications 3.7.9.2 and 3.7.9.5.

APPLICABILITY: At all times.

ACTION:

a. With one pump inoperable, restore the inoperable equipment to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

b. With the fire suppression water system otherwise inoperable:

1. Establish a backup fire suppression water system within 24 hours, and

2. Submit a Special Report in accordance with Specification 6.9.2;

a) By telephone within 24 hours,

b) Confirmed by telegram, mailgram or facsimile transmission no later than the first working day following the event, and

*Shared system with D.C. COOK - UNIT 2.

ACTION: (Continued)

c) In writing within 14 days following the event, outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE STATUS.

SURVEILLANCE REQUIREMENTS

4.7.9.1.1 The fire suppression water system shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by starting each pump and operating it for at least 15 minutes on recirculation flow.

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. At least once per 6 months by performance of a system flush.

d. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.

e. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:

1. Verifying that each automatic valve in the flow path actuates to its correct position,

2. Verifying that each pump develops a flow of at least 2000 gpm at a system head of at least 300 feet,

3. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel, and

4. Verifying that each high pressure pump starts (sequentially) to maintain the fire suppression water system pressure $\geq$ 100 psig.

f. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of Fire Protection Handbook, 14th Edition published by National Fire Protection Association.

SURVEILLANCE REQUIREMENTS (Continued)

4.7.9.1.2 The fire pump diesel engine shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying:

1. The fuel storage tank contains at least 160 gallons of fuel, and

2. The diesel starts from ambient conditions and operates for at least 30 minutes on recirculation flow.

b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank obtained in accordance with ASTM-D270-65 is within the acceptable limits specified in Table 1 of ASTM-D975-74 when checked for viscosity, water and sediment.

c. At least once per 18 months during shutdown by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.

4.7.9.1.3 The fire pump diesel starting battery bank and charger shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that:

1. The electrolyte level of each battery is above the plates, and

2. The overall battery voltage is $\geq$ 24 volts.

b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.

c. At least once per 18 months by verifying that:

1. The batteries, cell plates and battery packs show no visual indication of physical damage or abnormal deterioration, and

2. The battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anti-corrosion material.

SPRAY AND/OR SPRINKLER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.9.2 The spray and/or sprinkler systems located in the areas shown in Table 3.7-5 shall be OPERABLE:

APPLICABILITY: Whenever equipment in the spray/sprinkler protected areas is required to be OPERABLE.

ACTION:

a. With one or more of the above required spray and/or sprinkler systems inoperable, within 1 hour establish a continuous fire watch with backup fire suppression equipment for those areas* in which redundant safe shutdown systems or components could be damaged. Restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.9.2 Each of the above required 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.

*- For the reactor coolant pumps preaction sprinklers inside the containment, a closed circuit television located in the lower containment, with periodic monitoring (and hourly logging) of the CCTV screen, shall be an acceptable substitute to an hourly fire watch patrol. For high radiation areas where closed circuit television coverage does not exist, an hourly fire watch patrol will be instituted.

SURVEILLANCE REQUIREMENTS (Continued)

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.

TABLE 3.7-5

SPRAY AND/OR SPRINKLER SYSTEMS

A. OPEN HEAD DELUGE TYPE WATER SYSTEMS

LOCATION	ACTUATION
1-HV-AES-1 Charcoal Filters	Electric-heat
1-HV-AES-2 Charcoal Filters	Electric-heat
12-HV-AFX Charcoal Filters*	Electric-heat
1-HV-CPR-1 Charcoal Filters	Electric-heat
1-HV-CIPX-1 Charcoal Filters	Electric-heat
1-HV-ACRF-1 Charcoal Filters	Electric-heat

B. CLOSED HEAD SPRINKLER TYPE WATER SYSTEMS

LOCATION	TYPE SYSTEM	ACTUATION
Auxiliary Bldg. Cask Handling Area*	Preaction Sprinkler	Dry Pilot
Auxiliary Bldg. Drumming Area*	Preaction Sprinkler	Dry Pilot
Auxiliary Bldg. Elev. 587* & 609* (Corridors, charging, safety Inj. pump rooms, laundry area)	Preaction Sprinkler	Dry Pilot
Reactor Coolant Pumps (4)	Preaction Sprinkler	Manual

*Shared system with D.C. COOK - UNIT 2.

TABLE 3.7-6

LOW PRESSURE CARBON DIOXIDE SYSTEMS

17 TON CAPACITY

LOCATION	ACTUATION METHOD
Diesel Generator 1AB Room	Heat - 2 circuits
Diesel Generator 1CD Room	Heat - 2 circuits
Diesel Generator Fuel Oil Pump Room	Heat
4 kv Switchgear Rooms	Ionization and Infrared
Control Rod Drive, Transf. Switchgear Rooms	Ionization and Infrared
Emergency Safety Switchgear Room	Ionization and Infrared
Switchgear Room Cable Vault	Ionization and Infrared
Auxiliary Cable Vault	Ionization
Control Room Cable Vault	Manual (backup)
Penetration Cable Tunnel Quadrant 1	Ionization and Infrared
Penetration Cable Tunnel Quadrant 2	Ionization and Infrared
Penetration Cable Tunnel Quadrant 3N	Ionization and Infrared
Penetration Cable Tunnel Quadrant 3M	Ionization and Infrared
Penetration Cable Tunnel Quadrant 3S	Ionization and Infrared
Penetration Cable Tunnel Quadrant 4	Ionization and Infrared

HALON SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.9.4 The Halon system located in the Unit 1 Control Room Cable Spreading Area shall be OPERABLE.

APPLICABILITY: Whenever equipment in the Halon protected areas is required to be OPERABLE.

ACTION:

a. With the above required Halon system inoperable, within 1 hour verify that the fire detection system and the backup CO_2 fire suppression system are OPERABLE; otherwise, establish a continuous fire watch with backup fire suppression equipment for the Control Room Cable Spreading Area. Restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.9.4 The above required Halon system shall be demonstrated OPERABLE:

a. At least once per 6 months by verifying each Halon storage tank to be ≥ 95% of full charge weight and to be ≥ 90% of full charge pressure.

b. At least once per 18 months by:

1. Verifying the system, including associated ventilation dampers, actuates manually and automatically to a simulated test signal.

2. Performance of an air flow test or CO_2 puff test through headers and nozzles to assure no blockage.

FIRE HOSE STATIONS

LIMITING CONDITION FOR OPERATION

3.7.9.5 The fire hose standpipe connections in the following locations shall be OPERABLE:

1. Auxiliary Building (minimum 12).
2. Access to Diesel Generators (minimum 1).
3. Access to Switchgear Rooms (minimum 1).
4. Access to Control Room (minimum 1).

APPLICABILITY: Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

ACTION:

a. With one or more of the above required hose standpipe connections inoperable, route an additional equivalent capacity fire hose to the unprotected area(s) from an OPERABLE hose standpipe connection within 1 hour if the inoperable fire hose is the primary means of fire suppression; otherwise, route the additional hose within 24 hours. Restore the fire hose station to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability, and plans and schedule for restoring the station to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.9.5 Each of the above required fire hose standpipe connections shall be demonstrated OPERABLE:

a. At least once per 31 days by a visual inspection of the fire hose standpipe connections to assure all required equipment is at the connection.

b. At least once per 18 months by:

   1. Removing the hose for inspection and re-racking, and
   2. Replacement of all degraded gaskets in couplings.

c At least once per 3 years by:

   1. Partially opening each hose standpipe connection valve to verify valve OPERABILITY and no flow blockage.
   2. Conducting a hose hydrostatic test at a pressure at least 50 psig greater than the maximum pressure available at that hose standpipe connection.

3/4.7.10 FIRE RATED ASSEMBLIES

LIMITING CONDITION FOR OPERATION

3.7.10 All fire rated assemblies (walls, floor/ceilings, cable tray enclosures) separating safety related fire areas or separating portions of redundant systems important to safe shutdown within a fire area and all sealing devices in fire rated assembly penetrations (fire doors, fire dampers, cable and piping penetration seals, and ventilation seals) shall be OPERABLE.

APPLICABILITY: **At all times.**

ACTION:

a. **With one or more of the above required fire rated assemblies and/or sealing devices inoperable, within one hour either establish a continuous fire watch on at least one side of the affected assembly, or verify the OPERABILITY of fire detectors per Specification 4.3.3.7 on at least one side of the inoperable assembly and establish an hourly fire watch patrol or secure in the closed position the inoperable sealing device* and establish an hourly fire watch patrol. Restore the inoperable fire rated assembly and sealing device to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperable fire rated assembly and/or sealing device and the plans and schedule for restoring the fire rated assembly and/or sealing device to OPERABLE status.**

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.10.1 At least once per 18 months the above required fire rated assemblies and penetration sealing devices shall be verified OPERABLE by:

a. Performing a visual inspection of the exposed surfaces of each fire rated assemblies.

b. Performing a visual inspection of each fire damper and associated hardware.

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* Except fire doors on Turbine Driven Auxiliary Feedwater Pump and Hallway enclosures which cannot be locked closed for HELB considerations.

SURVEILLANCE REQUIREMENTS (Continued)

c. Performing a visual inspection of at least 10 percent of each type of sealed penetration. If apparent changes in appearance or abnormal degradations are found, a visual inspection of an additional 10 percent of each type of sealed penetration shall be made. This inspection process shall continue until a 10 percent sample with no apparent changes in appearance or abnormal degradation is found.

4.7.10.2 Each of the above required fire doors shall be verified OPERABLE by inspecting the hold-open, release and closing mechanism and latches at least once per 6 months, and by verifying:

a The position of each closed fire door at least once per 24 hours.

b. That doors with hold-open and release mechanisms are free of obstructions at least once per 24 hours.

c. The position of each locked closed fire door at least once per 7 days.

4.7.10.3 Each of the above required fire rated assemblies or sealing devices in fire rated assembly penetrations shall be verified to be OPERABLE prior to declaring a penetration fire barrier OPERABLE following repairs or maintenance.

3/4.3.3.7 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the fire detection instrumentation ensures that adequate warning capability is available for the prompt detection of fires. This capability is required in order to detect and locate fires in their early stages. Prompt detection of fires will reduce the potential for damage to safety related equipment and is an integral element in the overall facility fire protection program.

In the event that a portion of the fire detection instrumentation is inoperable, the establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY. Use of containment temperature monitoring is allowed once per hour if containment fire detection is inoperable.

3/4.3.3.8 POST-ACCIDENT INSTRUMENTATION

The OPERABILITY of the post-accident instrumentation ensures that sufficient information is available on selected plant parameters to monitor and assess these variables during and following an accident.

3/4 7.9 Cont.

Because of the inaccessibility of the lower containment to personnel during operation due to ALARA radiation exposure concerns, the use of one or more CCTVs in the lower containment, to monitor for fire and smoke, is an acceptable substitute to an hourly fire watch, if the fire suppression system becomes inoperable.

3/4.7.10 FIRE RATED ASSEMBLIES

The OPERABILITY of the fire barriers and barrier penetrations ensure that fire damage will be limited. These designfeatures minimize the possibility of a single fire involving more than one fire area prior to detection and extinguishment. The fire barriers, fire barrier penetrations for conduits, cable trays and piping, fire dampers, and fire doors are periodically inspected to verify their OPERABILITY. The ventilation seals are seals around ventilation duct work penetrating fire barriers.

SURVEILLANCE REQUIREMENTS (Continued)

a. If the absolute value of $\frac{R_{ij}-\bar{R}_j}{\bar{R}_j}$ is greater than $2\sigma_j$, another map shall be completed to verify the new $\bar{R}_j$. If the second map shows the first to be in error, the first map shall be disregarded. If the second map confirms the new $\bar{R}_j$, four more maps (including rodded configurations allowed by the insertion limits) will be completed so that a new $\bar{R}_j$ and σ_j can be defined from the six new maps.

4.3.3.7.2 The APDMS shall be demonstrated OPERABLE:

a. By performance of a CHANNEL FUNCTIONAL TEST within 7 days prior to its use and at least once per 31 days thereafter when used for monitoring $F_j(Z)$.

b. At least once per 18 months, during shutdown or below 5% of RATED THERMAL POWER, by performance of a CHANNEL CALIBRATION.

FIRE DETECTION INSTRUMENTATION

LIMITING CONDITION FOR OPERATION

3.3.3.8 As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.3-11 shall be OPERABLE.

APPLICABILITY: Whenever equipment protected by the fire detection instrument(s) is required to be OPERABLE.

ACTION:

With the number of OPERABLE fire detection instrument(s) less than the minimum number OPERABLE requirement of Table 3.3-11:

a. Within 1 hour establish a fire watch patrol to inspect the zone(s) with the inoperable instrument(s) at least once per hour, unless the instrument(s) is located inside the containment, then inspect the containment at least once per 8 hours or monitor the containment air temperature at least once per hour at the locations listed in Specification 4.6.1.5.

b. Restore the inoperable instrument(s) to OPERABLE status within 14 days, or in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the instrument(s) to OPERABLE status.

c. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.3.3.8.1 Each of the above required fire detection instruments which are accessible during plant operation shall be demonstrated OPERABLE at least once per 6 months by performance of a CHANNEL FUNCTIONAL TEST. Fire detectors which are not accessible during plant operation shall be demonstrated OPERABLE by the performance of a CHANNEL FUNCTIONAL TEST during each COLD SHUTDOWN exceeding 24 hours unless performed in the previous 6 months.

4.3.3.8.2 The NFPA Standard 72D Class B supervised circuits supervision associated with the detector alarms of each of the above required fire detection instruments shall be demonstrated OPERABLE at least once per 6 months.

TABLE 3.3-11

FIRE DETECTION INSTRUMENTATION

INSTRUMENTATION LOCATION	MINIMUM INSTRUMENTS OPERABLE**		
	SMOKE IONIZATION	HEAT (THERMISTOR)	OPTICAL (INFRARED)
1a. Outside Containment			
Quadrant 1 Cable Tunnel	3		2
Quadrant 2 Cable Tunnel	5		3
Quadrant 3N Cable Tunnel	3		2
Quadrant 3M Cable Tunnel	3		2
Quadrant 3S Cable Tunnel	2		2
Quadrant 4 Cable Tunnel	5		4
1b. Inside Containment			
Quadrant 1		12	
Quadrant 2		5	
Quadrant 3		23	
Quadrant 4		11	
2-HV-CFT-1 Charcoal Filters		1	
2-HV-CFT-2 Charcoal Filters		1	
2. Control Room	22		
3. Cable Spreading Rooms			
Switchgear Cable Vault	8		8
Auxiliary Cable Vault	5		
Control Room Cable Vault (Zone 12)	24		
Control Room Cable Vault (Zone 13)	25		
4. Diesel Generator			
Diesel Generator Room 2AB		1	
Diesel Generator Room 2CD		1	
5. Diesel Fuel Oil Room		1	

**The fire detection instruments located within the Containment are not required to be OPERABLE during the performance of Type A Containment Leakage Rate tests.

TABLE 3.3-11 (Cont'd)

FIRE DETECTION INSTRUMENTATION

INSTRUMENTATION LOCATION	MINIMUM INSTRUMENTS OPERABLE**		
	SMOKE (IONIZATION)	HEAT (THERMISTOR)	OPTICAL (INFRARED)
6. Auxiliary Building			
Elevation 573 ft.*	5		
Elevation 587 ft.*	42		
Elevation 609 ft.*	22		
Elevation 633 ft.*	31		
Elevation 650 ft.*	26		
4 Kv Switchgear	3		5
Engineered Safety Switchgear	7		4
CRD, Transformer, Switchgear	6		4
2-HV-AES-1 Charcoal Filters		1	
2-HV-AES-2 Charcoal Filters		1	
12-HV-AFX Charcoal Filters*		1	
2-HV-CPR Charcoal Filters		1	
2-HV-CIPX Charcoal Filters		1	
2-HV-ACRF Charcoal Filters		1	
7. Fuel Storage			
New Fuel Storage Room*	3		

*Shared system with D.C. COOK - UNIT 1

**The fire detection instruments located within the Containment are not required to be OPERABLE during the performance of Type A Containment Leakage Rate tests.

SURVEILLANCE REQUIREMENTS (Continued)

1. With a half-life greater than 30 days (excluding Hydrogen 3), and

2. In any form other than gas,

b. Stored sources not in use - Each sealed source and fission detector shall be tested prior to use or transfer to another licensee unless tested within the previous six months. Sealed sources and fission detectors transferred without a certificate indicating the last test date shall be tested prior to being placed into use.

c. Startup sources and fission detectors - Each sealed startup source and fission detector shall be tested within 31 days prior to being subjected to core flux or installed in the core and following repair or maintenance to the source.

4.7.8.1.3 Reports - A report shall be prepared and submitted to the Commission on an annual basis if sealed source or fission detector leakage tests reveal the presence of $\geq$ 0.005 microcuries of removable contamination.

3/4.7.9 FIRE SUPPRESSION SYSTEMS

FIRE SUPPRESSION WATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.9.1 The fire suppression water system shall be OPERABLE with:

a. Two* high demand pumps, one of which shall be a diesel driven pump, with their discharge aligned to the fire suppression header.

b. An OPERABLE flow path capable of taking suction from Lake Michigan and transferring the water through distribution piping with OPERABLE sectionalizing control or isolation valves to the yard hydrant curb valves and the first valve ahead of the hose standpipe or spray system riser or water flow alarm device on each sprinkler, required to be OPERABLE per Specifications 3.7.9.2 and 3.7.9.5.

APPLICABILITY: At all times.

ACTION:

a. With one pump inoperable, restore the inoperable equipment to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

b. With the fire suppression water system otherwise inoperable:

1. Establish a backup fire suppression water system within 24 hours, and

2. Submit a Special Report in accordance with Specification 6.9.2.

a) By telephone within 24 hours

b) Confirmed by telegram, mailgram or facsimile transmission no later than the first working day following the event, and

*Shared system with D. C. COOK - UNIT 1

ACTION: (Continued)

c) In writing within 14 days following the event, outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

SURVEILLANCE REQUIREMENTS

4.7.9.1.1 The fire suppression water system shall be demonstrated OPERABLE:

a. At least once per 31 days on a STAGGERED TEST BASIS by starting each pump and operating it for at least 15 minutes on recirculation flow.

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. At least once per 6 months by performance of a system flush.

d. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.

e. At least once per 18 months by performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence, and:

1. Verifying that each automatic valve in the flow path actuates to its correct position,

2. Verifying that each pump develops a flow of at least 2000 gpm at a system head of at least 300 feet,

3. Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel, and

4. Verifying that each high pressure pump starts (sequentially) to maintain the fire suppression water system pressure $\geq$ 100 psig.

f. At least once per 3 years by performing a flow test of the system in accordance with Chapter 5, Section 11 of Fire Protection Handbook, 14th Edition published by National Fire Protection Association.

SURVEILLANCE REQUIREMENTS (Continued)

4.7.9.1.2 The fire pump diesel engine shall be demonstrated OPERABLE:

a. At least once per 31 days by verifying:

1. The fuel storage tank contains at least 160 gallons of fuel, and

2. the diesel starts from ambient conditions and operates for at least 30 minutes on recirculation flow

b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank obtained in accordance with ASTM-D270-65 is within the acceptable limits specified in Table 1 of ASTM-D975-74 when checked for viscosity, water and sediment.

c. At least once per 18 months during shutdown by subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for this class of standby service.

4.7.9.1.3 The fire pump diesel starting battery bank and charger shall be demonstrated OPERABLE:

a. At least once per 7 days by verifying that:

1. The electrolyte level of each battery is above the plates, and

2. The overall battery voltage is $\geq$ 24 volts

b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of the battery.

c. At least once per 18 months by verifying that:

1. The batteries, cell plates and battery racks show no visual indication of physical damage or abnormal deterioration, and

2. The battery-to-battery and terminal connections are clean, tight, free of corrosion and coated with anticorrosion material.

SPRAY AND/OR SPRINKLER SYSTEMS

LIMITING CONDITION FOR OPERATION

3.7.9.2 The spray and/or sprinkler systems located in the areas shown in Table 3.7-5 shall be OPERABLE:

APPLICABILITY: Whenever equipment in the spray/sprinkler protected areas is required to be OPERABLE:

ACTION:

a. With one or more of the above required spray and/or sprinkler systems inoperable, within 1 hour establish a continuous fire watch with backup fire suppression equipment for those areas* in which redundant safe shutdown systems or components could be damaged. Restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.9.2 Each of the above required 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.

* - For the reactor coolant pumps preaction sprinklers inside the containment, a closed circuit television located in the lower containment, with periodic monitoring (and hourly logging) of the CCTV screen, shall be an acceptable substitute to an hourly fire watch patrol. For high radiation areas, where closed circuit television coverage does not exist, an hourly fire watch patrol will be instituted.

SURVEILLANCE REQUIREMENTS (Continued)

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 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.

TABLE 3.7-5

SPRAY AND/OR SPRINKLER SYSTEMS

A. OPEN HEAD DELUGE TYPE WATER SYSTEMS

LOCATION	ACTUATION
2-HV-AES-1 Charcoal Filters	Electric-heat
2-HV-AES-2 Charcoal Filters	Electric-heat
12-HV-AFX Charcoal Filters*	Electric-heat
2-HV-CPR-1 Charcoal Filters	Electric-heat
2-HV-CIPX-1 Charcoal Filters	Electric-heat
2-HV-ACRF-1 Charcoal Filters	Electric-heat

B. CLOSED HEAD SPRINKLER TYPE WATER SYSTEMS

LOCATION	TYPE SYSTEM	ACTUATION
Auxiliary Bldg Cask Handling Area*	Preaction Sprinkler	Dry Pilot
Auxiliary Bldg Drumming Area*	Preaction Sprinkler	Dry Pilot
Auxiliary Bldg Elev 587* & 609* (Corridors, charging, safety Inj pump rooms, laundry area)	Preaction Sprinkler	Dry Pilot
Reactor Coolant Pumps (4)	Preaction Sprinkler	Manual

* Shared system with D C COOK - UNIT 1.

TABLE 3.7-6

LOW PRESSURE CARBON DIOXIDE SYSTEMS

17 TON CAPACITY

LOCATION	ACTUATION METHOD
Diesel Generator 2AB Room	Heat - 2 circuits
Diesel Generator 2CD Room	Heat - 2 circuits
Diesel Generator Fuel Oil Pump Room	Heat
4 kv Switchgear Rooms	Ionization and Infrared
Control Rod Drive, Transf. Switchgear Rooms	Ionization and Infrared
Emergency Safety Switchgear Room	Ionization and Infrared
Switchgear Room Cable Vault	Ionization and Infrared
Auxiliary Cable Vault	Ionization
Control Room Cable Vault	Manual (backup)
Penetration Cable Tunnel Quadrant 1	Ionization and Infrared
Penetration Cable Tunnel Quadrant 2	Ionization and Infrared
Penetration Cable Tunnel Quadrant 3N	Ionization and Infrared
Penetration Cable Tunnel Quadrant 3M	Ionization and Infrared
Penetration Cable Tunnel Quadrant 3S	Ionization and Infrared
Penetration Cable Tunnel Quadrant 4	Ionization and Infrared

HALON SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.9.4 The Halon system located in the Unit 2 Control Room Cable Spreading Area shall be OPERABLE.

APPLICABILITY: Whenever equipment in the Halon protected areas is required to be OPERABLE.

ACTION:

a. With the above required Halon system inoperable, within 1 hour verify that the fire detection system and the backup CO_2 fire suppression system are OPERABLE; otherwise, establish a continuous fire watch with backup fire suppression equipment for the Control Room Cable Spreading Area. Restore the system to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability and the plans and schedule for restoring the system to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.9.4 The above Halon system shall be demonstrated OPERABLE:

a. At least once per 6 months by verifying each Halon storage tank to be $\geq$ 95% of full charge weight and to be $\geq$ 90% of full charge pressure.

b. At least once per 18 months by:

1. Verifying the system, including associated ventilation dampers, actuates manually and automatically to a simulated test signal.

2. Performance of an air flow test or CO_2 puff test through headers and nozzles to assure no blockage.

FIRE HOSE STATIONS

LIMITING CONDITION FOR OPERATION

3.7.9.5 The fire hose standpipe connections in the following locations shall be OPERABLE:

1. Auxiliary Building (minimum 12).
2. Access to Diesel Generators (minimum 1).
3. Access to Switchgear Rooms (minimum 1).
4. Access to Control Room (minimum 1).

APPLICABILITY: Whenever equipment in the areas protected by the fire hose stations is required to be OPERABLE.

ACTION:

a. With one or more of the above required hose standpipe connections inoperable, route an additional equivalent capacity fire hose to the unprotected area(s) from an OPERABLE hose standpipe connection within 1 hour if the inoperable fire hose is the primary means of fire suppression; otherwise, route the additional hose within 24 hours. Restore the fire hose station to OPERABLE status within 14 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperability, and plans and schedule for restoring the station to OPERABLE status.

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.9.5 Each of the above required fire hose standpipe connections shall be demonstrated OPERABLE:

a. At least once per 31 days by a visual inspection of the fire hose standpipe connection to assure all required equipment is at the connection.

b. At least once per 18 months by:

3/4.7.10 FIRE RATED ASSEMBLIES

LIMITING CONDITION FOR OPERATION

3.7.10 All fire rated assemblies (walls, floor/ceilings, cable tray enclosures) separating safety related fire areas or separating portions of redundant systems important to safe shutdown within a fire area and all sealing devices in fire rated assembly penetrations (fire doors, fire dampers, cable and piping penetration seals, and ventilation seals) shall be OPERABLE.

APPLICABILITY: At all times.

ACTION:

a. **With one or more of the above required fire rated asemblies and/or sealing devices inoperable, within one hour either establish a continuous fire watch on at least one side of the affected assembly, or verify the OPERABILITY of fire detectors per Specification 4.3.3.8 on at least one side of the inoperable assembly and establish an hourly fire watch patrol or secure in the closed position the inoperable sealing device* and establish an hourly fire watch patrol. Restore the inoperable fire rated assembly and sealing device to OPERABLE status within 7 days or, in lieu of any other report required by Specification 6.9.1, prepare and submit a Special Report to the Commission pursuant to Specification 6.9.2 within the next 30 days outlining the action taken, the cause of the inoperable fire rated assembly and/or sealing device and the plans and schedule for restoring the fire rated assembly and/or sealing device to OPERABLE status.**

b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.7.10.1 At least once per 18 months the above required fire rated assemblies and penetration sealing devices shall be verified OPERABLE by:

a. Performing a visual inspection of the exposed surfaces of each fire rated assemblies.

b. Performing a visual inspection of each fire damper and associated hardware.

* Except fire doors on Turbine Driven Auxiliary Feedwater Pump and Hallway enclosures which cannot be locked closed for HELB considerations.

1. Removing the hose for inspection and re-racking, and

2. Replacement of all degraded gaskets in couplings.

c. At least once per 3 years by:

1. Partially opening each hose standpipe connection valve to verify valve OPERABILITY and no flow blockage.

2. Conducting a hose hydrostatic test at a pressure at least 50 psig greater than the maximum pressure available at that hose standpipe connection.

SURVEILLANCE REQUIREMENTS (Cont'd)

c. Performing a visual inspection of at least 10 percent of each type of sealed penetration. If apparent changes in appearance or abnormal degradations are found, a visual inspection of an additional 10 percent of each type of sealed penetration shall be made. This inspection process shall continue until a 10 percent sample with no apparent changes in appearance or abnormal degradation is found.

4.7.10.2 Each of the above required fire doors shall be verified OPERABLE by inspecting the hold-open, release and closing mechanism and latches at least once per 6 months, and by verifying:

a. The position of each closed fire door at least once per 24 hours.

b. That doors with hold-open and release mechanisms are free of obstructions at least once per 24 hours.

c. The position of each locked closed fire door at least once per 7 days.

4.7.10.3 Each of the above required fire rated assemblies or sealing devices in fire rated assembly penetrations shall be verified to be OPERABLE prior to declaring a penetration fire barrier OPERABLE following repairs or maintenance.

3/4.3.3.8 FIRE DETECTION INSTRUMENTATION

OPERABILITY of the fire detection instrumentation ensures that adequate warning capability is available for the prompt detection of fires. This capability is required in order to detect and locate fires in their early stages. Prompt detection of fires will reduce the potential for damage to safety-related equipment and is an integral element in the overall facility fire protection program.

In the event that a portion of the fire detection instrumentation is inoperable, the establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is restored to OPERABILITY. Use of containment temperature monitoring is allowed once per hour if containment fire detection is inoperable.

3/4.3.3.9 RADIOACTIVE LIQUID EFFLUENT INSTRUMENTATION

The radioactive liquid effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in liquid effluents during actual or potential releases. The alarm/trip setpoints for these instruments shall be calculated in accordance with NRC approved methods in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria specified in Section 11.3 of the Final Safety Analysis Report for the Donald C. Cook Nuclear Plant.

3/4.3.3.10 RADIOACTIVE GASEOUS EFFLUENT INSTRUMENTATION

The radioactive gaseous effluent instrumentation is provided to monitor and control, as applicable, the releases of radioactive materials in gaseous effluents during actual or potential releases. The alarm/trip setpoints for these instruments shall be calculated in accordance with NRC approved methods in the ODCM to ensure that the alarm/trip will occur prior to exceeding the limits of 10 CFR Part 20. This instrumentation also includes provisions for monitoring the concentrations of potentially explosive gas mixtures in the waste gas holdup system. The OPERABILITY and use of this instrumentation is consistent with the requirements of General Design Criteria specified in Section 11.3 of the Final Safety Analysis Report for the Donald C. Cook Nuclear Plant.

3/4.3.4 TURBINE OVERSPEED PROTECTION

This specification is provided to ensure that the turbine overspeed protection instrumentation and the turbine speed control valves are OPERABLE and will protect the turbine from excessive overspeed. Protection from turbine excessive overspeed is required since excessive overspeed of the turbine could generate potentially damaging missiles which could impact and damage safety related components, equipment or structures.

other tasks (e.g. an operator on tour) provided that such personnel fulfilled the above stated requirements. As a minimum, each area affected by an isolated low pressure CO_2 system must be visited every twenty-five (25) to thirty-five (35) minutes by the Roving Fire Watch Patrol. Such measures will provide the necessary level of fire protection while affording necessary provisions for personnel safety.

In the event that portions of the fire suppression systems are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the inoperable equipment is restored to service. When the inoperable fire-fighting equipment is intended for use as a backup means of fire suppression, a longer period of time is allowed to provide an alternate means of fire fighting than if the inoperable equipment is the primary means of fire suppression.

The surveillance requirements provide assurance that the minimum OPERABILITY requirements of the fire suppression systems are met. An allowance is made for ensuring a sufficient volume of Halon and CO_2 in the storage tanks by verifying either the weight, level, or pressure of the tanks.

In the event the fire suppression water system becomes inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the plant. The requirement for a twenty-four hour report to the Commission provides for prompt evaluation of the acceptability of the corrective measures to provide adequate fire suppression capability for the continued protection of the nuclear plant.

Because of the inaccessibility of the lower containment to personnel during operation due to ALARA radiation exposure concerns, the use of one or more CCTVS in the lower containment to monitor for fire and smoke, is an acceptable substitute to a continuous fire watch, if the fire suppression system becomes inoperable.

3/4.7.10 FIRE RATED ASSEMBLIES

The OPERABILITY of the fire barriers and barrier penetrations ensure that fire damage will be limited. These design features minimize the possibility of a single fire involving more than one fire area prior to detection and extinguishment. The fire barriers, fire barrier penetrations for conduits, cable trays and piping, fire dampers, and fire doors are periodically inspected to verify their OPERABILITY. The ventilation seals are seals around ventilation duct work penetrating fire barriers.

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 79 TO FACILITY OPERATING LICENSE NO. DPR-58

AND AMENDMENT NO. 61 TO FACILITY OPERATING LICENSE NO. DPR-74

INDIANA AND MICHIGAN ELECTIC COMPANY

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

DOCKET NOS. 50-315 AND 50-316

Introduction

By letter dated August 2, 1982, the Indiana and Michigan Electric Company (IMEC), the licensee, submitted proposed amendments to the Operating Licenses for the Donald C. Cook Nuclear Plant, Unit Nos. 1 and 2. The amendments would update the Technical Specifications for fire protection systems to incorporate the wording of the current Standardized Technical Specifications for Westinghouse plants and to substitute the use of the closed circuit television in the lower containment in place of continuous fire watch whenever the reactor coolant pump sprinklers were inoperable.

Evaluation

Fire Detection Instrumentation and Table 3.3-10

The proposed changes would distinguish between those systems which are inside containment and inaccessible during operation and those outside containment. The Standard Technical Specifications (STS) recognize action statements and surveillance requirements which have been reviewed by the staff and found acceptable. The proposed changes are consistent with the STS, that is, a fire inspection each 8 hour inside containment and an hourly monitor of containment temperature monitors will replace the requirement for hourly patrols inside containment. The instrumentation which is accessible during operation will continue to be tested on a six month basis. Instrumentation not accessible will be tested at cold shutdowns exceeding 24 hours unless performed in the previous six months. We find these changes acceptable.

Table 3.3-10 has been changed to delete reference to zones. The correct terminology at Cook would be "quadrants" and the revised Technical Specifications reflect this correction as well as the separation of inside/outside instruments and identification of shared systems by Unit 1 and Unit 2. A footnote has been added to account for instruments inside containment not required to be operable during Type A leak rate tests.

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During the pressurization of the containment for the Type A leak test, all incidental sources of heat are turned off to simplify calculations needed to support the tests. The fire detector instrumentation inside containment does provide a small heat source which could effect the small volumn of air inside the ice condensor containment. Since the Type A tests are done during shutdown and the time that the detector instrumentation is inoperable is small, we agree that the detectors may be inoperable for the tests and this footnote on the Technical Specifications is acceptable.

Fire Suppression Systems

Portions of the action statements have been rearranged for clarity and moved to the surveillance requirements where appropriate, i.e., 160 gallons in the fuel storage tank is a value to be checked during surveillance. The surveillance on the fire pump diesel is now defined to include a 30 minute test on recirculation flow rather than an undefined test for 20 minutes. The 18 month test to start the diesel and run for 20 minutes has been deleted since it is duplicative with the above test on recirculation flow for 30 minutes. These changes are acceptable.

Spray and/or Sprinkler Systems

Aside from the point of clarity in the action statement regarding areas where redundant safe shutdown system or components could be changed, the major change in this Technical Specification relates to the proposed use of the closed circuit television (TV) in the lower containment in lieu of an hourly fire watch patrol. The spray and/or sprinkler system provides a backup to the detection system; a fire can be detected by the detection system or actuation of the sprays. In the lower containment and specifically in the reactor coolant pump area, a closed circuit TV system is used to periodically check the external conditions of the pump. If the spray system fails in this area, the detection system would still be available but an hourly fire watch patrol here would subject personnel to high radiation areas unnecessarily. The TV would show either a clear room or no picture due to a TV failure or a smoke filled room. With loss of the TV picture, someone would be dispatched to check the area. The staff's concern was with the limited viewing area of the TV, however, a review of the area reveals that should a fire occur, it would be caused by an oil spill from the reactors coolant pump and an oil fire with thick smoke. If there is an oil spill, the pump will no longer be operational and the licensee has stated that there are no other safety related components or systems in that area. The smoke from the oil fire would appear on the TV screen as no picture, someone would be dispatched to check the area, and even though there was a fire in the area, nothing else significant would be lost due to the fire. The staff, therefore, concludes that the TV is an acceptable alternative to the spray as a backup detection system for this area. The available backup fire suppression equipment is sufficient to fight a fire in this area should the spray be inoperable and a fire occur. The proposed change to the Technical Specifications is acceptable.

Loss Pressure CO_2 Systems and Table 3.7-6

License Amendment No. 68/50 issued on February 7, 1983 adequately resolved the proposed changes to the Technical Specification on low pressure CO_2 system. No further action is required here. In table 3.7-6, the licensee proposes to add infrared to a number of areas as a means of actuation of low pressure CO_2 system. This is acceptable.

Halon Systems

The proposed changes involve moving the storage weight and pressure to the surveillance requirements and clarifying the requirement that verification of the fire detection system and backup CO_2 suppression system is to be made within 1 hour. The licensee has also proposed to add a CO_2 puff test as an option to assuring no blockage through headers and nozzles. The requirement is to assure no blockage in the halon system by a test at least once per 18 months and if by air flow or CO_2 puff, the licensee can show no blockage, the requirement will be met. These changes are acceptable.

Fire Hose Stations

The proposed change would differentiate between the re-routing of fire hoses where the hose was the primary or backup suppression means. The 1 hour remains for re-routing where the hose is the primary means but would now allow 24 hours if the hose was the secondary means. The special report and this differentiately between primary and backup means is consistent with current staff requirements and the STS. We find these changes acceptable.

Fire Rated Assemblies

The licensee proposes to replace the Technical Specification on Penetration Fire Barriers with a specification on Fire Rated Assemblies on the basis that the new specification covers all provisions in the old Technical Specifications and is more prescriptive. In our discussion with the licensee we proposed adding to the new specification reference to cable tray enclosures and ventilation seals. Some of these enclosures are being added in the plant by the licensee and are to be covered by the Technical Specification as they are declared operable by plant management. The proposed wording of the new Technical Specification, with the appropriate addition of cable tray enclosure and ventilation seals, is consistent with current staff requirement and the STS. We find the revised Technical Specifications acceptable.

Technical Specification Bases-Fire Rated Assemblies

In discussion with the licensee it was agreed that the proposed bases should be supplemented with the definition that the ventilation seals are seals around ventilation duct work penetrating fire barriers. This is 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) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Dated: March 16, 1984

Principal Contributors:
D. Wigginton
R. Eberly