



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

April 12, 1982

Docket No. 50-237/249  
LS05-82-04-034

Mr. L. DelGeorge  
Director of Nuclear Licensing  
Commonwealth Edison Company  
Post Office Box 767  
Chicago, Illinois 60690



Dear Mr. DelGeorge:

The Commission has issued the enclosed Amendment No. 69 to Provisional Operating License No. DPR-19 for Dresden Station Unit No. 2 and Amendment No. 61 to Facility Operating License No. DPR-25 for Dresden Station Unit No. 3. The amendments are in response to your letter of October 21, 1980, as supplemented June 12, 1981 and February 17, 1982.

The amendments modify the Technical Specifications to incorporate Limiting Conditions for Operation and Surveillance Requirements related to modifications to the fire protection system required by our March 22, 1978 Safety Evaluation Report (SER).

Your submittal was in response to Section 7.0 of the NRC staff's SER which stated that the Technical Specifications would be modified to incorporate limiting conditions for operations and surveillance requirements for the approved fire protection modifications. During our review we identified several changes to your proposed specifications that were necessary. We discussed these changes with your staff and they accepted our changes.

We have reviewed your proposed Technical Specification changes and conclude that the revisions are in accordance with our Fire Protection SER and with your Fire Hazards Analysis Report and are consistent with the fire protection requirements contained in the BWR Standard Technical Specifications. These modifications represent an increased effectiveness of your Fire Protection System. On this basis, we find the proposed Technical Specification changes acceptable.

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.

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We have concluded, based on the considerations discussed above, that:

(1) because the amendments do not involve a significant increase in the probability or consequences of accidents previously considered and do not involve a significant decrease in a safety margin, the amendments do not involve a significant hazards consideration, (2) there is reasonable assurance that the health and safety of the public will not be endangered by this action, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

Sincerely,

Original signed by

Dennis M. Crutchfield, Chief  
 Operating Reactors Branch #5  
 Division of Licensing

Enclosures:

1. Amendment No. 69 to License No. DPR-19
2. Amendment No. 61 to License No. DPR-25
3. Notice of Issuance

cc w/enclosure:  
 See next page

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Mr. L. DelGeorge

- 3 -

April 12, 1982

cc

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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-237

DRESDEN STATION UNIT NO. 2

AMENDMENT TO PROVISIONAL OPERATING LICENSE

Amendment No. 69  
License No. DPR-19

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Commonwealth Edison Company (the licensee) dated October 21, 1980, as supplemented June 12, 1981 and February 17, 1981, 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.

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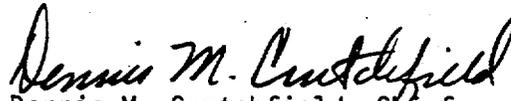
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 3.B of Provisional Operating License No. DPR-19 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 69, 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



Dennis M. Crutchfield, Chief  
Operating Reactors Branch #5  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: April 12, 1982

ATTACHMENT TO LICENSE AMENDMENT NO. 69

PROVISIONAL OPERATING LICENSE NO. DPR-19

DOCKET NO. 50-237

Change the Appendix A Technical Specifications by removing the pages described below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain vertical lines indicating the area of change.

<u>REMOVE</u>	<u>INSERT</u>
156d	156d
156e	156e
156f	156f
156g	156g
156h	156h
156i	156i
156j	156j
156k	156k
156l	156l
156m	156m
156n	156n
156o	156o
156p	156p
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**3.12 LIMITING CONDITIONS FOR OPERATION**

**3.12 FIRE PROTECTION SYSTEMS**

**Applicability:**

Applies to the fire protection systems whenever the equipment or systems being protected are required to be operable.

**Objective:**

To ensure that adequate protection against fires is maintained during all modes of facility operation.

**Specification:**

**A. Fire Detection Instrumentation**

1. As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.12-1 shall be operable at all times when equipment in that fire detection zone is required to be operable.
2. With the number of operable fire detection instruments less than required by Table 3.12-1;
  - a. Perform an inspection of the affected zone, if accessible, within 1 hour. Perform additional inspections at least once per hour, except in inaccessible areas.
  - b. Restore the inoperable instrument(s) to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to operable status.
  - c. The provisions of Specification 3.0.A are not applicable.

**DPR-19 4.12 SURVEILLANCE REQUIREMENTS**

**4.12 FIRE PROTECTION SYSTEMS**

**Applicability:**

Applies to the periodic testing requirements of the fire protection systems whenever the fire protection systems are required to be operable.

**Objective:**

To verify operability of the fire protection systems.

**Specification:**

**A. Fire Detection Instrumentation**

1. Each of the fire detection instruments given by Table 3.17-1 shall be demonstrated OPERABLE at least every 6 months by a channel functional test.

## 3.12 LIMITING CONDITIONS FOR OPERATION

B. Fire Suppression Water System

1. The Fire Suppression Water System shall be operable at all times with:

- a. A flow path capable of taking suction from the 2/3 Intake Canal for Unit 2/3 Fire Pump.
- b. A flow path capable of taking suction from the Unit 1 Intake Canal for Unit 1 fire pump.
- c. The Unit 2/3 fire pump (2000 GPM) with its discharge aligned to the fire suppression header (from Unit 2/3 Intake Structure).
- d. The Unit 1 fire pump (2000 GPM) with its discharge aligned to the fire suppression header (from Unit 1 Intake Structure).
- e. Automatic initiation logic for each fire pump.
- f. Fire suppression header piping with sectional control valves to:
  - 1) The yard loop.
  - 2) The front valve ahead of the water flow alarm device on each sprinkler or water spray system.
  - 3) The standpipe system.

2. With an inoperable fire pump or associated water supply, restore the inoperable equipment to operable status within 7 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system.

## 4.12 SURVEILLANCE REQUIREMENTS

B. Fire Suppression Water System

1. The Fire Suppression Water System shall be demonstrated operable:

- a. At least once per 31 days by verifying valve positions.
- b. At least once per 12 months by cycling each testable valve in the flow path through one complete cycle.
- c. At least once per year by performance of a system flush.
- d. At least once per operating cycle:
  - 1) By performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence and verifying that each automatic valve in the flow path actuates to its correct position.
  - 2) By verifying that the Unit 2/3 fire pump develops at least 2000 gpm at a system head of 238 feet.
  - 3) By verifying that the Unit 1 fire pump starts and develops at least 2000 gpm at a system head of 238 ft.
  - 4) Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.
- e. At least once per 3 years by performing flow tests of the system in accordance with the "Test of Water Supplies" Chapter in the NFPA Fire Protection Handbook.

**3.12 LIMITING CONDITIONS FOR OPERATION****4.12 SURVEILLANCE REQUIREMENTS**

3. With no Fire Suppression Water System operable, within 24 hours;
  - a. Establish a backup Fire Suppression Water System.
  - b. Notify the Commission pursuant to Specification 6.6.B.1 outlining the actions taken and the plans and schedule for restoring the system to operable status.
  
4. If the requirements of 3.12.B.3.a cannot be met, an orderly shutdown shall be initiated, and the reactor shall be in cold shutdown condition within 24 hours.

Amendment No. ~~36~~ 69

## 3.12 LIMITING CONDITIONS FOR OPERATION

## 4.12 SURVEILLANCE REQUIREMENTS

## C. Sprinkler Systems

1. The sprinkler systems given in Table 3.12-2 shall be operable at all times when equipment in the area that is sprinkler protected is required to be operable.
2. With a sprinkler system inoperable, establish fire inspections with backup fire suppression equipment within 1 hour.
  - a. In the Unit 2/3 turbine mezzanine 538' elevation area or Unit 2 hydrogen seal oil area, a continuous fire watch is to be established.
  - b. In all other areas given in Table 3.12-2 perform inspection hourly.
3. Restore the system to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.8.2 within the next 30 days outlining the cause of inoperability, action taken and the plans for restoring the system to operable status.
4. The provisions of Specification 3.0.A are not applicable.

D. CO<sub>2</sub> System

1. The CO<sub>2</sub> Storage Tank shall have a minimum standby level of 50 percent and a minimum pressure of 250 psig.
2. The CO<sub>2</sub> System given in Table 3.12-3 shall be operable.

## C. Sprinkler System

1. At least once per 31 days by verifying that each valve, manual, power-operated, or automatic, in the flow path is in its correct position.
2. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
3. At least once per operating cycle:
  - a. A system functional test shall be performed which includes simulated automatic actuation of the system and verifying that the automatic valves in the flow path actuate to their correct positions.
  - b. The sprinkler headers shall be inspected to verify their integrity.
  - c. Each nozzle's spray area shall be inspected to verify no blockage of the spray pattern.
4. At least every other operating cycle, a flow test will be performed to verify that each open head spray nozzle is unobstructed.

D. CO<sub>2</sub> System

1. At least once per 7 days the CO<sub>2</sub> Storage Tank level and pressure will be verified.
2. At least once per 31 days by verifying that each valve, manual, power-operated, or automatic, in the flow path is in the correct position.
3. At least once per operating cycle, the system valves and associated dampers will be verified to actuate automatically and manually. A brief flow test shall be made to verify flow from

## 3.12 LIMITING CONDITIONS FOR OPERATION

## 4.12 SURVEILLANCE REQUIREMENTS

3. Specifications 3.12.D.1 and 3.12.D.2 above apply when the equipment in the areas given in Table 3.12-3 is required to be operable.
4. With a CO<sub>2</sub> System inoperable, establish fire inspection with backup fire suppression equipment in unprotected areas within 1 hour, and perform inspection at least hourly.
5. Restore the system to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the cause of inoperability, action taken and the plans and schedule for restoring the system to operable status.
6. The provisions of Specification 3.0.A are not applicable.

## E. Fire Hose Stations

1. The Fire Hose Stations given in Table 3.12-4 shall be operable at all times when the equipment in the area is required to be operable.
2. With a hose station inoperable route an additional equivalent capacity hose to the unprotected area from an operable hose station within 1 hour.
3. When a hose station becomes inoperable, restore to operable status within 14 days or report to the Commission pursuant to specification 6.6.B.2 within the next 30 days outlining the cause of inoperability and plans for restoring the hose station to operability.
4. The provisions of Specification 3.0.A are not applicable.

## E. Fire Hose Stations

1. At least once per 31 days, a visual inspection of each fire hose station shall be made to assure all equipment is available at the station.
2. At least once per operating cycle, the hose will be removed for inspection and repacked. Degraded gaskets in the couplings will be replaced.
3. At least once per 3 years, each hose station valve will be partially opened to verify valve operability and no blockage.
4. At least once per 3 years a hydrostatic test will be conducted on each hose at a pressure at least 50 psig above line pressure at that station.

**3.12 LIMITING CONDITIONS FOR OPERATION****4.12 SURVEILLANCE REQUIREMENTS****F. Penetration Fire Barriers**

1. All penetration fire barriers (including fire doors and fire dampers) protecting safety related areas shall be intact, except as stated in specification 3.12.F.2 below.
2. With one or more of the required penetration fire barriers not intact, establish a continuous fire watch on at least one side of the affected penetration within 1 hour when the area on either side of the affected penetration contains equipment required to be operable.
3. The provisions of Specification 3.0.A are not applicable.
4. Restore the non-functional fire barrier penetrations to operable status within 7 days or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2. within the next 30 days outlining the cause of inoperability, action taken and the plans and schedule for restoring the penetration fire barriers to operable status.

G. See 3.12.B.

**F. Penetration Fire Barriers**

1. Each of the required penetration fire barriers shall be verified to be intact by a visual inspection:
  - a. At least once per 18 months, and
  - b. Prior to declaring a penetration fire barrier intact following repairs or maintenance.

**G. Fire Pump Diesel Engine**

1. The fire pump diesel engine shall be demonstrated OPERABLE:
  - a. At least once per 31 days by verifying:
    - 1) The fuel storage day tank contains at least 150 gallons of fuel, and
    - 2) The diesel starts for ambient conditions and operates for at least 30 minutes.
    - 3) The fuel transfer pump starts and transfers fuel from the storage tank to the day tank.
  - b. At least once per 92 days a sample of diesel fuel shall be checked for viscosity, water and sediment. The procedure used shall be consistent with existing station procedures used to check diesel fuel in the main storage tanks.

## 3.12 LIMITING CONDITIONS FOR OPERATION

## 4.12 SURVEILLANCE REQUIREMENTS

c. At least once per 18 months, by:

- 1) Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service, and
- 2) Verifying the diesel starts from ambient conditions on the auto-start signal and operates for  $\geq 30$  minutes while loaded with the fire pump.

2. The fire pump diesel engine batteries 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 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 anti-corrosion material.

**3.12 LIMITING CONDITIONS FOR OPERATION****H. Halon System**

1. The following Halon system shall be OPERABLE with the storage tanks having at least 95% of full charge weight and 90% of full charge pressure.

- a. Auxiliary Electrical Equipment Room

2. With one or more of the above required Halon systems inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, prepare and submit a report to the Commission pursuant to Specification 6.6.F 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.

**4.12 SURVEILLANCE REQUIREMENTS****H. Halon System**

1. At least once per 31 days, verify that each valve in the flow path is in the correct position.
2. At least once per 6 months, the Halon storage tank weight and pressure will be verified.
3. At least once per operating cycle, the system, including associated ventilation dampers, will be verified to actuate manually and automatically. A flow test shall be made through headers and nozzles to assure no blockage.

Bases: Fire Protection Systems

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 inspections in the affected areas is required to provide detection capability until the inoperable instrumentation is returned to service.

The operability of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, sprinklers, CO<sub>2</sub> systems, Halon system, and fire hose stations, and is adequate to minimize potential damage to safety related equipment, and is a major element in the facility fire protection program.

In the event that portions of the fire suppression system are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the affected equipment can be restored to service.

A fire suppression water system shall consist of a water source, pumps, and distribution piping with associated valves. Such valves shall include sectional control valves, and the first valve ahead of the water flow alarm device on each sprinkler or hose standpipe riser.

In the event that 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 24-hour report of 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.

The functional integrity of the penetration fire barriers ensures that fires will be confined or adequately retarded from spreading to adjacent portions of the facility. This design feature minimizes the possibility of a single fire rapidly involving several areas of the facility prior to detection and extinguishment. The penetration fire barriers are a passive element in the facility fire protection program and are subject to periodic inspections.

During periods of time when the barriers are not functional, a fire watch is required to be maintained in the vicinity of the affected barrier until the barrier is restored to functional status.

FIRE DETECTION INSTRUMENTS

<u>INSTRUMENT LOCATION</u>	<u>MINIMUM INSTRUMENTS OPERABLE</u>
1. Main Control Room 34 Smoke Detectors	24
2. Unit 2/3 Aux. Elect. Equip. Room 12 Smoke Detectors	8
3. Unit 2/3 Computer Room 8 Smoke Detectors	6
4. Unit 2 Battery Room 10 Smoke Detectors	7
5. Unit 2 Turb Bldg. 480v MCC 17 Smoke Detectors	12
6. Unit 2 Turb Bldg. 4KV Switchgear 10 Smoke Detectors	7
7. Unit 2/3 Diesel Generator Area 4 Heat Detectors	3
8. Unit 2 Diesel Generator Area 3 Heat Detectors	2
9. Unit 2 Rx Bldg. 480v MCC (570') 3 Smoke Detectors	2
10. Unit 2 Rx Bldg. 480v MCC (517') 7 Smoke Detectors	5
11. Unit 2 Rx Bldg. 4KV Switchgear 4 Smoke Detectors	3
12. Unit 2 Standby Liquid Control Area 1 Smoke Detector	1

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TABLE 3.12-2

SPRINKLER SYSTEMS

1. Unit 2 Emergency Diesel Oil Day Tank
2. Unit 2/3 Turbine Mezzanine 538' Elevation
3. Unit 2/3 Emergency Diesel Oil Day Tank
4. Unit 2 Reactor Feed Pump Area
5. Unit 2 Hydrogen Seal Oil Area
6. Unit 2 Condensate Feed Pump Area
7. Unit 2 HPCI Area
8. Unit 2 Turbine Building East Mezzanine Area
9. Unit 2 EHC Area
10. 2/3 Fire Pump Area
11. Unit 2 Trackway
12. Unit 2 Instrument Air Compressor Area

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TABLE 3.12-3

CO<sub>2</sub> SYSTEMS

1. Unit 2 Emergency Diesel Generator
2. Unit 2/3 Emergency Diesel Generator

DPR-19  
TABLE 3.12-4

FIRE HOSE STATIONS

<u>NO.</u>	<u>LOCATION</u>	<u>NO.</u>	<u>LOCATION</u>
F21	Cribhouse - 517-ft., by Bus 20	F62	Reactor Building - 545-ft., North Wall Near Elevator
F54	Reactor Building - 589-ft., North East Wall at Elevator	F63	Reactor Building - 545-ft., South Wall at RBCCW Heat Exchanger
F55	Reactor Building - 589-ft., South of Standby Liquid Tank	F64	Reactor Building - 545-ft., South West Stairway
F56	Reactor Building - 589-ft., South East of Isolation Condenser	F65	Reactor Building - 545-ft., North of Bus 23 :
F57	Reactor Building - 589-ft., South West Stairway	F66	Reactor Building - 517-ft., at Elevator
F58	Reactor Building - 570-ft., North Wall at Elevator	F67	Reactor Building - 517-ft., South East Wall
F59	Reactor Building - 570-ft., Across from Cleanup Demineralizer P.C. Tank	F68	Reactor Building - 517-ft., South East Stairway
F60	Reactor Building - 570-ft., C.R.D. Repair Room	F73	Reactor Building - 476-ft., 2B LPCI Pump
F61	Reactor Building - 570-ft., West Wall Near RBCCW Tank	F74	Reactor Building - 476-ft., 2C Core Spray Pump
F61A	Reactor Building - 570-ft., by South Stairs	F80A	Turbine Building - 549-ft., North Wall Unit 2 Battery Room
		F80B	Turbine Building - 549-ft., Outside of Passenger Elevator

DPR-19  
TABLE 3.12-4

FIRE HOSE STATIONS

<u>NO.</u>	<u>LOCATION</u>	<u>NO.</u>	<u>LOCATION</u>
F82	Turbine Building - 538-ft., Stator Cooling Pump		
F82A	Turbine Building - 538-ft., East of Trackway Equipment Hatch		
F82B	Turbine Building - 534-ft., Across from Switchgear 23 and 24		
F84	Turbine Building - 534-ft., East of Standby Gas System		
F85	Turbine Building - 517-ft., Near U-2 Transformer Valve		
F86	Turbine Building - 517-ft., at U-2 Emergency Diesel		
F87	Turbine Building - 517-ft., Across from 2C RFP West Walk		
F88	Turbine Building - 495-ft., at C.R.D. Pumps		
F89	Turbine Building - 469-ft., Across from 2D Condensate Pump		

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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-249

DRESDEN STATION UNIT NO. 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 61  
License No. DPR-25

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Commonwealth Edison Company (the licensee) dated October 22, 1980, as supplemented June 12, 1981 and February 17, 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.

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2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and Paragraph 3.B of Facility Operating License No. DPR- 25 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A 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. This license amendment is effective as of the date of its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Domenic B. Vassallo  
Operating Reactors Branch # 2  
Division of Licensing

Attachment:  
Changes to the Technical  
Specifications

Date of Issuance: April 12, 1982

ATTACHMENT TO LICENSE AMENDMENT NO. 61

FACILITY OPERATING LICENSE NO. DPR-25

DOCKET NO. 50-249

Change the Appendix A Technical Specifications by removing the pages described below and inserting the enclosed pages. The revised pages are identified by the captioned amendment number and contain vertical lines indicating the area of change.

<u>REMOVE</u>	<u>INSERT</u>
156d	156d
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156f	156f
156g	156g
156h	156h
156i	156i
156j	156j
156k	156k
156l	156l
156m	156m
156n	156n
156o	156o
156p	156p
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3.12 LIMITING CONDITIONS FOR OPERATION

3.12 FIRE PROTECTION SYSTEMS

Applicability:

Applies to the fire protection systems whenever the equipment or systems being protected are required to be operable.

Objective:

To ensure that adequate protection against fires is maintained during all modes of facility operation.

Specification:

A. Fire Detection Instrumentation

1. As a minimum, the fire detection instrumentation for each fire detection zone shown in Table 3.12-1 shall be operable at all times when equipment in that fire detection zone is required to be operable.
2. With the number of operable fire detection instruments less than required by Table 3.12-1;
  - a. Perform an inspection of the affected zone, if accessible, within 1 hour. Perform additional inspections at least once per hour, except in inaccessible areas.
  - b. Restore the inoperable instrument(s) to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the cause of the malfunction and the plans for restoring the instrument(s) to operable status.
- C. The provisions of Specification 3.0.A are not applicable.

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4.12 FIRE PROTECTION SYSTEMS

Applicability:

Applies to the periodic testing requirements of the fire protection systems whenever the fire protection systems are required to be operable.

Objective:

To verify operability of the fire protection systems.

Specification:

A. Fire Detection Instrumentation

1. Each of the fire detection instruments given by Table 3.17-1 shall be demonstrated OPERABLE at least every 6 months by a channel functional test.

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## 3.12 LIMITING CONDITIONS FOR OPERATION

## B. Fire Suppression Water System

1. The Fire Suppression Water System shall be operable at all times with:

- a. A flow path capable of taking suction from the 2/3 Intake Canal for Unit 2/3 Fire Pump.
- b. A flow path capable of taking suction from the Unit 1 Intake Canal for Unit 1 fire pump.
- c. The Unit 2/3 fire pump (2000 GPM) with its discharge aligned to the fire suppression header (from Unit 2/3 Intake Structure).
- d. The Unit 1 fire pump (2000 GPM) with its discharge aligned to the fire suppression header (from Unit 1 Intake Structure).
- e. Automatic initiation logic for each fire pump.
- f. Fire suppression header piping with sectional control valves to:

- 1) The yard loop.
- 2) The front valve ahead of the water flow alarm device on each sprinkler or water spray system.
- 3) The standpipe system.

2. With an inoperable fire pump or associated water supply, restore the inoperable equipment to operable status within 7 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system.

## 4.12 SURVEILLANCE REQUIREMENTS

## B. Fire Suppression Water System

1. The Fire Suppression Water System shall be demonstrated operable:

- a. At least once per 31 days by verifying valve positions.
- b. At least once per 12 months by cycling each testable valve in the flow path through one complete cycle.
- c. At least once per year by performance of a system flush.
- d. At least once per operating cycle:

- 1) By performing a system functional test which includes simulated automatic actuation of the system throughout its operating sequence and verifying that each automatic valve in the flow path actuates to its correct position.
- 2) By verifying that the Unit 2/3 fire pump develops at least 2000 gpm at a system head of 238 feet.
- 3) By verifying that the Unit 1 fire pump starts and develops at least 2000 gpm at a system head of 238 ft.
- 4) Cycling each valve in the flow path that is not testable during plant operation through at least one complete cycle of full travel.

e. At least once per 3 years by performing flow tests of the system in accordance with the "Test of Water Supplies" Chapter in the NFPA Fire Protection Handbook.

**3.12 LIMITING CONDITIONS FOR OPERATION****4.12 SURVEILLANCE REQUIREMENTS**

3. With no Fire Suppression Water System operable, within 24 hours;
  - a. Establish a backup Fire Suppression Water System.
  - b. Notify the Commission pursuant to Specification 6.6.B.1 outlining the actions taken and the plans and schedule for restoring the system to operable status.
  
4. If the requirements of 3.12.B.3.a cannot be met, an orderly shutdown shall be initiated, and the reactor shall be in cold shutdown condition within 24 hours.

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## 3.12 LIMITING CONDITIONS FOR OPERATION

## 4.12 SURVEILLANCE REQUIREMENTS

## C. Sprinkler Systems

1. The sprinkler systems given in Table 3.12-2 shall be operable at all times when equipment in the area that is sprinkler protected is required to be operable.
2. With a sprinkler system inoperable, establish fire inspections with backup fire suppression equipment within 1 hour.
  - a. In the Unit 2/3 turbine mezzanine 538' elevation area or Unit 2 hydrogen seal oil area, a continuous fire watch is to be established.
  - b. In all other areas given in Table 3.12-2 perform inspection hourly.
3. Restore the system to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the cause of inoperability, action taken and the plans for restoring the system to operable status.
4. The provisions of Specification 3.0.A are not applicable.

D. CO<sub>2</sub> System

1. The CO<sub>2</sub> Storage Tank shall have a minimum standby level of 50 percent and a minimum pressure of 250 psig.
2. The CO<sub>2</sub> System given in Table 3.12-3 shall be operable.

## C. Sprinkler System

1. At least once per 31 days by verifying that each valve, manual, power-operated, or automatic, in the flow path is in its correct position.
2. At least once per 12 months by cycling each testable valve in the flow path through at least one complete cycle of full travel.
3. At least once per operating cycle:
  - a. A system functional test shall be performed which includes simulated automatic actuation of the system and verifying that the automatic valves in the flow path actuate to their correct positions.
  - b. The sprinkler headers shall be inspected to verify their integrity.
  - c. Each nozzle's spray area shall be inspected to verify no blockage of the spray pattern.
4. At least every other operating cycle, a flow test will be performed to verify that each open head spray nozzle is unobstructed.

D. CO<sub>2</sub> System

1. At least once per 7 days the CO<sub>2</sub> Storage Tank level and pressure will be verified.
2. At least once per 31 days by verifying that each valve, manual, power-operated, or automatic, in the flow path is in the correct position.
3. At least once per operating cycle, the system valves and associated dampers will be verified to actuate automatically and manually. A brief

3. Specifications 3.12.D.1 and 3.12.D.2 above apply when the equipment in the areas given in Table 3.12-3 is required to be operable.
4. With a CO<sub>2</sub> System inoperable, establish fire inspection with backup fire suppression equipment in unprotected areas within 1 hour, and perform inspection at least hourly.
5. Restore the system to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the cause of inoperability, action taken and the plans and schedule for restoring the system to operable status.
6. The provisions of Specification 3.0.A are not applicable.

#### E. Fire Hose Stations

1. The Fire Hose Stations given in Table 3.12-4 shall be operable at all times when the equipment in the area is required to be operable.
2. With a hose station inoperable route an additional equivalent capacity hose to the unprotected area from an operable hose station within 1 hour.
3. When a hose station becomes inoperable, restore to operable status within 14 days or report to the Commission pursuant to specification 6.6.B.2 within the next 30 days outlining the cause of inoperability and plans for restoring the hose station to operability.
4. The provisions of Specification 3.0.A are not applicable.

#### E. Fire Hose Stations

1. At least once per 31 days, a visual inspection of each fire hose station shall be made to assure all equipment is available at the station.
2. At least once per operating cycle, the hose will be removed for inspection and repacked. Degraded gaskets in the couplings will be replaced.
3. At least once per 3 years, each hose station valve will be partially opened to verify valve operability and no blockage.
4. At least once per 3 years a hydrostatic test will be conducted on each hose at a pressure at least 50 psig above line pressure at that station.

## 3.12 LIMITING CONDITIONS FOR OPERATION

## 4.12 SURVEILLANCE REQUIREMENTS

## F. Penetration Fire Barriers

1. All penetration fire barriers (including fire doors and fire dampers) protecting safety related areas shall be intact, except as stated in specification 3.12.F.2 below.
2. With one or more of the required penetration fire barriers not intact, establish a continuous fire watch on at least one side of the affected penetration within 1 hour when the area on either side of the affected penetration contains equipment required to be operable.
3. The provisions of Specification 3.0.A are not applicable.
4. Restore the non-functional fire barrier penetrations to operable status within 7 days or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2. within the next 30 days outlining the cause of inoperability, action taken and the plans and schedule for restoring the penetration fire barriers to operable status.

G. See 3.12.B.

## F. Penetration Fire Barriers

1. Each of the required penetration fire barriers shall be verified to be intact by a visual inspection:
  - a. At least once per 18 months, and
  - b. Prior to declaring a penetration fire barrier intact following repairs or maintenance.

## G. Fire Pump Diesel Engine

1. The fire pump diesel engine shall be demonstrated OPERABLE:
  - a. At least once per 31 days by verifying:
    - 1) The fuel storage day tank contains at least 150 gallons of fuel, and
    - 2) The diesel starts for ambient conditions and operates for at least 30 minutes.
    - 3) The fuel transfer pump starts and transfers fuel from the storage tank to the day tank.
  - b. At least once per 92 days a sample of diesel fuel shall be checked for viscosity, water and sediment. The procedure used shall be consistent with existing station procedures used to check diesel fuel in the main storage tanks.

## 3.12 LIMITING CONDITIONS FOR OPERATION

## 4.12 SURVEILLANCE REQUIREMENTS

c. At least once per 18 months, by:

- 1) Subjecting the diesel to an inspection in accordance with procedures prepared in conjunction with its manufacturer's recommendations for the class of service, and
- 2) Verifying the diesel starts from ambient conditions on the auto-start signal and operates for  $\geq 30$  minutes while loaded with the fire pump.

2. The fire pump diesel engine batteries 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 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 anti-corrosion material.

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## 3.12 LIMITING CONDITIONS FOR OPERATION

## H. Halon System

1. The following Halon system shall be OPERABLE with the storage tanks having at least 95% of full charge weight and 90% of full charge pressure.

- a. Auxiliary Electrical Equipment Room

2. With one or more of the above required Halon systems inoperable, establish a continuous fire watch with backup fire suppression equipment for the unprotected area(s) within 1 hour; restore the system to OPERABLE status within 14 days or, prepare and submit a report to the Commission pursuant to Specification 6.6.F 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.

## 4.12 SURVEILLANCE REQUIREMENTS

## H. Halon System

1. At least once per 31 days, verify that each valve in the flow path is in the correct position.
2. At least once per 6 months, the Halon storage tank weight and pressure will be verified.
3. At least once per operating cycle, the system, including associated ventilation dampers, will be verified to actuate manually and automatically. A flow test shall be made through headers and nozzles to assure no blockage.

Bases: Fire Protection Systems

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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 inspections in the affected areas is required to provide detection capability until the inoperable instrumentation is returned to service.

The operability of the fire suppression systems ensures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, sprinklers, CO<sub>2</sub> systems, Halon system, and fire hose stations, and is adequate to minimize potential damage to safety related equipment, and is a major element in the facility fire protection program.

In the event that portions of the fire suppression system are inoperable, alternate backup fire fighting equipment is required to be made available in the affected areas until the affected equipment can be restored to service.

A fire suppression water system shall consist of a water source, pumps, and distribution piping with associated valves. Such valves shall include sectional control valves, and the first valve ahead of the water flow alarm device on each sprinkler or hose standpipe riser.

In the event that 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 24-hour report of 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.

The functional integrity of the penetration fire barriers ensures that fires will be confined or adequately retarded from spreading to adjacent portions of the facility. This design feature minimizes the possibility of a single fire rapidly involving several areas of the facility prior to detection and extinguishment. The penetration fire barriers are a passive element in the facility fire protection program and are subject to periodic inspections.

During periods of time when the barriers are not functional, a fire watch is required to be maintained in the vicinity of the affected barrier until the barrier is restored to functional status.

FIRE DETECTION INSTRUMENTS

<u>INSTRUMENT LOCATION</u>	<u>MINIMUM INSTRUMENTS OPERABLE</u>
1. Main Control Room 34 Smoke Detectors	24
2. Unit 2/3 Aux. Elect. Equip. Room 12 Smoke Detectors	8
3. Unit 2/3 Computer Room 8 Smoke Detectors	6
4. Unit 2 Battery Room 10 Smoke Detectors	7
5. Unit 2 Turb Bldg. 480v MCC 17 Smoke Detectors	12
6. Unit 2 Turb Bldg. 4KV Switchgear 10 Smoke Detectors	7
7. Unit 2/3 Diesel Generator Area 4 Heat Detectors	3
8. Unit 2 Diesel Generator Area 3 Heat Detectors	2
9. Unit 2 Rx Bldg. 480v MCC (570') 3 Smoke Detectors	2
10. Unit 2 Rx Bldg. 480v MCC (517') 7 Smoke Detectors	5
11. Unit 2 Rx Bldg. 4KV Switchgear 4 Smoke Detectors	3
12. Unit 2 Standby Liquid Control Area 1 Smoke Detector	1

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## SPRINKLER SYSTEMS

1. Unit 2 Emergency Diesel Oil Day Tank
2. Unit 2/3 Turbine Mezzanine 538' Elevation
3. Unit 2/3 Emergency Diesel Oil Day Tank
4. Unit 2 Reactor Feed Pump Area
5. Unit 2 Hydrogen Seal Oil Area
6. Unit 2 Condensate Feed Pump Area
7. Unit 2 HPCI Area
8. Unit 2 Turbine Building East Mezzanine Area
9. Unit 2 EHC Area
10. 2/3 Fire Pump Area
11. Unit 2 Trackway
12. Unit 2 Instrument Air Compressor Area

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TABLE 3.12-3

CO<sub>2</sub> SYSTEMS

1. Unit 2 Emergency Diesel Generator
2. Unit 2/3 Emergency Diesel Generator

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TABLE 3.12-4

FIRE HOSE STATIONS

<u>NO.</u>	<u>LOCATION</u>	<u>NO.</u>	<u>LOCATION</u>
F21	Cribhouse - 517-ft., by Bus 20	F62	Reactor Building - 545-ft., North Wall Near Elevator
F54	Reactor Building - 589-ft., North East Wall at Elevator	F63	Reactor Building - 545-ft., South Wall at RBCCW Heat Exchanger
F55	Reactor Building - 589-ft., South of Standby Liquid Tank	F64	Reactor Building - 545-ft., South West Stairway
F56	Reactor Building - 589-ft., South East of Isolation Condenser	F65	Reactor Building - 545-ft., North of Bus 23 :
F57	Reactor Building - 589-ft., South West Stairway	F66	Reactor Building - 517-ft., at Elevator
F58	Reactor Building - 570-ft., North Wall at Elevator	F67	Reactor Building - 517-ft., South East Wall
F59	Reactor Building - 570-ft., Across from Cleanup Demineralizer P.C. Tank	F68	Reactor Building - 517-ft., South East Stairway
F60	Reactor Building - 570-ft., C.R.D. Repair Room	F73	Reactor Building - 476-ft., 2B LPCI Pump
F61	Reactor Building - 570-ft., West Wall Near RBCCW Tank	F74	Reactor Building - 476-ft., 2C Core Spray Pump
F61A	Reactor Building - 570-ft., by South Stairs	F80A	Turbine Building - 549-ft., North Wall Unit 2 Battery Room
		F80B	Turbine Building - 549-ft., Outside of Passenger Elevator

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TABLE 3.12-4

FIRE HOSE STATIONS

<u>NO.</u>	<u>LOCATION</u>	<u>NO.</u>	<u>LOCATION</u>
F82	Turbine Building - 538-ft., Stator Cooling Pump		
F82A	Turbine Building - 538-ft., East of Trackway Equipment Hatch		
F82B	Turbine Building - 534-ft., Across from Switchgear 23 and 24		
F84	Turbine Building - 534-ft., East of Standby Gas System		
F85	Turbine Building - 517-ft., Near U-2 Transformer Valve		
F86	Turbine Building - 517-ft., at U-2 Emergency Diesel		
F87	Turbine Building - 517-ft., Across from 2G RFP West Walk		
F88	Turbine Building - 495-ft., at C.R.D. Pumps		
F89	Turbine Building - 469-ft., Across from 2D Condensate Pump		

UNITED STATES NUCLEAR REGULATORY COMMISSIONDOCKET NOS. 50-237 AND 50-249COMMONWEALTH EDISON COMPANYNOTICE OF ISSUANCE OF AMENDMENTS TO OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued Amendment No. <sup>69</sup> to Provisional Operating License No. DPR-19 and Amendment No. <sup>61</sup> to Facility Operating License No. DPR-25, to Commonwealth Edison Company, which revised the Technical Specifications for operation of the Dresden Nuclear Power Station, Unit Nos. 2 and 3, respectively, located in Grundy County, Illinois. The amendments are effective as of their date of issuance.

The amendments modify the Technical Specifications to incorporate Limiting Conditions for Operation and Surveillance Requirements related to modifications to the fire protection system required by the March 22, 1978 Safety Evaluation Report by the Commission's staff.

The application for amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was not required since the amendments do not involve a significant hazards consideration.

The Commission has determined that the issuance of these amendments will not result in any significant environmental impact and that pursuant to 10 CFR Section 51.5(d)(4) and environmental impact statement or negative declaration and environmental impact appraisal need not be prepared in connection with issuance of these amendments.

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For further details with respect to this action, see (1) the application for amendments dated October 21, 1980, and its supplements dated June 12, 1981 and February 17, 1982, (2) Amendment No. 69 to Provisional Operating License No. DPR-19 and Amendment No. 61 to Facility Operating License No. DPR-25, and (3) the Commission's related Safety Evaluation published on March 22, 1978. All of these items are available for inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C., and at the Morris Public Library, 604 Liberty Street, Morris, Illinois. A copy of items (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director Division of Licensing.

Dated at Bethesda, Maryland, this 12th day of April, 1982.

FOR THE NUCLEAR REGULATORY COMMISSION

  
Dennis M. Crutchfield, Chief  
Operating Reactors Branch #5  
Division of Licensing