



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-10

DRESDEN STATION UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 34
License No. DPR-2

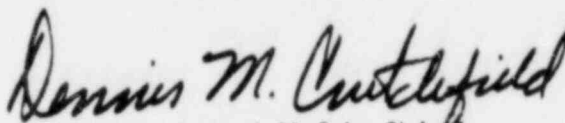
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Commonwealth Edison Company (the licensee) dated May 30, 1980, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules 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 3.B of Facility License No. DPR-2 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 34, 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

A handwritten signature in black ink that reads "Dennis M. Crutchfield". The signature is written in a cursive style with a large initial 'D'.

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 25, 1981

ATTACHMENT TO LICENSE AMENDMENT NO. 34

FACILITY OPERATING LICENSE NO. DPR-2

DOCKET NO. 50-10

Revise the Appendix "A" Technical Specifications as follows:

<u>Remove</u>	<u>Replace</u>
i	i
4	4
--	19a
--	19b
96	96
122d	122d
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M. Operable - A system, subsystem, train, component, or device shall be operable when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).

N. Operating - Operating means that a system, subsystem, train, component or device is performing its intended functions in its required manner.

O. Operating Cycle - Interval between the end of one refueling outage and the end of the next subsequent refueling outage.

P. Peaking Factor - The ratio of the maximum fuel rod surface heat flux in an assembly to the average surface heat flux of the core.

Q. Primary Containment Integrity - Primary containment integrity means that the sphere is intact and all of the following conditions are satisfied:

1. All manual containment isolation valves on lines connecting to the reactor coolant system or containment which are not required to be open during accident conditions are closed.

2. At least one door in each airlock is closed and sealed.

3. All automatic containment isolation valves are operable or deactivated in the isolated position.

4. All blind flanges and manways are closed.

R. Protective Instrumentation Definitions

1. Instrument channel - An instrument channel means an arrangement of a sensor and auxiliary equipment required to generate and transmit to a trip system a single trip signal related to the plant parameter monitored by that instrument channel.

2. Trip System - A trip system means an arrangement of instrument channel trip signals and auxiliary equipment required to initiate action to accomplish a protective trip function. A trip system may require one or more instrument channel trip signals related to one or more plant parameters in order to initiate trip system action.

3.12 LIMITING CONDITIONS FOR OPERATION

3.12 FIRE PROTECTION SYSTEMSApplicability:

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 SURVEILLANCE REQUIREMENTS

4.12 FIRE PROTECTION SYSTEMSApplicability:

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 3.12-1 shall be demonstrated OPERABLE at least every 6 months by a channel functional test.
2. All nonsupervised circuits shall be demonstrated operable once per month.

12 LIMITING CONDITIONS FOR OPERATION

DPR-2

4.12 SURVEILLANCE REQUIREMENTS

C. CO₂ System

1. The CO₂ Storage Tank shall have a minimum Standby level of 50 percent and a minimum pressure of 250 psig.
2. The CO₂ Systems given in Table 3.12-3 shall be operable.
3. Specifications 3.12.C.1 and 3.12.C.2 above apply when the equipment in the areas given in Table 3.12-3 is required to be operable.
4. With a CO₂ System inoperable, establish fire surveillance with backup fire suppression equipment in unprotected areas within 1 hour and perform inspections in the area at least twice per shift.
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.

D. 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.

C. CO₂ System

1. At least once per 7 days the CO₂ Storage Tank level and pressure will be verified.
2. 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 each nozzle.

D. 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.

3.12 LIMITING CONDITIONS FOR OPERATION

DPR-2 4.12 SURVEILLANCE REQUIREMENTS

E. Penetration Fire Barriers

1. All penetration fire barriers protecting safety related areas shall be intact, except as stated in specification 3.12.E.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.

F. Fire Pump Diesel Engine

1. See 3.12.B

4. At least once per 3 years a hydrostatic test will be conducted at 50 psig above line pressure at that station.

E. 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.

F. 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 45 gallons of fuel, and
 - 2) The diesel starts from ambient conditions and operates for at least 20 minutes.
 - b. At least once per month, a sample of diesel fuel shall be checked for quality. The procedures will be consistent with existing station procedures used to check diesel fuel in the main storage tanks.
 - c. At least once per 18 months, during shutdown, by:

3.8 LIMITING CONDITIONS FOR OPERATION

4.8 SURVEILLANCE REQUIREMENT

estimated annual average release rate of iodine 131 and particulates with half lives greater than eight days is likely to exceed 2.4×10^{-7} curies/second, the licensee shall:

- (a) make an investigation to identify the causes of such release rates;
 - (b) define and initiate a program of action to reduce such release rates to a level consistent with Specification 3.8.A.3;
 - (c) report these actions to the Director, Division of Operating Reactors within 30 days of the end of the calendar quarter.
4. An off-gas discharge rate averaged over any 48 hour period exceeding 0.112 curies/second of gross activity or 4.8×10^{-7} curies/second of iodine 131 and particulates with half lives greater than eight days shall be reported in accordance with Section 6.6.B.1 of these Specifications.
5. If the limits of Specification 3.8.A.2.a and 3.8.A.2.b are exceeded, an orderly load reduction of the unit(s) causing these limits to be exceeded shall be initiated immediately to reduce the release below the limits of Specification 3.8.A.2.a and 3.8.A.2.b.
6. The provisions of Specification 3.0.A are not applicable.

Bases:

- 3.0.A. This specification delineates the action to be taken for circumstances not directly provided for in the Limiting Condition for Operation statements and whose occurrence would violate the intent of the specification.
- 3.0.B. This specification delineates what additional conditions must be satisfied to permit operation to continue, consistent with the Limiting Condition for Operation statements for power sources, when a normal or emergency power source is not operable. Power sources are defined as AC Auxiliary Electrical Systems as defined in Section 3.9.A.1, 3.9.A.2, and 3.9.A.3. It specifically prohibits operation when one division is inoperable because its normal or emergency power source is inoperable and a system, subsystem, train, component or device in another division is inoperable for another reason.

The provisions of this specification permit the Limiting Condition for Operation statements associated with individual systems, subsystems, trains, components or devices to be consistent with the Limiting Condition for Operation statements of the associated electrical power source. It allows operation to be governed by the time limits of action statements associated with the Limiting Condition for Operation for the normal or emergency power source, not the individual action statements for each system, subsystem, train, component, or device that is determined to be inoperable solely because of the inoperability of its normal or emergency power source.

3.0 LIMITING CONDITION FOR OPERATION

3.0 Limiting Condition for Operation

- A. In the event a Limiting Condition for Operation cannot be satisfied because of circumstances in excess of those addressed in the specification, the unit shall be placed in at least hot shutdown within 12 hours and in cold shut down within the following 24 hours unless corrective measures are completed that satisfy the Limiting Conditions for Operation. Exceptions to these requirements are stated in the individual specifications.
- B. When a system, subsystem, train, component, or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered operable for the purpose of satisfying the requirements of its applicable Limiting Condition for Operations, provided: (1) its corresponding normal or emergency power source is operable; and (2) all of its redundant system(s), subsystem(s), train(s), component(s), and device(s) in the other division are operable, or likewise satisfy the requirements of this specification. Unless both conditions (1) and (2) are satisfied, the unit shall be placed in at least hot shutdown within 12 hours, and in at least cold shutdown within the following 24 hours.
- C. Specifications 3.0.A and 3.0.B are not applicable in refueling or cold shutdown.



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

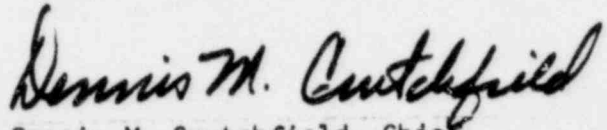
Amendment No. 62
License No. DPR-19

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Commonwealth Edison Company (the licensee) dated May 30, 1980, 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 3.B of Provisional Operating License No. DPR-19 is hereby amended to read as follows:
 - B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 62, 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

A handwritten signature in black ink that reads "Dennis M. Crutchfield". The signature is written in a cursive style with a large, prominent initial "D".

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

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 25, 1981

ATTACHMENT TO LICENSE AMENDMENT NO. 62
PROVISIONAL OPERATING LICENSE NO. DPR-19
DOCKET NO. 50-237

Revise the Appendix "A" Technical Specifications as follows:

<u>Remove</u>	<u>Replace</u>
i	i
2	2
--	21a
--	21b
135	135
156d	156d
156g	156g
156h	156h
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3.0 LIMITING CONDITION FOR OPERATION	21a

- I. Limiting Conditions for Operation (LCO) - The limiting conditions for operation specify the minimum acceptable levels of system performance necessary to assure safe startup and operation of the facility. When these conditions are met, the plant can be operated safely and abnormal situations can be safely controlled.
- J. Limiting Safety System Setting (LSSS) - The limiting safety system settings are settings on instrumentation which initiate the automatic protective action at a level such that the safety limits will not be exceeded. The region between the safety limit and these settings represents margin with normal operation lying below these settings. The margin has been established so that with proper operation of the instrumentation the safety limits will never be exceeded.
- K. Fraction of Limiting Power Density (FLPD) - The fraction of limiting power density is the ratio of the Linear Heat Generation Rate (LHGR) existing at a given location to the design LHGR for that bundle type.
- L. Logic System Function Test - A logic system functional test means a test of all relays and contacts of a logic circuit from sensor to actuated device to insure all components are operable per design intent. Where possible, action will go to completion, i.e., pumps will be started and valves opened.
- M. Minimum Critical Power Ratio (MCPR) - The minimum in-core critical power ratio corresponding to the most limiting fuel assembly in the core.
- N. Mode - The reactor mode is that which is established by the mode-selector-switch.
- O. Operable - A system, subsystem, train, component, or device shall be operable when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, control, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).
- P. Operating - Operating means that a system, subsystem, train, component or device is performing its intended functions in its required manner.
- Q. Operating Cycle - Interval between the end of one refueling outage and the end of the next subsequent refueling outage.
- R. Primary Containment Integrity - Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:
1. All manual containment isolation valves on lines connecting to the reactor coolant system or containment which are not required to be open during accident conditions are closed.
 2. At least one door in each airlock is closed and sealed.
 3. All automatic containment isolation valves are operable or deactivated in the isolated position.
 4. All blind flanges and manways are closed.
- S. Protective Instrumentation Definitions
1. Instrument Channel - An instrument channel means an arrangement of a sensor and auxiliary equipment required to generate and transmit to a trip system a single trip signal related to the plant parameter monitored by that instrument channel.

3.0 LIMITING CONDITION FOR OPERATION

3.0 Limiting Condition for Operation

- A. In the event a Limiting Condition for Operation cannot be satisfied because of circumstances in excess of those addressed in the specification, the unit shall be placed in at least hot shutdown within 12 hours and in cold shutdown within the following 24 hours unless corrective measures are completed that satisfy the Limiting Conditions for Operation. Exceptions to these requirements are stated in the individual specifications.
- B. When a system, subsystem, train, component, or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered operable for the purpose of satisfying the requirements of its applicable Limiting Condition for Operations, provided: (1) its corresponding normal or emergency power source is operable; and (2) all of its redundant system(s), subsystem(s), train(s), component(s), and device(s) in the other division are operable, or likewise satisfy the requirements of this specification. Unless both conditions (1) and (2) are satisfied, the unit shall be placed in at least hot shutdown within 12 hours, and in at least cold shutdown within the following 24 hours.
- C. Specifications 3.0.A and 3.0.B are not applicable in refueling or cold shutdown.

Bases:

- 3.0.A. This specification delineates the action to be taken for circumstances not directly provided for in the Limiting Condition for Operation statements and whose occurrence would violate the intent of the specification.
- 3.0.B. This specification delineates what additional conditions must be satisfied to permit operation to continue, consistent with the Limiting Condition for Operation statements for power sources, when a normal or emergency power source is not operable. Power sources are defined as AC Auxiliary Electrical Systems as defined in Section 3.9.A.1, 3.9.A.2, and 3.9.A.3. It specifically prohibits operation when one division is inoperable because its normal or emergency power source is inoperable and a system, subsystem, train, component or device in another division is inoperable for another reason.

The provisions of this specification permit the Limiting Condition for Operation statements associated with individual systems, subsystems, trains, components or devices to be consistent with the Limiting Condition for Operation statements of the associated electrical power source. It allows operation to be governed by the time limits of action statements associated with the Limiting Condition for Operation for the normal or emergency power source, not the individual action statements for each system, subsystem, train, component, or device that is determined to be inoperable solely because of the inoperability of its normal or emergency power source.

3.8 LIMITING CONDITION FOR OPERATION	4.8 SURVEILLANCE REQUIREMENT
<p data-bbox="366 321 995 609">3. If the limits of 3.8.A.2.a, or 3.8.A.2.c are exceeded, an orderly load reduction of the unit(s) causing these limits to be exceeded shall be initiated immediately to reduce the releases below the limits of 3.8.A.2.a or 3.8.A.2.c. The provisions of Specification 3.0.A are not applicable.</p> <p data-bbox="336 760 719 787">B. Mechanical Vacuum Pump</p> <ol data-bbox="387 812 995 1036" style="list-style-type: none"> 1. The mechanical vacuum pump shall be capable of being isolated and secured on a signal of high radioactivity, whenever the main steam isolation valves are open. 2. If the limits of 3.8.B are not met following a routine surveillance check, orderly shut-down shall be initiated. <p data-bbox="344 1068 600 1096">C. Liquid Effluents</p> <ol data-bbox="400 1117 1010 1263" style="list-style-type: none"> 1. Radioactive liquid released from the facility shall be continuously monitored. To accomplish this either the radiation monitor or the discharge line on the discharge canal sampler shall be operable. 	<p data-bbox="1123 743 1515 771">B. Mechanical Vacuum Pump</p> <p data-bbox="1187 795 1825 885">At least once during each operating cycle verify automatic securing and isolation of the mechanical vacuum pump.</p> <p data-bbox="1132 1052 1400 1079">C. Liquid Effluents</p> <ol data-bbox="1195 1101 1783 1214" style="list-style-type: none"> 1. The radiation monitor shall be calibrated quarterly and functionally tested monthly. The operability of the sampler shall be verified on a daily basis.

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 3.0.4 are not applicable.

156d

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 3.12-1 shall be demonstrated OPERABLE at least every 6 months by a channel functional test.
2. All nonsupervised circuits shall be demonstrated operable once per month.

3.12 LIMITING CONDITIONS FOR OPERATION

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 surveillance 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, continuous surveillance is to be performed.
 - b. In the Unit 2 emergency diesel oil day tank area, Unit 2/3 emergency diesel oil day tank area, Unit 2 reactor feed pump area, perform surveillance twice per shift.
3. Restore the system to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.G.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. CO₂ System

1. The CO₂ Storage Tank shall have a minimum standby level of 50 percent and a minimum pressure of 250 psig.
2. The CO₂ System given in Table 3.12-3 shall be operable.
3. Specifications 3.12.F.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.

4.12 SURVEILLANCE REQUIREMENTS

C. Sprinkler Systems

1. 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.
- a. The sprinkler headers shall be inspected to verify their integrity.
- b. Each nozzle shall be inspected to verify no blockage.

2. At least every other operating cycle, a flow test will be performed to verify that each open head sprinkler nozzle is unobstructed.

D. CO₂ System

1. At least once per 7 days the CO₂ Storage Tank level and pressure will be verified.
2. 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 each nozzle.

3.12 LIMITING CONDITIONS FOR OPERATION

4. With a CO₂ System inoperable, establish fire surveillance with backup fire suppression equipment in unprotected areas within 1 hour, and perform surveillance at least twice per shift.
5. Restore the system to operable status within 14 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.P.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 6.6.8.2 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.

4.12 SURVEILLANCE REQUIREMENTS

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.

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.

3.12 ...ATING CONDITIONS FOR OPERATION

4.12 SURVEILLANCE REQUIREMENTS

F. Penetration Fire Barriers

1. All penetration fire barriers 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.

G. See 3.12.8

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 from ambient conditions and operates for at least 20 minutes.
 - b. At least once per month, a sample of diesel fuel shall be checked for quality. The procedure used shall be consistent with existing station procedures used to check diesel fuel in the main storage tanks.
 - c. At least once per 18 months, during shutdown, 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 > 20 minutes while loaded with the fire pump.



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. 53
License No. DPR-25

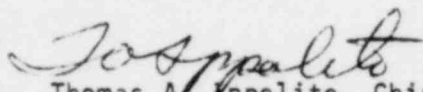
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Commonwealth Edison Company (the licensee) dated May 30, 1980, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules 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 3.B of Facility License No. DPR-25 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 53, 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


Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 25, 1981

ATTACHMENT TO LICENSE AMENDMENT NO. 53

FACILITY OPERATING LICENSE NO. DPR-25

DOCKET NO. 50-249

Revise the Appendix "A" Technical Specifications as follows:

Remove

Replace

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2

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21a

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21b

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- I. Limiting Conditions for Operation (LCO) - The limiting conditions for operation specify the minimum acceptable levels of system performance necessary to assure safe startup and operation of the facility. When these conditions are met, the plant can be operated safely and abnormal situations can be safely controlled.
- J. Limiting Safety System Setting (LSSS) - The limiting safety system settings are settings on instrumentation which initiate the automatic protective action at a level such that the safety limits will not be exceeded. The region between the safety limit and these settings represents margin with normal operation lying below these settings. The margin has been established so that with proper operation of the instrumentation the safety limits will never be exceeded.
- K. Fraction of Limiting Power Density (FLPD) - The fraction of limiting power density is the ratio of the Linear Heat Generation Rate (LHGR) existing at a given location to the design LHGR for that bundle type.
- L. Logic System Function Test - A logic system functional test means a test of all relays and contacts of a logic circuit from sensor to activated device to insure all components are operable per design intent. Where possible, action will go to completion, i.e., pumps will be started and valves opened.
- M. Minimum Critical Power Ratio (MCPR) - The minimum in-core critical power ratio corresponding to the most limiting fuel assembly in the core.
- N. Mode - The reactor mode is that which is established by the mode-selector-switch.
- O. Operable - A system, subsystem, train, component, or device shall be operable when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).
- P. Operating - Operating means that a system, subsystem, train, component or device is performing its intended functions in its required manner.
- Q. Operating Cycle - Interval between the end of one refueling outage and the end of the next subsequent refueling outage.
- R. Primary Containment Integrity - Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:
1. All manual containment isolation valves on lines connecting to the reactor coolant system or containment which are not required to be open during accident conditions are closed.
 2. At least one door in each airlock is closed and sealed.
 3. All automatic containment isolation valves are operable or deactivated in the isolated position.
 4. All blind flanges and manways are closed.
- S. Protective Instrumentation Definitions
1. Instrument Channel - An instrument channel means an arrangement of a sensor and auxiliary equipment required to generate and transmit to a trip system a single trip signal related to the plant parameter monitored by that instrument channel.

3.0 LIMITING CONDITION FOR OPERATION

3.0 Limiting Condition for Operation

- A. In the event a Limiting Condition for Operation cannot be satisfied because of circumstances in excess of those addressed in the specification, the unit shall be placed in at least hot shutdown within 12 hours and in cold shutdown within the following 24 hours unless corrective measures are completed that satisfy the Limiting Conditions for Operation. Exceptions to these requirements are stated in the individual specifications.
- B. When a system, subsystem, train, component, or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered operable for the purpose of satisfying the requirements of its applicable Limiting Condition for Operations, provided: (1) its corresponding normal or emergency power source is operable; and (2) all of its redundant system(s), subsystem(s), train(s), component(s), and device(s) in the other division are operable, or likewise satisfy the requirements of this specification. Unless both conditions (1) and (2) are satisfied, the unit shall be placed in at least hot shutdown within 12 hours, and in at least cold shutdown within the following 24 hours.
- C. Specifications 3.0.A and 3.0.B are not applicable in refueling or cold shutdown.

Bases:

- 3.0.A. This specification delineates the action to be taken for circumstances not directly provided for in the Limiting Condition for Operation statements and whose occurrence would violate the intent of the specification.
- 3.0.B. This specification delineates what additional conditions must be satisfied to permit operation to continue, consistent with the Limiting Condition for Operation statements for power sources, when a normal or emergency power source is not operable. Power sources are defined as AC Auxiliary Electrical Systems as defined in Section 3.9.A.1, 3.9.A.2, and 3.9.A.3. It specifically prohibits operation when one division is inoperable because its normal or emergency power source is inoperable and a system, subsystem, train, component or device in another division is inoperable for another reason.

The provisions of this specification permit the Limiting Condition for Operation statements associated with individual systems, subsystems, trains, components or devices to be consistent with the Limiting Condition for Operation statements of the associated electrical power source. It allows operation to be governed by the time limits of action statements associated with the Limiting Condition for Operation for the normal or emergency power source, not the individual action statements for each system, subsystem, train, component, or device that is determined to be inoperable solely because of the inoperability of its normal or emergency power source.

3.8 LIMITING CONDITION FOR OPERATION

3. If the limits of 3.8.A.2.a, or 3.8.A.2.c are exceeded, an orderly load reduction of the unit(s) causing these limits to be exceeded shall be initiated immediately to reduce the releases below the limits of 3.8.A.2.a or 3.8.A.2.c. The provisions of Specification 3.0.A are not applicable.

B. Mechanical Vacuum Pump

1. The mechanical vacuum pump shall be capable of being isolated and secured on a signal of high radioactivity, whenever the main steam isolation valves are open.
2. If the limits of 3.3.B are not met following a routine surveillance check, orderly shut-down shall be initiated.

C. Liquid Effluents

1. Radioactive liquid released from the facility shall be continuously monitored. To accomplish this either the radiation monitor or the discharge line on the discharge canal sampler shall be operable.

4.8 SURVEILLANCE REQUIREMENT

B. Mechanical Vacuum Pump

At least once during each operating cycle verify automatic securing and isolation of the mechanical vacuum pump.

C. Liquid Effluents

1. The radiation monitor shall be calibrated quarterly and functionally tested monthly. The operability of the sampler shall be verified on a daily basis.

3.12 FIRE PROTECTION SYSTEMSApplicability:

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 SYSTEMSApplicability:

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 3.12-1 shall be demonstrated OPERABLE at least every 6 months by a channel functional test.
2. All nonsupervised circuits shall be demonstrated operable once per month.

3.12 LIMITING CONDITIONS FOR OPERATION

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 surveillance 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, continuous surveillance is to be performed.
 - b. In the Unit 2 emergency diesel oil day tank area, Unit 2/3 emergency diesel oil day tank area, Unit 2 reactor feed pump area, perform surveillance twice per shift.
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. CO₂ System

1. The CO₂ Storage Tank shall have a minimum standby level of 50 percent and a minimum pressure of 250 psig.
2. The CO₂ System given in Table 3.12-3 shall be operable.
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.

4.12 SURVEILLANCE REQUIREMENTS

C. Sprinkler Systems

1. 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.
- a. The sprinkler headers shall be inspected to verify their integrity.
- b. Each nozzle shall be inspected to verify no blockage.

2. At least every other operating cycle, a flow test will be performed to verify that each open head sprinkler nozzle is unobstructed.

D. CO₂ System

1. At least once per 7 days the CO₂ Storage Tank level and pressure will be verified.
2. 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 each nozzle.

3.12 LIMITING CONDITIONS FOR OPERATION

4. With a CO₂ System inoperable, establish fire surveillance with backup fire suppression equipment in unprotected areas within 1 hour, and perform surveillance at least twice per shift.
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.

4.12 SURVEILLANCE REQUIREMENTS

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.

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.

3.12 LIMITING CONDITIONS FOR OPERATION

4.12 SURVEILLANCE REQUIREMENTS

F. Penetration Fire Barriers

1. All penetration fire barriers 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.

G. See 3.12.B

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 from ambient conditions and operates for at least 20 minutes.
 - b. At least once per month, a sample of diesel fuel shall be checked for quality. The procedure used shall be consistent with existing station procedures used to check diesel fuel in the main storage tanks.
 - c. At least once per 18 months, during shutdown, 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 > 20 minutes while loaded with the fire pump.



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

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

DOCKET NO. 50-254

QUAD CITIES UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 72
License No. DPR-29

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Commonwealth Edison Company (the licensee) dated May 30, 1980, 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 3.B of Facility License No. DPR-29 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 72, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

2. With one or more penetration fire barriers not intact, establish a continuous fire watch on at least one side of the affected penetration within 1 hour if 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.

G. Fire Pump Diesel Engine

1. The Fire Pump Diesel Engine shall be operable as specified in 3.12.B.1.a and 3.12.B.1.b.

- a. ~~At least~~ once per operating cycle, and
- b. ~~Prior to~~ declaring a penetration fire barrier functional following repairs or maintenance.

G. Fire Pump Diesel Engine

1. The fire pump diesel starting 24-volt 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 ≥ 24 volts.
 - b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of 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 anti-corrosion material.
2. 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 250 gallons of fuel, and
 - (2) The diesel starts from ambient conditions and operates for at least 20 minutes.

D. CO₂ Systems

1. The CO₂ Storage Tank shall have a minimum stand by level of 50 percent and a minimum pressure of 250 psig.
2. The CO₂ Systems given in Table 3.12-3 shall be operable.
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 CO₂ System inoperable, establish backup fire suppression equipment for the unprotected area(s) within 1 hour and inspect the area twice per shift.
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, the action taken, and the plans and schedule for restoring the system to operable status.
6. If actuated, the storage tank will be restored to greater than the minimum level within 48 hours.
7. 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 areas protected by the fire hose 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. The provisions of Specification 3.0.A are not applicable.

F. Penetration Fire Barriers

1. All penetration fire barriers protecting safety related areas shall be intact except as stated in Specification 3.12.F.2.

D. CO₂ Systems

1. At least once per 7 days the CO₂ Storage Tank level and pressure will be verified.
2. 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 each nozzle.

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 racked. 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 psi greater than the maximum pressure available at the hose station.

F. Penetration Fire Barriers

1. Each of the penetration fire barrier shall be verified to be intact by visual inspection.

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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 each pump develops at least 2000 gpm at a system head of 123 psig.
 - (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
- f. At least once per 3 years by performing flow tests of the system in accordance with Chapter 5, Section II, NFPA Fire Protection Handbook.

C. Sprinkler Systems

1. The sprinkler systems given in Table 3.12-2 shall be operable at all times when equipment in the areas spray/sprinkler protected is required to be operable.
2. With a sprinkler system inoperable, establish back up fire suppression equipment and inspect the area twice per shift.
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, the action taken, and the plans for restoring the system to operable status.
4. The provisions of Specification 5.0.A are not applicable.

C. Sprinkler Systems

1. At least once per year by cycling each testable valve in the flow path through at least one complete cycle of full travel.
2. 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 shall be inspected to verify no blockage.
3. At least once per 3 years by performing an air flow test through each open head spray/sprinkler header and verifying each open head spray/sprinkler nozzle is unobstructed.

3.12/4.12-3

3.12/4.12 FIRE PROTECTION SYSTEMS

LIMITING CONDITIONS FOR OPERATIONS

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.

SURVEILLANCE REQUIREMENTS

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.

SPECIFICATIONS

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 affected zone, 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, the action taken, and the plans for restoring the instrument(s) to operable status.
3. The provisions of Specification 3.0.A are not applicable.

A. Fire Detection Instrumentation

1. Each of the fire detection instruments given by Table 3.12-1 shall be demonstrated operable at least once per 6 months by a channel functional test.
2. All non-supervised circuits shall be demonstrated operable once per month.

- b. 1) The average release rate per site of all radioiodines and radioactive materials in particulate form with half-lives greater than 8 days during any calendar quarter shall be such that:

$$13 \{ 7.3 \times 10^5 Q_V + 2.6 \times 10^5 Q_C \} \leq 1$$

- 2) The amount of Iodine-131 released during any calendar quarter shall not exceed 2 Ci/reactor.

- c. 1) The average release rate per site of all radioiodines and radioactive materials in particulate form with half-lives greater than 8 days during any period of 12 consecutive months shall be such that:

$$25 \{ 7.3 \times 10^5 Q_V + 2.6 \times 10^5 Q_C \} \leq 1$$

- 2) The amount of Iodine-131 released during any period of 12 consecutive months shall not exceed 4 Ci/reactor.

- d. The provisions of Specification 3.0.A are not applicable.

3. a. The design objectives stipulate that the annual total quantity of all radioiodines and radioactive material in particulate forms with half-lives greater than 8 days, above background, from all reactors at a site should not result in an annual dose to any organ of an individual in an unrestricted area from all pathways of exposure in excess of 15 mrem and that the annual total quantity of Iodine-131 discharged from each reactor at a site should not exceed 1 Ci.

- b. Should any of the conditions or 3.8.B.3.c(1) or (2) listed below exist, the licensee shall make an investigation to identify the causes of the release rates, define and initiate a program of action to reduce the release rates to the design objective levels. The licensee shall report these actions to the NRC within 30 days from the end of the quarter during which the releases occurred. The provisions of Specification 3.0.A are not applicable.

half lives greater than 8 days released weekly. An analysis shall also be performed of a sample at least quarterly for the radionuclides I-133 and I-135.

For release of radioactive material in particulate form, a sample shall be drawn continuously through a particulate filter. Measurements shall be made on these filters to determine the quantities of nuclides in particulate form with half lives greater than 8 days that are released to the environment.

The particulate filters shall be changed and analyzed at least weekly for gross beta-particulate radioactivity with half lives greater than 8 days. Monthly, a composite of those filters used during the month shall be prepared. This composite shall be analyzed for the principal gamma-emitting nuclides.

Analysis for Sr-89 and Sr-90 shall be made quarterly. Gross alpha radioactivity shall be determined quarterly.

3. The ventilation stack filters and cartridges shall be counted weekly when the measured release rate of the sum of Iodine-131 and particulates is less than 25% of the release rate given in Specification 3.8.B.2.a; otherwise the ventilation stack filters and cartridges shall be removed and counted daily.

A determination shall be made of the total I-131 and particulates with half lives greater than 8 days released weekly. An analysis sample shall be taken at least quarterly for the radionuclides I-133 and I-135.

For release of radioactive material in particulate form, a sample shall be drawn continuously through a particulate filter. Measurements shall be made on these filters to determine the quantities of nuclides in particulate form with half lives greater than 8 days that are released to the environment.

The particulate filters shall be changed and analyzed at least weekly for gross

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3.0/4.0 BASES

3.0.A

This specification delineates the action to be taken for circumstances not directly provided for in the Limiting Condition for Operation statements and whose occurrence would violate the intent of the specification.

3.0.B

This specification delineates what additional conditions must be satisfied to permit operation to continue, consistent with the Limiting Condition for Operation statements for power sources, when a normal or emergency power source is not OPERABLE. It specifically prohibits operation when one division is inoperable because its normal or emergency power source is inoperable and a system, subsystem, train, component, or device in another division is inoperable for another reason. Power sources are defined as AC Auxiliary Electrical Systems as noted in Section 3.9.A.1, 3.9.A.2, and 3.9.A.3.

The provisions of this specification permit the Limiting Condition for Operation statements associated with individual systems, subsystems, trains, components, or devices to be consistent with the Limiting Condition for Operation statements of the associated electrical power source. It allows operation to be governed by the time limits of the action statements associated with the Limiting Condition for Operation for the normal or emergency power source, not the individual action statements for each system, subsystem, train, component, or device that is determined to be inoperable solely because of the inoperability of its normal or emergency power source.

3.0/4.0-3

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- B. When a system, subsystem, train, component, or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided:
1. Its corresponding normal or emergency power source is OPERABLE, and
 2. All of its redundant systems, subsystems, trains, components, and devices in the other division are OPERABLE, or likewise satisfy the requirements of this specification.

Unless both conditions 1. and 2. are satisfied, the unit shall be placed in at least HOT SHUTDOWN within 12 hours and in at least COLD SHUTDOWN within the following 24 hours.

- C. Specifications 3.0.A and 3.0.B are not applicable in refueling or cold shutdown.

3.0/4.0-2

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3.0/4.0 Limiting Conditions for Operation
(General)

Applicability:

Applies to systems, subsystems, trains, components, or devices required to be operable.

Objective:

To assure that no set of equipment outages would be allowed to persist that would result in the facility being in an unprotected condition.

LIMITING CONDITION FOR OPERATION

- A. In the event a Limiting Condition for Operation cannot be satisfied because of circumstances in excess of those addressed in the specification, the unit shall be placed in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the following 24 hours unless corrective measures are completed that satisfy the Limiting Conditions for Operation.

3.0/4.0-1

- H. **Limiting Conditions for Operation (LCO)** - The limiting conditions for operation specify the minimum acceptable levels of system performance necessary to assure safe startup and operation of the facility. When these conditions are met, the plant can be operated safely and abnormal situations can be safely controlled.
- L. **Limiting Safety System Setting (LSSS)** - The limiting safety system settings are settings on instrumentation which initiate the automatic protective action at a level such that the safety limits will not be exceeded. The region between the safety limit and these settings represents margin, with normal operation lying below these settings. The margin has been established so that with proper operation of the instrumentation, the safety limits will never be exceeded.
- K. **Logic System Functional Test** - A logic system functional test means a test of all relays and contacts of a logic circuit from sensor to activated device to ensure all components are operable per design intent. Where possible, action will go to completion; i.e., pumps will be started and valves opened.
- L. **Modes of Operation** - A reactor mode switch selects the proper interlocking for the operating or shutdown condition of the plant. Following are the modes and interlocks provided:
1. **Shutdown** - In this position, a reactor scram is initiated, power to the control rod drives is removed, and the reactor protection trip systems have been deenergized for 10 seconds prior to permissive for manual reset.
 2. **Refuel** - In this position, interlocks are established so that one control rod only may be withdrawn when flux amplifiers are set at the proper sensitivity level and the refueling crane is not over the reactor. Also, the trips from the turbine control valves, turbine stop valves, main steam isolation valves, and condenser vacuum are bypassed. If the refueling crane is over the reactor, all rods must be fully inserted and none can be withdrawn.
 3. **Startup/Hot Standby** - In this position, the reactor protection scram trips, initiated by condenser low vacuum and main steamline isolation valve closure, are bypassed, the low pressure main steamline isolation valve closure trip is bypassed, and the reactor protection system is energized, with IRM and APRM neutron monitoring system trips and control rod withdrawal interlocks in service.
 4. **Run** - In this position the reactor system pressure is at or above 850 psig, and the reactor protection system is energized, with APRM protection and RMB interlocks in service (excluding the 15% high flux scram).
- M. **Operable** - A system, subsystem, train, component, or device shall be operable when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).
- N. **Operating** - Operating means that a system, subsystem, train, component or device is performing its intended functions in its required manner.
- O. **Operating Cycle** - Interval between the end of one refueling outage for a particular unit and the end of the next subsequent refueling outage for the same unit.
- P. **Primary Containment Integrity** - Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:
1. All manual containment isolation valves on lines connecting to the reactor coolant system or containment which are not required to be open during accident conditions are closed.

TECHNICAL SPECIFICATIONS

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ATTACHMENT TO LICENSE AMENDMENT NO. 72

FACILITY OPERATING LICENSE NO. DPR-29

DOCKET NO. 50-254

Revise the Appendix "A" Technical Specifications as follows:

Remove

i

1.0/2

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3.8/4.8-4

3.12/4.12-1

3.12/4.12-3

3.12/4.12-4

3.12/4.12-5

Replace

i

1.0/2

3.0/4.0-1

3.0/4.0-2

3.0/4.0-3

3.8/4.8-4

3.12/4.12-1

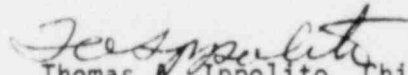
3.12/4.12-3

3.12/4.12-4

3.12/4.12-5

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

FOR THE NUCLEAR REGULATORY COMMISSION


Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 25, 1981



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

COMMONWEALTH EDISON COMPANY

AND

IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

DOCKET NO. 50-265

QUAD CITIES UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 65
License No. DPR-30

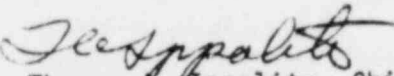
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by the Commonwealth Edison Company (the licensee) dated May 30, 1980, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules 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 3.B of Facility License No. DPR-30 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 65, 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


Thomas A. Ippolito, Chief
Operating Reactors Branch #2
Division of Licensing

Attachment:
Changes to the Technical
Specifications

Date of Issuance: June 25, 1981

ATTACHMENT TO LICENSE AMENDMENT NO. 65

FACILITY OPERATING LICENSE NO. DPR-30

DOCKET NO. 50-265

Revise the Appendix "A" Technical Specifications as follows:

<u>Remove</u>	<u>Replace</u>
i	i
1.0-2	1.0-2
--	3.0/4.0-1
--	3.0/4.0-2
--	3.0/4.0-3
3.8/4.8-4	3.8/4.8-4
3.12/4.12-1	3.12/4.12-1
3.12/4.12-3	3.12/4.12-3
3.12/4.12-4	3.12/4.12-4
3.12/4.12-5	3.12/4.12-5

TECHNICAL SPECIFICATIONS

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3.4 Limiting Conditions for Operation Bases	3.4/4.4-3

- H. **Limiting Conditions for Operation (LCO)** - The limiting conditions for operation specify the minimum acceptable levels of system performance necessary to assure safe startup and operation of the facility. When these conditions are met, the plant can be operated safely and abnormal situations can be safely controlled.
- L. **Limiting Safety System Setting (LSSS)** - The limiting safety system settings are settings on instrumentation which initiate the automatic protective action at a level such that the safety limits will not be exceeded. The region between the safety limit and these settings represents margin, with normal operation lying below these settings. The margin has been established so that with proper operation of the instrumentation, the safety limits will never be exceeded.
- K. **Logic System Functional Test** - A logic system functional test means a test of all relays and contacts of a logic circuit from sensor to activated device to ensure all components are operable per design intent. Where possible, action will go to completion; i.e., pumps will be started and valves opened.
- L. **Modes of Operation** - A reactor mode switch selects the proper interlocking for the operating or shutdown condition of the plant. Following are the modes and interlocks provided:
1. **Shutdown** - In this position, a reactor scram is initiated, power to the control rod drives is removed, and the reactor protection trip systems have been deenergized for 10 seconds prior to permissive for manual reset.
 2. **Refuel** - In this position, interlocks are established so that one control rod only may be withdrawn when flux amplifiers are set at the proper sensitivity level and the refueling crane is not over the reactor. Also, the trips from the turbine control valves, turbine stop valves, main steam isolation valves, and condenser vacuum are bypassed. If the refueling crane is over the reactor, all rods must be fully inserted and none can be withdrawn.
 3. **Startup/Hot Standby** - In this position, the reactor protection scram trips, initiated by condenser low vacuum and main steamline isolation valve closure, are bypassed, the low pressure main steamline isolation valve closure trip is bypassed, and the reactor protection system is energized, with IRM and APRM neutron monitoring system trips and control rod withdrawal interlocks in service.
 4. **Run** - In this position the reactor system pressure is at or above 850 psig, and the reactor protection system is energized, with APRM protection and RMB interlocks in service (excluding the 15% high flux scram).
- M. **Operable** - A system, subsystem, train, component, or device shall be operable when it is capable of performing its specified function(s). Implicit in this definition shall be the assumption that all necessary attendant instrumentation, controls, normal and emergency electrical power sources, cooling or seal water, lubrication or other auxiliary equipment that are required for the system, subsystem, train, component or device to perform its function(s) are also capable of performing their related support function(s).
- N. **Operating** - Operating means that a system, subsystem, train, component or device is performing its intended functions in its required manner.
- O. **Operating Cycle** - Interval between the end of one refueling outage for a particular unit and the end of the next subsequent refueling outage for the same unit.
- P. **Primary Containment Integrity** - Primary containment integrity means that the drywell and pressure suppression chamber are intact and all of the following conditions are satisfied:
1. All manual containment isolation valves on lines connecting to the reactor coolant system or containment which are not required to be open during accident conditions are closed.

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3.0/4.0 Limiting Conditions for Operation
(General)

Applicability:

Applies to systems, subsystems, trains, components, or devices required to be operable.

Objective:

To assure that no set of equipment outages would be allowed to persist that would result in the facility being in an unprotected condition.

LIMITING CONDITION FOR OPERATION

- A. In the event a Limiting Condition for Operation cannot be satisfied because of circumstances in excess of those addressed in the specification, the unit shall be placed in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the following 24 hours unless corrective measures are completed that satisfy the Limiting Conditions for Operation.

3.0/4.0-1

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- B. When a system, subsystem, train, component, or device is determined to be inoperable solely because its emergency power source is inoperable, or solely because its normal power source is inoperable, it may be considered OPERABLE for the purpose of satisfying the requirements of its applicable Limiting Condition for Operation, provided:
1. Its corresponding normal or emergency power source is OPERABLE, and
 2. All of its redundant systems, subsystems, trains, components, and devices in the other division are OPERABLE, or likewise satisfy the requirements of this specification.

Unless both conditions 1. and 2. are satisfied, the unit shall be placed in at least HOT SHUTDOWN within 12 hours and in at least COLD SHUTDOWN within the following 24 hours.

- C. Specifications 3.0.A and 3.0.B are not applicable in refueling or cold shutdown.

3.0/4.0-2

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3.0/4.0 BASES

3.0.A

This specification delineates the action to be taken for circumstances not directly provided for in the Limiting Condition for Operation statements and whose occurrence would violate the intent of the specification.

3.0.B

This specification delineates what additional conditions must be satisfied to permit operation to continue, consistent with the Limiting Condition for Operation statements for power sources, when a normal or emergency power source is not OPERABLE. It specifically prohibits operation when one division is inoperable because its normal or emergency power source is inoperable and a system, subsystem, train, component, or device in another division is inoperable for another reason. Power sources are defined as AC Auxiliary Electrical Systems as noted in Section 3.9.A.1, 3.9.A.2, and 3.9.A.3.

The provisions of this specification permit the Limiting Condition for Operation statements associated with individual systems, subsystems, trains, components, or devices to be consistent with the Limiting Condition for Operation statements of the associated electrical power source. It allows operation to be governed by the time limits of the action statements associated with the Limiting Condition for Operation for the normal or emergency power source, not the individual action statements for each system, subsystem, train, component, or device that is determined to be inoperable solely because of the inoperability of its normal or emergency power source.

3.0/4.0-3

- b. 1) The average release rate per site of all radioiodines and radioactive materials in particulate form with half-lives greater than 8 days during any calendar quarter shall be such that:

$$13 \{ 7.3 \times 10^5 Q_V + 2.6 \times 10^5 Q_C \} \leq 1$$

- 2) The amount of Iodine-131 released during any calendar quarter shall not exceed 2 Ci/reactor.

- c. 1) The average release rate per site of all radioiodines and radioactive materials in particulate form with half-lives greater than 8 days during any period of 12 consecutive months shall be such that:

$$25 \{ 7.3 \times 10^5 Q_V + 2.6 \times 10^5 Q_C \} \leq 1$$

- 2) The amount of Iodine-131 released during any period of 12 consecutive months shall not exceed 4 Ci/reactor.

- d. The provisions of Specification 3.0.A are not applicable.

3. a. The design objectives stipulate that the annual total quantity of all radioiodines and radioactive material in particulate forms with half-lives greater than 8 days, above background, from all reactors at a site should not result in an annual dose to any organ of an individual in an unrestricted area from all pathways of exposure in excess of 15 mrem and that the annual total quantity of Iodine-131 discharged from each reactor at a site should not exceed 1 Ci.
- b. Should any of the conditions or 3.8.B.3.c(1) or (2) listed below exist, the licensee shall make an investigation to identify the causes of the release rates, define and initiate a program of action to reduce the release rates to the design objective levels. The licensee shall report those actions to the NRC within 30 days from the end of the quarter during which the releases occurred. The provisions of Specification 3.0.A are not applicable.

half lives greater than 8 days released weekly. An analysis shall also be performed of a sample at least quarterly for the radionuclides I-133 and I-135.

For release of radioactive material in particulate form, a sample shall be drawn continuously through a particulate filter. Measurements shall be made on these filters to determine the quantities of nuclides in particulate form with half lives greater than 8 days that are released to the environment.

The particulate filters shall be changed and analyzed at least weekly for gross beta-particulate radioactivity with half lives greater than 8 days. Monthly, a composite of those filters used during the month shall be prepared. This composite shall be analyzed for the principal gamma-emitting nuclides.

Analysis for Sr-89 and Sr-90 shall be made quarterly. Gross alpha radioactivity shall be determined quarterly.

3. The ventilation stack filters and cartridges shall be counted weekly when the measured release rate of the sum of Iodine-131 and particulates is less than 25% of the release rate given in Specification 3.8.B.2.a; otherwise the ventilation stack filters and cartridges shall be removed and counted daily.

A determination shall be made of the total I-131 and particulates with half lives greater than 8 days released weekly. An analysis sample shall be taken at least quarterly for the radionuclides I-133 and I-135.

For release of radioactive material in particulate form, a sample shall be drawn continuously through a particulate filter. Measurements shall be made on these filters to determine the quantities of nuclides in particulate form with half lives greater than 8 days that are released to the environment.

The particulate filters shall be changed and analyzed at least weekly for gross

3.12/4.12 FIRE PROTECTION SYSTEMS

LIMITING CONDITIONS FOR OPERATIONS

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.

SURVEILLANCE REQUIREMENTS

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.

SPECIFICATIONS

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 affected zone, 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, the action taken, and the plans for restoring the instrument(s) to operable status.
3. The provisions of Specification 3.0.A are not applicable.

A. Fire Detection Instrumentation

1. Each of the fire detection instruments given by Table 3.12-1 shall be demonstrated operable at least once per 6 months by a channel functional test.
2. All non-supervised circuits shall be demonstrated operable once per month.

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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 each pump develops at least 2000 gpm at a system head of 123 psig.

(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

f. At least once per 3 years by performing flow tests of the system in accordance with Chapter 5, Section II, NFPA Fire Protection Handbook.

C. Sprinkler Systems

1. The sprinkler systems given in Table 3.12-2 shall be operable at all times when equipment in the areas spray/sprinkler protected is required to be operable.
2. With the cable tunnel sprinkler system inoperable, establish a continuous fire watch with back up fire suppression equipment for the unprotected area within 1 hour.
3. With any other sprinkler system inoperable, establish back up fire suppression within 1 hour and inspect the area twice per shift.
4. 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, the action taken, and the plans for restoring the system to operable status.
5. The provisions of Specification 3.0.A are not applicable.

C. Sprinkler Systems

1. At least once per year by cycling each testable valve in the flow path through at least once complete cycle of full travel.
2. 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 shall be inspected to verify no blockage.
3. At least once per 3 years by performing an air flow test through each open head spray/sprinkler header and verifying each open head spray/sprinkler nozzle is unobstructed.

D. CO₂ Systems

1. The CO₂ Storage Tank shall have a minimum stand by level of 50 percent and a minimum pressure of 250 psig.
2. The CO₂ Systems given in Table 3.12-3 shall be operable.
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 CO₂ System inoperable, establish backup fire suppression equipment for the unprotected area(s) within 1 hour and inspect the area twice per shift.
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, the action taken, and the plans and schedule for restoring the system to operable status.
6. If actuated, the storage tank will be restored to greater than the minimum level within 48 hours.
7. 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 areas protected by the fire hose 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. The provisions of Specification 3.0.A are not applicable.

F. Penetration Fire Barriers

1. All penetration fire barriers protecting safety related areas shall be intact except as stated in Specification 3.12.F.2.

D. CO₂ Systems

1. At least once per 7 days the CO₂ Storage Tank level and pressure will be verified.
2. 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 each nozzle.

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 reracked. 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 greater than the maximum pressure available at the hose station.

F. Penetration Fire Barriers

1. Each of the penetration fire barrier shall be verified to be intact by visual inspection;

2. With one or more penetration fire barriers not intact, establish a continuous fire watch on at least one side of the affected penetration within 1 hour if 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.

G. Fire Pump Diesel Engine

1. The Fire Pump Diesel Engine shall be operable as specified in 3.12.B.1.a and 3.12.B.1.b.

- a. ~~At least~~ once per operating cycle, and
- b. ~~Prior to~~ declaring a penetration fire barrier functional following repairs or maintenance.

G. Fire Pump Diesel Engine

1. The fire pump diesel starting 24-volt 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 ≥ 24 volts.
 - b. At least once per 90 days by verifying that the specific gravity is appropriate for continued service of 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 anti-corrosion material.
2. 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 250 gallons of fuel, and
 - (2) The diesel starts from ambient conditions and operates for at least 20 minutes.