3/22/78

Dockets Nos. 50-254
and 50-265

Commonwealth Edison Company
ATTN: Mr. Cordell Reed
Assistant Vice President
Post Office Box 767
Chicago, Illinois 60690

Gentlemen:

In response to your application dated August 3, 1977, as supplemented by letter dated December 16, 1977, and our letter dated November 28, 1977, we have issued the enclosed Amendment No. 45 to Facility Operating License No. DPR-29 and Amendment No. 44 to Facility Operating License No. DPR-30. The amendments incorporate changes to the Technical Specifications for the Quad Cities Units Nos. 1 and 2 to provide limiting conditions for operation and surveillance requirements for existing fire protection equipment and administrative controls for fire protection.

These changes to the Quad Cities Units Nos. 1 and 2 Technical Specifications are supported by the Safety Evaluation issued with our letter of November 28, 1977, except for those changes which were proposed in your letter dated December 16, 1977, and other minor changes. All substantive changes to our proposed Technical Specifications of November 28, 1977, are discussed herein:

1. Specification 4.12.A.2 has been deleted because Quad Cities Station does not have any NFPA Code 72D Class A supervised circuits.

2. Specification 4.12.B.4.c has been modified to require an annual flushing of the system rather than a semi-annual flush. Based upon the quality of water used by the Quad Cities system and the successful operation of the Quad Cities service water system using the same source of water, we conclude that an annual flush of this system is acceptable.

3. Specification 4.12.B.4.e.(4) has been deleted because it repeats the requirement contained in Specification 4.12.B.4.e.(2). This deletion does not reduce the level of surveillance and is acceptable.

2

OFFICE➤						
SURNAME➤						
DATE➤						

4. Specifications 3.12.C.2 and 3.12.D have been modified to require a continuous fire watch only in the Unit No. 2 cable tunnel. The equipment located in the diesel generator areas, the diesel generator oil day tank rooms, the HPCI rooms and the Unit No. 1 cable tunnel, have redundant back up equipment separate from these areas and we have therefore determined that an inspection twice per shift is acceptable in the event of an inoperable sprinkler system or CO_2 system in these areas.

A copy of the Notice of Issuance is also enclosed.

Sincerely,

George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

Enclosures:
1. Amendment No. 45 to License DPR-29
2. Amendment No. 44 to License DPR-30

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DATE➤	3/13/78	3/13/78	3/16/78	3/ /78	3/13/78	

Specifications 3.12.C.2 and 3.12.D have been modified to require a continuous fire watch only in the Unit No. 2 cable tunnel. The equipment located in the diesel generator areas, the diesel generator oil day tank rooms, the HPCI rooms and the Unit No. 1 cable tunnel, have redundant back up equipment separate from these areas and we have therefore determined that an inspection twice per shift is acceptable in the event of an inoperable sprinkler system or CO_2 system in these areas.

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Sincerely,

George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors

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1. Amendment No. to License DPR-29
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Region V Office
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Chicago, Illinois 60604

ATTACHMENT TO LICENSE AMENDMENT NO. 44

FACILITY OPERATING LICENSE NO. DPR-30

DOCKET NO. 50-265

Make the following changes to the Appendix A portion of the Technical Specifications. Changed areas on the revised pages are shown by marginal lines.

Remove	Insert
iii	iii
iv	iv
v	v
6.1-1	6.1-1
6.1-2	6.1-2
6.1-3	6.1-3
6.1-6	6.1-6
Figure 6.1-1	Figure 6.1-1
Figure 6.1-2	Figure 6.1-2
6.2-1	6.2-1

Add pages 3.12/4.12-1 thru 3.12/4.12-9

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TECHNICAL SPECIFICATIONS

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TECHNICAL SPECIFICATIONS

APPENDIX A

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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.

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. Fire Suppression Water System

1. The Fire Suppression Water System shall be operable at all times with;
   a. Two (2) high pressure pumps each with a capacity of 2000 gpm with their discharge aligned to the fire suppression header.
   b. Automatic initiation logic for each fire pump.
   c. An operable flow path capable of taking suction from the Mississippi River and transferring the water through distribution piping with operable sectionalizing control or isolation valves to the yard hydrant curb valves and the front valve ahead of the water flow alarm device on each spinkler, hose stand pipe, or spray system riser.

2. With inoperable fire pumps or associated water supply, restore the inoperable equipment to operable status within 7 days, or prepare and submit a report to the Commission pursuant to Specification 6.6.B.2 within the next 30 days outlining the plans and procedures to be used to provide for the loss of redundancy in this system.
3. With no Fire Suppression Water System operable, within 24 hours;
   a. Establish a backup Fire Suppression Water System.
   b. Notify the Commission pursuant to Specification 6.6.B.1 outlining the actions taken, the cause of the inoperability, and the plans and schedule for restoring the system to operable status.

4. If the requirements of Specification 3.12.B.3.a cannot be met, an orderly shut down shall be initiated, and the reactor shall be in a cold shut down condition within 24 hours.

B. Fire Suppression Water System

1. The Fire Suppression Water System shall be demonstrated operable:
   a. At least once per 31 days on a staggered test basis by starting each pump and operating it for at least 20 minutes on recirculation flow.
   b. At least once per 31 days by verifying that each valve (manual, power operated or automatic) in the flow path is in the correct position.
   c. At least once per year by performance of a system flush.
   d. At least once per year by cycling each testable valve in the flow path through at least one complete cycle of full travel.

   e. At least once per operating cycle
      (1) By performing a system functional test which

includes simulated automatic actuation of the system throughout its operating sequence and verifying that each automatic valve in the flow path actuates to its correct position.

(2) By verifying that 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.

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. CO_2 Systems

1. The CO_2 Storage Tank shall have a minimum stand by level of 50 percent and a minimum pressure of 250 psig.
2. The CO_2 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 CO_2 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.

D. CO_2 Systems

1. At least once per 7 days the CO_2 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. 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.

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

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.

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 Engine shall be operable as specified in 3.12.B.1.a and 3.12.B.1.b.

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 eletrolyte level of each battery is above the plates, and
      (2) The overall battery voltage is $\geq$ 24 volts.
   b. At least once per 92 days by verifying that the specific gravity is appropriate for continued service of 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.

b. At least once per 92 days by verifying that a sample of diesel fuel from the fuel storage tank shall be checked for quality using existing station procedures for diesel oil 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 $\geq$ 20 minutes while loaded with the fire pump.

3.12/4.12 LIMITING CONDITION FOR OPERATION AND SURVEILLANCE REQUIREMENT BASES

The operability of the fire suppression systems insures that adequate fire suppression capability is available to confine and extinguish fires occurring in any portion of the facility where safety related equipment is located. The fire suppression system consists of the water system, sprinklers, CO_2, and fire hose stations. The collective capability of the fire suppression systems is adequate to minimize potential damage to safety related equipment, and is a major element in the facility fire protection program.

Operability of the fire detection instrumentation ensures that adequate warning capability is available for the prompt detection of fires. This capability is required in order to detect and locate fires in their early stages. Prompt detection of fires will reduce the potential for damage to safety related equipment, and is an integral element in the overall facility fire protection program. In the event that a portion of the fire detection instrumentation is inoperable, the establishment of frequent fire patrols in the affected areas is required to provide detection capability until the inoperable instrumentation is returned to service.

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

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

In the event that the fire suppression water system becomes inoperable, immediate corrective measures must be taken since this system provides the major fire suppression capability of the plant. The requirement for a 24-hour report to the Commission provides for prompt evaluation of the acceptability of the corrective measures to provide adequate fire suppression capability for the continued protection of the nuclear plant.

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

TABLE 3.12-1

FIRE DETECTION INSTRUMENTS

INSTRUMENT LOCATION	MINIMUM INSTRUMENTS OPERABLE		
	HEAT	SMOKE	FLOW
Unit 2 HPCI area: 7 heat detectors	5		
Unit 2 Diesel Generator Room: 2 heat detectors	1		
Unit 2 Diesel Oil Day Tank Area: 4 heat detectors	3		
Unit 1/2 Diesel Generator Room: 4 heat detectors	3		
Unit 1/2 Diesel Oil Day Tank Area: 4 heat detectors	3		
Unit 1 Cable Tunnel: 1 flow detector			1
Control Room, Computer Room, Electrical Equipment Room HVAC; 10 smoke detectors		8	

TABLE 3.12-2

SPRINKLER SYSTEMS

1. Unit Two Cable Tunnel
2. Unit Two HPCI Room
3. Unit Two Diesel Oil Day Tank Room
4. Unit 1/2 Diesel Oil Day Tank Room

TABLE 3.12-3

CO_2 SYSTEMS

1. Unit Two Diesel Generator Area
2. Unit 1/2 Diesel Generator Area
3. Unit Two Diesel Oil Day Tank Room
4. Unit 1/2 Diesel Oil Day Tank Room

TABLE 3.12-4

FIRE HOSE STATIONS

NO.	SIZE	LOCATION
F168	100 ft.	Outside South Entrance to Control Room
F169	100 ft.	Outside Cable Spreading Room
F170	100 ft.	Outside Cable Spreading Room
CO-25B	150 ft.	Outside Battery Charger Room near MCC 28-2
F172	100 ft.	Outside Electrical Equipment Room near Machine Shop
F171	100 ft.	Outside Electrical Equipment Room
F129	100 ft.	Above Cable Tunnel at Column 17-G
F211	100 ft.	Above Cable Tunnel at Column 9-G
F212	100 ft.	Above Cable Tunnel at Column 3-G
F225	100 ft.	Outside RHR Service Water Pump Rooms by Column 8-E
F247	100 ft.	Outside North Core Spray Room
F248	100 ft.	North RHR Room
F249	100 ft.	South RHR Room
F250	100 ft.	Outside South Core Spray Room
F156	100 ft.	Outside DG 1/2 at Column 14-N
F231	100 ft.	Standby Liquid Control Area
F232	100 ft.	Standby Liquid Control Area
F201	100 ft.	Between Bus 23-1 and Bus 24-1
CO-21A	150 ft.	North of Bus 23-1
F244	100 ft.	MCC 28/29-5
F242	100 ft.	MCC 29-1
F128	100 ft.	Above and East of Cable Tunnel
CO-26A	150 ft.	Above and East of Cable Tunnel
CO-24B	150 ft.	Southwest of DG2 Room

6.0 ADMINISTRATIVE CONTROLS

6.1 ORGANIZATION, REVIEW, INVESTIGATION, AND AUDIT

A. The Station Superintendent shall have overall full-time responsibility for safe operation of the facility. During periods when the Station Superintendent is unavailable, he shall designate this responsibility to an established alternate who satisfies the ANSI N18.1 of March 8, 1971 experience requirements for plant manager.

B. The corporate management which relates to the operation of this station is shown in Figure 6.1-1.

C. The normal functional organization for operation of the station shall be as shown in Figure 6.1-2. The shift manning for the station shall be shown in Figure 6.1-3. The individual filling the position of Administrative Assistant shall meet the minimum acceptable level for "Technical Manager" as described in Section 4.2.4 of ANSI N18.1-1971.

A fire brigade of at least 5 members shall be maintained on-site at all times. This excludes the shift crew necessary for safe shutdown of the plant, and any personnel required for other essential functions during a fire emergency.

D. Qualifications of the station management and operating staff shall meet minimum acceptable levels as described in ANSI N18.1, "Selection and Training of Nuclear Power Plant Personnel", dated March 8, 1971. The Rad/Chem Supervisor shall meet the requirements of radiation protection manager of Regulatory Guide 1.8.

E. Retraining and replacement training of Station personnel shall be in accordance with ANSI N18.1, "Selection and Training of Nuclear Power Plant Personnel", dated March 8, 1971.

A training program for the fire brigade shall be maintained under the direction of the Station Fire Marshal, and shall meet or exceed the requirements of Section 27 of the NFPA Code-1975 except that training sessions shall be at least quarterly.

F. Retraining shall be conducted at intervals not exceeding 2 years.

G. The Review and Investigative Function and the Audit Function of activities affecting quality during facility operations shall be constituted and have the responsibilities and authorities outlined below:

1. The Supervisor of the Offsite Review and Investigative Function shall be appointed by the Vice President of Construction, Production, Licensing and Environmental Affairs. The Audit Function shall be the responsibility of the Manager of Quality Assurance and shall be independent of operations.

   a. Offsite Review and Investigative Function

   The Supervisor of the Offsite Review and Investigative Function shall: (1) provide directions for the review and investigative function and appoint a senior participant to provide appropriate direction, (2) select each participant for this function, (3) select a complement of more than one participant who collectively possess background and qualifications in the subject matter under review to provide comprehensive interdisciplinary review coverage under this function, (4) independently review and approve the findings and recommendations developed by personnel performing the review and investigative function, (5) approve and report in a timely manner all findings of noncompliance with NRC requirements to the Station Superintendent, Division Manager Nuclear Stations, Manager of Quality Assurance, and the Vice President of Construction, Production, Licensing and Environmental Affairs. During periods when the Supervisor of Offsite Review and Investigative Function is unavailable, he shall designate this responsibility to an established alternate, who satisfies the formal training and experience requirements for the Supervisor of the Offsite Review and Investigative Function. The responsibilities of the personnel performing this function are stated below. The Offsite Review and Investigative Function shall review:

   1) The safety evaluations for (1) changes to procedures, equipment, or systems as described in the safety analysis report and (2) tests or experiments completed under the provision of 10 CFR

50.59 to verify that such actions did not constitute an unreviewed safety question. Proposed changes to the Quality Assurance Program description shall be reviewed and approved by the Manager of Quality Assurance.

2) Proposed changes to procedures, equipment or systems which involve an unreviewed safety question as defined in 10 CFR 50.59.

3) Proposed tests or experiments which involve an unreviewed safety question as defined in 10 CFR 50.59.

4) Proposed changes in Technical Specifications or NRC operating licenses.

5) Noncompliance with NRC requirements, or of internal procedures, or instructions having nuclear safety significance.

6) Significant operating abnormalities or deviations from normal and expected performance of plant equipment that affect nuclear safety as referred to it by the Onsite Review and Investigative Function.

7) Reportable occurrences requiring 24- hour notification to the NRC.

8) All recognized indications of an unanticipated deficiency in some aspect of design or operation of safety-related structures, systems, or components.

9) Review and report findings and recommendations regarding all changes to the Generating Stations Emergency Plan prior to implementation of such change.

10) Review and report findings and recommendations regarding all items referred by the Technical Staff Supervisor, Station Superintendent, Division Manager – Nuclear Stations, and Manager of Quality Assurance.

b. Audit Function

The Audit Function shall be the responsibility of the Manager of Quality Assurance independent of the Production Department. Such responsibility is delegated to the Director of Quality Assurance for Operating and to the Staff Assistant to the Manager of Quality Assurance for maintenance quality assurance activities.

Either shall approve the audit agenda and checklists, the findings and the report of each audit. Audits shall be performed in accordance with the Company Quality Assurance Program and Procedures. Audits shall be performed to assure that safety-related functions are covered within a period of 2 years or less as designated below.

1) Audit of the conformance of facility operation to provisions contained within the Technical Specifications and applicable license conditions at least once per year.

2) Audit of the adherence to procedures, training and qualification of the station staff at least once per year.

3) Audit of the results of actions taken to correct deficiencies occurring in facility equipment, structures, systems, or methods of operation that affect nuclear safety at least once per 6 months.

4) Audit of the performance of activities required by the Quality Assurance Program to meet the Criteria of Appendix "B" 10 CFR 50.

5) Audit of the Facility Emergency Plan and implementing procedures.

6) Audit of the Facility Security Plan and implementing procedures.

7) Audit onsite and offsite reviews.

8) Audit the Facility Fire Protection Program and implementing procedures at least once per 24 months.

9) Report all findings of noncompliance with NRC requirements and recommendations and results each audit to the Station Superintendent, the Division Manager–Nuclear Stations, Manager of Quality Assurance, the General Superintendent of Production Systems Analysis, and to the Vice President of Construction, Production, Licensing and Environmental Affairs.

c. Authority

The Manager of Quality Assurance reports to the Executive Vice-President and the Supervisor of the Offsite Review and Investigative Function reports to the General Superintendent of Production Systems Analysis. Either the Manager of Quality Assurance or the Supervisor of the Offsite Review and Investigative Function has the authority to order unit shutdown or request any other action which he deems necessary to avoid unsafe plant conditions.

d. Records

1) Reviews, audits, and recommendations shall be documented and distributed as covered in 6.1.G.1.a and 6.1.G.1.b.

2) Copies of documentation, reports, and correspondence shall be kept on file at the station.

e. Procedures

Written administrative procedures shall be prepared and maintained for the offsite reviews and investigative functions described in Specifications 6.1.G.1.a. Those procedures shall cover the following:

1) Content and method of submission of presentations to the Supervisor of the Offsite Review and Investigative Function.

2) Use of committees and consultants.

3) Review and approval.

4) Detailed listing of items to be reviewed.

5) Method of (1) appointing personnel, (2) performing reviews, investigations, (3) reporting findings and recommendations of reviews and investigations, (4) approving reports, and (5) distributing reports.

6) Determining satisfactory completion of action required based on approved findings and recommendations reported by personnel performing the review and investigative function.

f. Personnel

1) The persons, including consultants, performing the review and investigative function, in addition to the Supervisor the Offsite Review and Investigative Function, shall have expertise in one or more of the following disciplines as appropriate for the subject or subjects being reviewed and investigated:

a) nuclear power plant technology,
b) reactor operations,
c) utility operations,
d) power plant design,
e) reactor engineering,
f) radiological safety,
g) reactor safety analysis,
h) instrumentation and control,
i) metallurgy,
j) any other appropriate disciplines required by unique characteristics of the facility.

2) Use of committees.

3) Review and approval.

4) Detailed listing of items to be reviewed.

5) Procedures for administration of the quality control activities.

6) Assignment of responsibilities.

e. Personnel

1) The personnel performing the Onsite Review and Investigative Function, in addition to the Station Superintendent, shall consist of persons having expertise in:

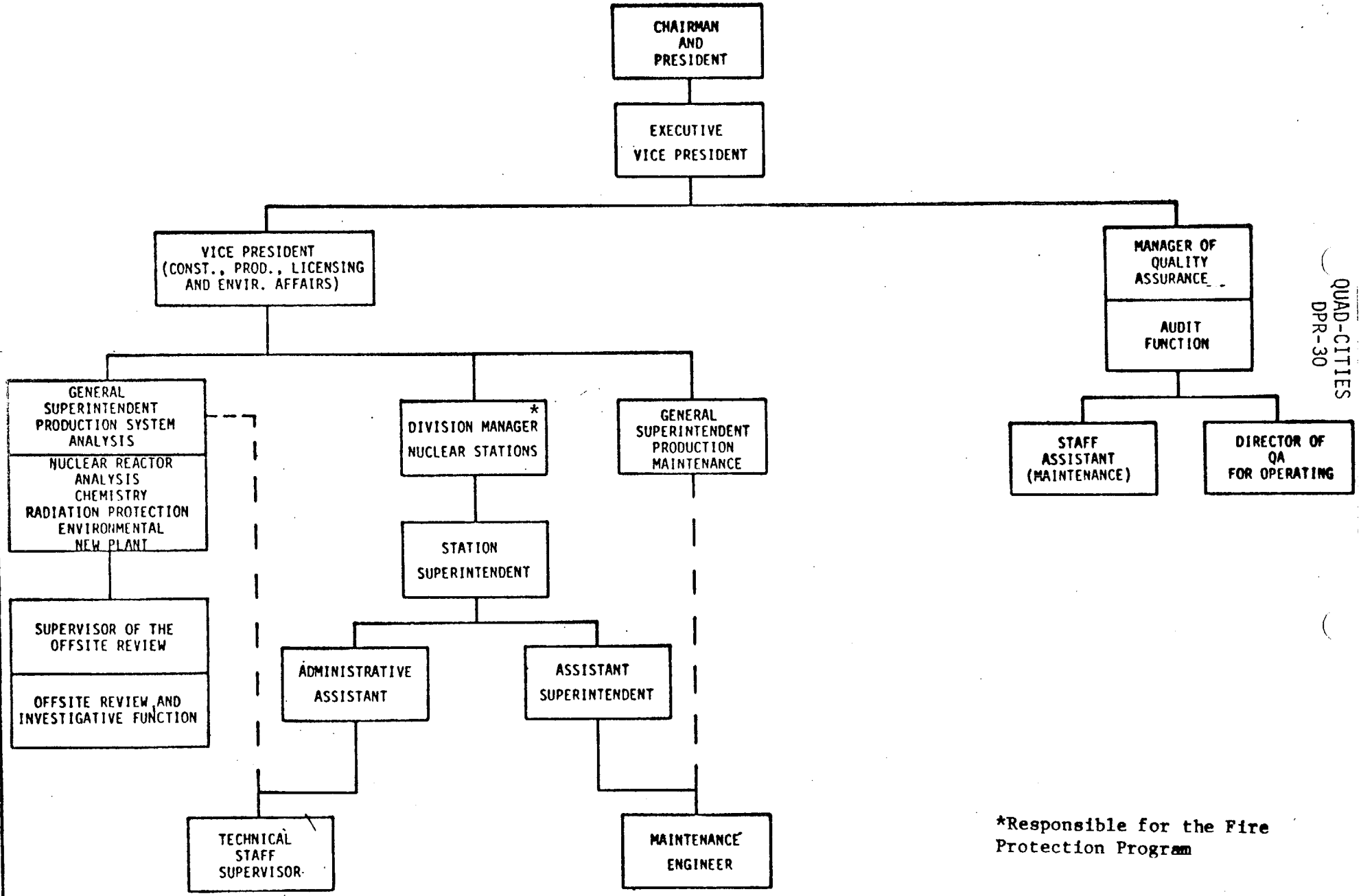
a) nuclear power plant technology,
b) reactor operations,
c) reactor engineering,
d) radiological safety and chemist,
e) instrumentation and control, and
f) mechanical and electric systems.

2) Personnel performing the Onsite Review and Investigative Function shall meet minimum acceptable levels as described in ANSI N18.1 1971, Sections 4.2 and 4.4.

H. Fire Protection Program

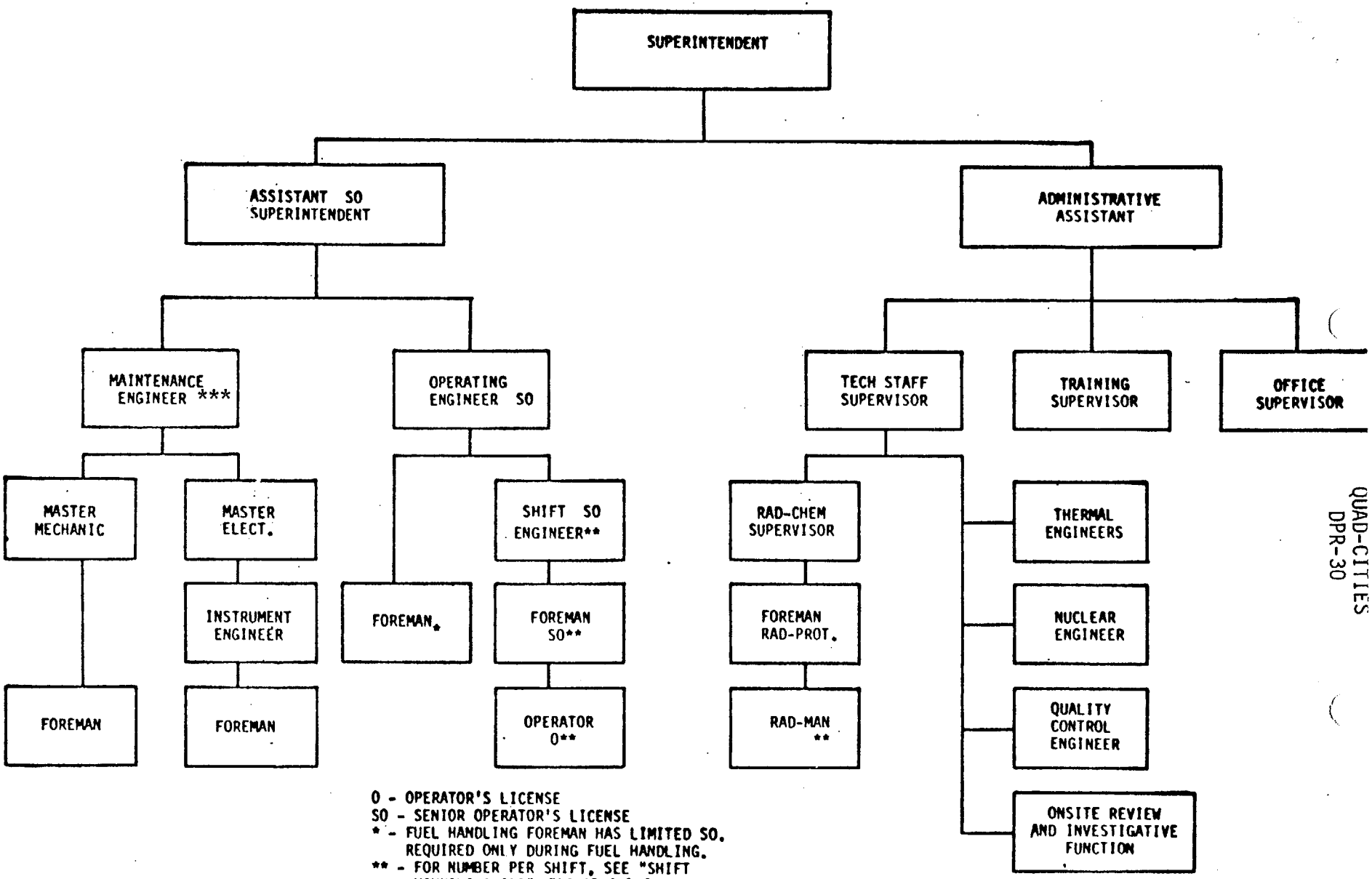
An independent fire protection and loss prevention program inspection and audit shall be performed at least once per 12 months utilizing either qualified offsite licensee personnel or an outside fire protection firm.

An inspection and audit of the fire protection and loss prevention program shall be performed by a qualified outside fire consultant at least once per 36 months.



*Responsible for the Fire Protection Program

FIGURE 6.1-1



O - OPERATOR'S LICENSE
SO - SENIOR OPERATOR'S LICENSE
* - FUEL HANDLING FOREMAN HAS LIMITED SO. REQUIRED ONLY DURING FUEL HANDLING.
** - FOR NUMBER PER SHIFT, SEE "SHIFT MANNING CHART", FIGURE 6.1-3

***Responsible for implementing the Fire Protection Program.

FIGURE 6.1-2

QUAD-CITIES STATION ORGANIZATION

6.2 PLANT OPERATING PROCEDURES

A. Detailed written procedures including applicable checkoff lists covering items listed below shall be prepared, approved, and adhered to:

1. Normal startup, operation, and shutdown of the reactor, and other systems and components involving nuclear safety of the facility.
2. Refueling operations.
3. Actions to be taken to correct specific and foreseen potential malfunctions of systems or components including responses to alarms, suspected primary system leaks, and abnormal reactivity changes.
4. Emergency conditions involving potential or actual release of radioactivity – "Generating Stations Emergency Plan" and station emergency and abnormal procedures.
5. Instrumentation operation which could have an effect on the safety of the facility.
6. Preventive and corrective maintenance operations which could have an effect on the safety of the facility.
7. Surveillance and testing requirements.
8. Tests and experiments.
9. Procedure to ensure safe shutdown of the plant.
10. Station Security Plan and implementation procedures.
11. Fire Protection Program implementation.

B. Radiation control procedures shall be maintained, made available to all station personnel, and adhered to. These procedures shall show permissible radiation exposure and shall be consistent with the requirements of 10 CFR 20. This radiation protection program shall be organized to meet the requirements of 10 CFR 20.

1. Pursuant to 10 CFR 20.103 (c) (1) and (3), allowance can be made for the use of respiratory protective equipment in conjunction with activities authorized by the operating licenses for this plant in determining whether individuals in restricted areas are exposed to concentrations in excess of the limits specified in Appendix B, Table I, Column I of 10 CFR 20 subject to the following conditions and limitations.

   a. The limits provided in Section 20.10 (a) and (b) are not exceeded.

   b. If the radioactive material is of such form that intake through the skin or other additional route is likely, individual exposures to radioactive material shall be controlled so that the radioactive content of any critical organ from all routes of intake averaged over 7 consecutive days does not exceed that which would result from inhaling such radioactive material for 40 hours at the pertinent concentration values provided in Appendix B, Table I, Column 1 of 10 CFR 20.

   c. For radioactive materials designated "Sub" in the "Isotope" column of Appendix B, Table I, Column 1 of 10 CFR 20, the concentration value specified is based upon exposure to the material as an external radiation source. Individual exposures to these materials shall be accounted for as part of the limitation on individual dose in Paragraph 20.101. These materials shall be subject to applicable process and other engineering controls.

2. In all operations in which adequate limitation of the inhalation of radioactive material by the use of process or other engineering controls is impracticable, the licensee may permit an individual in a restricted area to use respiratory protective equipment to limit the inhalation of airborne radioactive material provided:

   a. The limits in Specification 6.2.B.1 are not exceeded.

7590-01

UNITED STATES NUCLEAR REGULATORY COMMISSION

DOCKETS NOS. 50-254 AND 50-265

COMMONWEALTH EDISON COMPANY
AND
IOWA-ILLINOIS GAS AND ELECTRIC COMPANY

NOTICE OF ISSUANCE OF AMENDMENTS TO FACILITY OPERATING LICENSES

The U. S. Nuclear Regulatory Commission (the Commission) has issued an amendment each to Facility Operating License Nos. DPR-29 and DPR-30, issued to the Commonwealth Edison Company, the licensee (acting for itself and or behalf of the Iowa-Illinois Gas and Electric Company), which revised the Technical Specifications for operation of Unit Nos. 1 and 2 of the Quad Cities Nuclear Power Station (the facilities) located in Rock Island County, Illinois. These amendments will become effective 30 days after their date of issuance.

The amendments incorporate fire protection Technical Specifications on the existing fire protection equipment and adds administrative controls related to fire protection at the facilities. This action is being taken pending completion of the Commission's overall fire protection review of the facilities.

The application for the amendments complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations. The Commission has made appropriate findings as required by the Act and the Commission's rules and regulations in 10 CFR Chapter I, which are set forth in the license amendments. Prior public notice of these amendments was

not required since the amendments do not involve a significant hazards consideration.

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

For further details with respect to this action, see (1) the application for amendment dated August 3, 1977, as amended by filing dated December 16, 1977, (2) Amendment Nos. 45 and 44 to License Nos. DPR-29 and DPR-30, and (3) The Commission's related Safety Evaluation issued on November 28, 1977 and letters to the licensee dated June 24, 1977 and November 28, 1977. All of these items are available for public inspection at the Commission's Public Document Room, 1717 H Street, N. W., Washington, D. C., and at the Moline Public Library, 504 17th Street, Moline, Illinois 60625. A single copy of item (2) and (3) may be obtained upon request addressed to the U. S. Nuclear Regulatory Commission, Washington, D. C. 20555, Attention: Director, Division of Operating Reactors.

Dated at Bethesda, Maryland, this 22 day of March 1978.

FOR THE NUCLEAR REGULATORY COMMISSION

George Lear

George Lear, Chief
Operating Reactors Branch #3
Division of Operating Reactors