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UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

COMMONWEALTH EDISON COMPANY

AND

MIDAMERICAN ENERGY COMPANY

DOCKET NO. 50-254

QUAD CITIES NUCLEAR POWER STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 181 License No. DPR-29

1. The Nuclear Regulatory Commission (the Commission) has found that:

- A. The application for amendment by Commonwealth Edison Company (the licensee) dated May 18, 1998, 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 Operating License No. DPR-29 is hereby amended to read as follows:

B. <u>Technical Specifications</u>

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 181 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 and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

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Robert M. Pulsifer, Project Manager Project Directorate III-2 Division of Reactor Projects - III/IV Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: October 8, 1998



1.

UNITED STATES NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

COMMONWEALTH EDISON COMPANY

AND

MIDAMERICAN ENERGY COMPANY

DOCKET NO. 50-265

QUAD CITIES NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 179 License No. DPR-30

The Nuclear Regulatory Commission (the Commission) has found that:

- A. The application for amendment by Commonwealth Edison Company (the licensee) dated May 18, 1998, 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 Operating License No. DPR-30 is hereby amended to read as follows:

B. <u>Technical Specifications</u>

The Technical Specifications contained in Appendices A and B, as revised through Amendment No. 179, are hereby incorporated in the license. The licensee shall operate the facility in accordance with the Technical Specifications.

This license amendment is effective as of the date of its issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Robert M. Pulsifer, Project Manager Project Directorate III-2 Division of Reactor Projects - III/IV Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: October 8, 1998

3.

ATTACHMENT TO LICENSE AMENDMENT NOS. 181 AND 179

FACILITY OPERATING LICENSE NOS. DPR-29 AND DPR-30

DOCKET NOS. 50-254 AND 50-265

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

REMOVE	INSERT
3/4.2-15	3/4.2-15
3/4.3-9	3/4.3-9
3/4.4-3	3/4.4-3
3/4.5-8	3/4.5-8
B3/4.5-3	B3/4.5-3
3/4.8-5	3/4.8-5
3/4.9-12	3/4.9-12

TABLE 3.2.B-1 (Continued)

ECCS ACTUATION INSTRUMENTATION

INSTRUMENTATION

ECCS Actuation 3/4.2.B

Eunctional Unit	Trip Setpoint ^(h)	Minimum CHANNEL(s) per Trip Function ^(a)	Applicable OPERATIONAL MODE(s)	ACTION
5. AUTOMATIC DEPRESSURIZATION S	YSTEM - TRIP SYSTEM 'B' (d)			
a. Reactor Vessel Water Level - Low Lo	w ≥84 inches	2	1, 2, 3	30
b. Drywell Pressure - High ^(f)	≤2.5 psig	2	1, 2, 3	• 30
c. Initiation Timer	≤120 sec	1	1, 2, 3	31
d. Low Low Level Timer	≤9.0 min	1	1, 2, 3	31
e. CS Pump Discharge Pressure - High (Permissive)	≥100 psig & ≤150 psig	1/pump	1, 2, 3	31
f. LPCI Pump Discharge Pressure - High (Permissive)	≥100 psig & ≤150 psig	1/pump	1, 2, 3	31
	Trip Setpoint	Minimum CHANNEL(s) per <u>Trip Function</u>	Applicable OPERATIONAL <u>MODE(s)</u>	ACTION
6. LOSS OF POWER				
a. 4.16 kv Emergency Bus Undervoltag (Loss of Voltage)	e 3045 ± 152 volts decreasing voltage	2/bus	1, 2, 3, 4 ^(*) , 5 ^(*)	36
b. 4.16 kv Emergency Bus Undervoltag (Degraded Voltage)	e ≥3845 volts (Unit 1) ^{(g)(j)} ≥3845 volts (Unit 2) ^{(g)(j)}	2/bus	1, 2, 3, 4 ^(e) , 5 ^(e)	36

QUAD CITIES - UNITS 1 & 2

3/4.2-15

REACTIVITY CONTROL

Scram Accumulators 3/4.3.G

3.3 - LIMITING CONDITIONS FOR OPERATION

G. Control Rod Scram Accumulators

All control rod scram accumulators shall be OPERABLE.

APPLICABILITY:

OPERATIONAL MODE(s) 1, 2 and 5^(a).

ACTION:

- 1. In OPERATIONAL MODE 1 or 2:
 - a. With one control rod scram accumulator inoperable, within 8 hours:
 - Restore the inoperable accumulator to OPERABLE status, or
 - Declare the control rod associated with the inoperable accumulator inoperable.
 - b. With the provisions of ACTION 1.a above not met, be in at least HOT SHUTDOWN within the next 12 hours.
 - With more than one control rod scram accumulator inoperable, declare the associated control rods inoperable and:

4.3 - SURVEILLANCE REQUIREMENTS

G. Control Rod Scram Accumulators

Each control rod scram accumulator shall be determined OPERABLE at least once per 7 days by verifying that the indicated pressure is \ge 940 psig unless the control rod is fully inserted and disarmed, or scrammed.

a In OPERATIONAL MODE 5, this Specification is applicable for the accumulators associated with each withdrawn control rod and is not applicable to control rods removed per Specification 3.10.1 or 3.10.J.

QUAD CITIES - UNITS 1 & 2

3/4.3-9

Amendment Nos. 181-& 179

STANDBY LIQUID CONTROL SYSTEM

FIGURE 3.4.A-1

SODIUM PENTABORATE SOLUTION TEMPERATURE REQUIREMENTS



Sodium Pentaborate Concentration, % by Weight

QUAD CITIES - UNITS 1 & 2

EMERGENCY CORE COOLING SYSTEMS

3.5 - LIMITING CONDITIONS FOR OPERATION

C. Suppression Chamber

The suppression chamber shall be OPERABLE:

- In OPERATIONAL MODE(s) 1, 2, and 3 with a contained water volume equivalent to a water level of ≥ 14' 1" above the bottom of the suppression chamber.
- In OPERATIONAL MODE(s) 4 and 5^(a) with a contained volume equivalent to a water level of ≥8.5' above the bottom of the suppression chamber, except that the suppression chamber level may be less than the limit provided that:
 - a. No operations are performed that have a potential for draining the reactor vessel,
 - b. The reactor mode switch is locked in the Shutdown or Refuel position,
 - c. The condensate storage tank contains ≥ 140,000 available gallons of water, and
 - d. The ECCS systems are OPERABLE per Specification 3.5.B.

APPLICABILITY:

OPERATIONAL MODE(s) 1, 2, 3, 4 and 5^(a).

Suppression Chamber 3/4.5.C

4.5 - SURVEILLANCE REQUIREMENTS

C. Suppression Chamber

The suppression chamber shall be determined OPERABLE by verifying:

- For OPERATIONAL MODE(s) 1, 2 and 3, at least once per 24 hours, the water level to be ≥ 14' 1".
- 2. For OPERATIONAL MODE(s) 4 or 5^(a), at least once per 12 hours:
 - a. The water level to be $\ge 8.5'$, or
 - b. Verify the alternate conditions of Specification 3.5.C.2, or the conditions of footnote (a), to be satisfied.

The suppression chamber is not required to be OPERABLE provided that the reactor vessel head is removed, the cavity is flooded or being flooded from the suppression pool, the spent fuel pool gates are removed when the cavity is flooded, and the water level is maintained within the limits of Specification 3.10.G and 3.10.H.

QUAD CITIES - UNITS 1 & 2

3/4.5-8

Amendment Nos. 181 & 179

BASES

<u>3/4.5.C</u> Suppression Chamber

The suppression chamber is required to be OPERABLE as part of the ECCS to ensure that a sufficient supply of water is available to the HPCI and CS systems and the LPCI subsystem in the event of a LOCA. This limit on suppression chamber minimum water volume ensures that sufficient water is available to permit recirculation cooling flow to the core. The OPERABILITY of the suppression chamber in OPERATIONAL MODE(s) 1, 2 or 3 is also required by Specification 3.7.K.

Repair work might require making the suppression chamber inoperable. This specification will permit those repairs to be made and concurrently provide assurance that the irradiated fuel has an adequate cooling water supply when the suppression chamber must be made inoperable, including draining, in OPERATIONAL MODE(s) 4 or 5.

In OPERATIONAL MODE(s) 4 and 5 the suppression chamber minimum required water volume is reduced because the reactor coolant is maintained at or below 212°F. Since pressure suppression is not required below 212°F, the minimum water volume is based on net positive suction head (NPSH), recirculation volume and vortex prevention plus a safety margin for conservatism. With the suppression chamber water level less than the required limit, all ECCS subsystems are inoperable unless they are aligned to an OPERABLE condensate storage tank. When the suppression chamber level is less than 8.5 feet, the CS system or the LPCI subsystem is considered OPERABLE only if it can take suction from the condensate storage tank water level is sufficient to provide the required NPSH for the CS or LPCI pumps. Therefore, a verification that either the suppression chamber water level is greater than or equal to 8.5 feet or that CS or LPCI is aligned to take suction from the condensate storage tank and the condensate storage tank contains greater than or equal to 140,000 gallons of make-up water, available to the reactor pressure vessel.

3/4.5.D Reactor Core Isolation Cooling

The Reactor Core Isolation Cooling (RCIC) system is provided to supply continuous makeup water to the reactor core when the feedwater system is isolated from the turbine and when the feedwater system is not available. Under these conditions, the pumping capacity of the RCIC system is sufficient to maintain the water level above the core without any other water system in operation. If the water level in the reactor vessel decreases to the RCIC initiation level, the system automatically starts. The system may also be manually initiated at any time. The RCIC system is conservatively required to be OPERABLE whenever reactor pressure exceeds 150 psig even though the LPCI mode of the residual heat removal (RHR) system provides adequate core cooling up to 350 psig.

The RCIC system specifications are applicable during OPERATIONAL MODE(s) 1, 2 and 3 when reactor vessel pressure exceeds 150 psig because RCIC is the primary non-ECCS source of core cooling when the reactor is pressurized.

PLANT SYSTEMS

3.8 - LIMITING CONDITIONS FOR OPERATION

C. Ultimate Heat Sink

The ultimate heat sink shall be OPERABLE with:

- 1. A minimum water level at or above elevation 568 ft Mean Sea Level, and
- 2. An average water temperature of ≤95°F.

APPLICABILITY:

OPERATIONAL MODE(s) 1, 2, 3, 4, 5 and *.

ACTION:

With the requirements of the above specification not satisfied:

- 1. In OPERATIONAL MODE(s) 1, 2 or 3, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- In OPERATIONAL MODE(s) 4 or 5 declare the RHRSW system and the diesel generator cooling water system inoperable and take the ACTION(s) required by Specifications 3.8.A and 3.8.B.
- In OPERATIONAL MODE *, declare the diesel generator cooling water system inoperable and take the ACTION(s) required by Specification 3.8.B. The provisions of Specification 3.0.C are not applicable.

4.8 - SURVEILLANCE REQUIREMENTS

C. Ultimate Heat Sink

The ultimate heat sink shall be determined OPERABLE at least once per 24 hours by verifying the average water temperature and water level to be within their limits.

When handling irradiated fuel in the secondary containment, during CORE ALTERATION(s), and operations with a potential for draining the reactor vessel.

QUAD CITIES - UNITS 1 & 2

ELECTRICAL POWER SYSTEMS

3.9 - LIMITING CONDITIONS FOR OPERATION

C. D.C. Sources - Operating

As a minimum, the following D.C. electrical power sources shall be OPERABLE with the identified parameters within the limits specified in Table 4.9.C-1:

- 1. Two station 250 volt batteries, each with a full capacity charger.
- 2. Two station 125 volt batteries, each with a full capacity charger.

APPLICABILITY:

OPERATIONAL MODE(s) 1, 2, and 3.

ACTION:

 With one of the above required 250 volt station batteries and/or chargers inoperable, restore the inoperable equipment to OPERABLE status within 72 hours.

4.9 - SURVEILLANCE REQUIREMENTS

C. D.C. Sources - Operating

Each of the required 125 volt and 250 volt batteries and chargers shall be demonstrated OPERABLE^(a):

- 1. At least once per 7 days by verifying that:
 - a. The parameters in Table 4.9.C-1 meet Category A limits, and
 - b. There is correct breaker alignment to the battery chargers and total battery terminal voltage is ≥ 125.9 or ≥ 260.4 volts, as applicable, on float charge.
- At least once per 92 days and within 7 days after a battery discharge with a battery terminal voltage below 105 or 210 volts, as applicable, or battery overcharge with battery terminal voltage above 150 or 300 volts, as applicable, by verifying that:
 - a. The parameters in Table 4.9.C-1 meet the Category B limits,
 - b. There is no visible corrosion at either terminals or connectors, or the connection resistance of these items is ≤150 x10⁻⁶ ohms or ≤20% above baseline connection resistance, whichever is higher, and
 - c. The average electrolyte temperature of all connected cells is above 65°F.

a An alternate 125 volt battery shall adhere to these same Surveillance Requirements to be considered OPERABLE.

QUAD CITIES - UNITS 1 & 2

3/4.9-12

Amendment Nos. 181 & 179