UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-237

DRESDEN NUCLEAR POWER STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 167
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 October 27, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;

   B. The facility will operate in conformity with the application, the provisions of the Act and the rules and regulations of the Commission;

   C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;

   D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and

   E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment and paragraph 2.C.(2) of Facility Operating License No. DPR-19 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 167 , 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 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Lawrence W. Rossbach, 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: March 6, 1998

UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-249

DRESDEN NUCLEAR POWER STATION, UNIT 3

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 162
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 October 27, 1997, 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-25 is hereby amended to read as follows:

B. Technical Specifications

The Technical Specifications contained in Appendix A, as revised through Amendment No. 162 , 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 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION

Lawrence W. Rossbach, 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: March 6, 1998

ATTACHMENT TO LICENSE AMENDMENT NOS. 167 AND 162

FACILITY OPERATING LICENSE NOS. DPR-19 AND DPR-25

DOCKET NOS. 50-237 AND 50-249

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
3/4.4-1	3/4.4-1
3/4.4-2	3/4.4-2
B 3/4.4-1	B 3/4.4-1

3.4 - LIMITING CONDITIONS FOR OPERATION

A. Standby Liquid Control System (SLCS)

The standby liquid control system (SLCS) shall be OPERABLE.

APPLICABILITY:

OPERATIONAL MODE(s) 1 and 2.

ACTION:

1. With one subsystem inoperable, restore the inoperable subsystem to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours.

2. With both standby liquid control subsystems inoperable, restore at least one subsystem to OPERABLE status within 8 hours or be in at least HOT SHUTDOWN within the next 12 hours.

4.4 - SURVEILLANCE REQUIREMENTS

A. Standby Liquid Control System

The standby liquid control system shall be demonstrated OPERABLE:

1. At least once per 24 hours by verifying that:

   a. The temperature of the sodium pentaborate solution is greater than or equal to the limits of Figure 3.4.A-1.

   b. The volume of the sodium pentaborate solution is greater than or equal to the limits shown in Figure 3.4.A-2.

   c. The temperature of the pump suction piping to be greater than or equal to 83°F.

2. At least once per 31 days by:

   a. Verifying the continuity of the explosive charge.

   b. Determining[a] by chemical analysis that the available concentration of boron in solution is 14% by weight to 16.5% by weight.

   c. Verifying that each valve, manual, power operated or automatic, in the flow path that is not locked, sealed, or otherwise secured in position, is in the correct position, or can be aligned to the correct position.

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a This surveillance shall also be performed anytime water or boron is added to the solution or when the solution temperature drops below the limits specified by Figure 3.4.A-1.

3.4 - LIMITING CONDITIONS FOR OPERATION

4.4 - SURVEILLANCE REQUIREMENTS

3. When tested pursuant to Specification 4.0.E, by demonstrating that the minimum flow requirement of 40 gpm per pump at a pressure of greater than or equal to 1275 psig is met.

4. At least once per 18 months by:

   a. Initiating one of the standby liquid control subsystems, including an explosive valve, and verifying that a flow path from the pumps to the reactor pressure vessel is available. Both injection loops shall be tested in 36 months.

   b. Deleted

   c. Demonstrating that the pump suction line from the storage tank is not plugged.

3/4.4.A STANDBY LIQUID CONTROL SYSTEM

The standby liquid control system consists of an unpressurized tank for low temperature sodium pentaborate solution storage, a pair of full capacity positive displacement pumps, two explosive actuated shear plug valves, the poison sparger ring, and the necessary piping, valves and instrumentation. An OPERABLE standby liquid control system provides backup capability for reactivity control independent of normal reactivity control provisions provided by the control rods. OPERABILITY of the system is based on the conditions of the borated solution in the storage tank and the availability of a flow path to the reactor pressure vessel, including the pumps and valves. Two subsystems are required to be OPERABLE; each contains a pump, an explosive valve, and the associated piping, valves, and necessary instruments and controls to ensure an OPERABLE flow path. A valve is also allowed to be in the nonaccident position provided it can be aligned to the accident position from the control room, or locally by a dedicated operator. Inoperability of a nonredundant component, such as the tank, affects both subsystems.

The standby liquid control system provides the capability for bringing the reactor from full power to a cold, xenon-free shutdown assuming that none of the withdrawn control rods can be inserted. To meet this objective, it is designed to inject a quantity of boron which produces a concentration of no less than 600 ppm of boron in the reactor core in less than 100 minutes. This boron concentration is required to bring the reactor from full power to 3% $\Delta k/k$ or a more subcritical condition, considering the hot to cold reactivity swing and xenon poisoning. An additional margin of 25% boron is provide to compensate for possible losses and imperfect mixing of the chemical solution in the reactor water. This results in an average concentration of 750 ppm of boron in the reactor core assuming no losses. A net quantity of 3035 gallons of solution at less than or equal to 110°F and having a 14 weight percent sodium pentaborate ($NA_2B_{10}O_{16} \cdot 10H_2O$) concentration is required to meet this shutdown requirement. An additional volume of solution is contained below the pump suction and is not available for injection. Other equivalent combinations of increased concentration and reduced volume are also acceptable provided they have considered required temperatures and net positive suction head.

The specified pumping rate of 40 gpm will meet the above design objective. This insertion rate of boron solution will override the rate of reactivity insertion due to cooldown of the reactor following the xenon peak. Two-pump operation will enable faster reactor shutdown for anticipated transients without scram (ATWS) events. The required minimum flow combined with the solution concentration requirements are sufficient to comply with the requirements of 10 CFR 50.62.

With redundant pumps and explosive injection valves and with a highly reliable control rod scram system, operation of the reactor is permitted to continue for short periods of time with the system inoperable or for longer periods of time with one of the subsystems inoperable.

Surveillance requirements are established on a frequency that assures a high reliability of the system. The standby liquid control system is operated by a five-position control switch which allows single pump operation for surveillance testing. This testing demonstrates the capability of firing the explosive trigger assemblies, and injects clean demineralized water from the test tank to the reactor vessel to demonstrate the injection line isn't plugged. Locally controlled testing circulates sodium pentaborate from the storage tank, through one suction line, through a pump, and back into the storage tank. This is done separately for each system to demonstrate that both