



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. STN 50-454

BYRON STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 82
License No. NPF-37

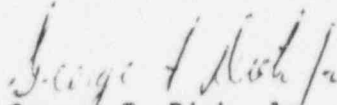
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated October 3, 1995, as supplemented February 21, 1996, and April 2, 1996, complies with the standards and requirements of the Atomic Energy Act of 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. NPF-37 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 82 and the Environmental Protection Plan contained in Appendix B, both of which are attached hereto, are hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION



George F. Dick, Jr., Senior 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: April 10, 1996



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. STN 50-455

BYRON STATION, UNIT NO. 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 82
License No. NPF-66

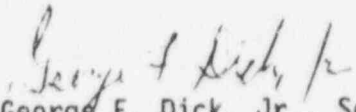
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated October 3, 1995, as supplemented February 21, 1996, and April 2, 1996, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and regulations set forth in 10 CFR Chapter 1;
 - 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. NPF-66 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A (NUREG-1113), as revised through Amendment No. 82 and revised by Attachment 2 to NPF-66, and the Environmental Protection Plan contained in Appendix B, both of which were attached to License No. NPF-37, dated February 14, 1985, are hereby incorporated into this license. Attachment 2 contains a revision to Appendix A which is hereby incorporated into this license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

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

FOR THE NUCLEAR REGULATORY COMMISSION


George F. Dick, Jr., Senior 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: April 10, 1996

ATTACHMENT TO LICENSE AMENDMENT NOS. 82 AND 82

FACILITY OPERATING LICENSE NOS. NPF-37 AND NPF-66

DOCKET NOS. STN 50-454 AND STN 50-455

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. Pages indicated by an asterisk are provided for convenience only.

<u>Remove Pages</u>	<u>Insert Pages</u>
3/4 1-15	3/4 1-15
3/4 3-42	3/4 3-42
3/4 4-11	3/4 4-11
3/4 4-22	3/4 4-22
3/4 5-2	3/4 5-2
3/4 6-13	3/4 6-13
3/4 6-25	3/4 6-25
3/4 6-26	3/4 6-26
3/4 7-4	3/4 7-4
3/4 7-5	3/4 7-5
*3/4 7-6	*3/4 7-6
3/4 11-3	3/4 11-3

REACTIVITY CONTROL SYSTEMS

LIMITING CONDITION FOR OPERATION

ACTION (Continued)

- c) A power distribution map is obtained from the movable incore detectors and $F_G(Z)$ and F_{AH}^N are verified to be within their limits within 72 hours; and
 - d) A reevaluation of each accident analysis of Table 3.1-1 is performed within 5 days; this reevaluation shall confirm that the previously analyzed results of these accidents remain valid for the duration of operation under these conditions;
- c. With more than one full-length rod trippable but inoperable due to causes other than addressed by ACTION a. above, or misaligned from its group step counter demand height by more than ± 12 steps (indicated position), POWER OPERATION may continue provided that:
- 1. Within 1 hour, the remainder of the rods in the group(s) with the inoperable rods are aligned to within ± 12 steps of the inoperable rods while maintaining the rod sequence and insertion limits of Figure 3.1-1. The THERMAL POWER level shall be restricted pursuant to Specification 3.1.3.6 during subsequent operation, and
 - 2. The inoperable rods shall be restored to OPERABLE status within 72 hours.

Otherwise, be in HOT STANDBY within 6 hours.

SURVEILLANCE REQUIREMENTS

4.1.3.1.1 The position of each full-length rod shall be determined to be within the group demand limit by verifying the individual rod positions at least once per 12 hours except during time intervals when the rod position deviation monitor is inoperable, then verify the group positions at least once per 4 hours.

4.1.3.1.2 Each full-length rod not fully inserted in the core shall be determined OPERABLE by movement of at least 10 steps in any one direction at least once per 92 days.

TABLE 4.3-3

RADIATION MONITORING INSTRUMENTATION FOR PLANT
OPERATIONS SURVEILLANCE REQUIREMENTS

<u>FUNCTIONAL UNIT</u>	<u>CHANNEL CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>DIGITAL CHANNEL OPERATIONAL TEST</u>	<u>MODES FOR WHICH SURVEILLANCE IS REQUIRED</u>
1. Fuel Building Isolation- Radioactivity-High and Criticality (ORE-AR055/56)	S	R	Q	*
2. Containment Isolation- Containment Radioactivity- High				
a) Unit 1 (1RE-AR011/12)	S	R	Q	A11
b) Unit 2 (2RE-AR011/12)	S	R	Q	A11
3. Gaseous Radioactivity- RCS Leakage Detection				
a) Unit 1 (1RE-PRO11B)	S	R	Q	1, 2, 3, 4
b) Unit 2 (2RE-PRO11B)	S	R	Q	1, 2, 3, 4
4. Particulate Radioactivity- RCS Leakage Detection				
a) Unit 1 (1RE-PRO11A)	S	R	Q	1, 2, 3, 4
b) Unit 2 (2RE-PRO11A)	S	R	Q	1, 2, 3, 4
5. Main Control Room Isolation- Outside Air Intake-Gaseous Radioactivity-High				
a) Train A (ORE-PRO31B/32B)	S	R	Q	A11
b) Train B (ORE-PRO33B/34B)	S	R	Q	A11

*With new fuel or irradiated fuel in the fuel storage areas or fuel building.

REACTOR COOLANT SYSTEM

3/4.4.3 PRESSURIZER

LIMITING CONDITION FOR OPERATION

3.4.3 The pressurizer shall be OPERABLE with at least two groups of pressurizer heaters each having a capacity of at least 150 kW and a water level of less than or equal to 92%.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With less than two groups of pressurizer heaters OPERABLE, restore at least two groups of pressurizer heaters to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With the pressurizer otherwise inoperable, be in at least HOT STANDBY with the Reactor trip breakers open within 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.4.3.1 The pressurizer water level shall be determined to be within its limit at least once per 12 hours.

4.4.3.2 The capacity of each of the above required groups of pressurizer heaters shall be verified by energizing the heaters and measuring circuit current at least once each refueling interval.

4.4.3.3 The cross-tie for the pressurizer heaters to the ESF power supply shall be demonstrated OPERABLE at least once per 18 months by energizing the heaters.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS

4.4.6.2.1 Reactor Coolant System leakages shall be demonstrated to be within each of the above limits by:

- a. Monitoring the containment atmosphere gaseous and particulate radioactivity monitor at least once per 12 hours;
- b. Monitoring the reactor cavity sump discharge, and the containment floor drain sump discharge and inventory at least once per 12 hours;
- c. Measurement of the CONTROLLED LEAKAGE to the reactor coolant pump seals when the Reactor Coolant System pressure is 2235 ± 20 psig at least once per 31 days with the modulating valve fully open. The provisions of Specification 4.0.4 are not applicable for entry into MODE 3 or 4;
- d. Performance of a Reactor Coolant System water inventory balance at least once per 72 hours; and
- e. Monitoring the Reactor Head Flange Leakoff System at least once per 24 hours.

4.4.6.2.2 Each Reactor Coolant System Pressure Isolation Valve specified in Table 3.4-1 shall be demonstrated OPERABLE by verifying leakage to be within its limit:

- a. At least once per 18 months,
- b. Prior to entering MODE 2 whenever the plant has been in COLD SHUTDOWN for 7 days or more and if leakage testing has not been performed in the previous 9 months,
- c. Prior to returning the valve to service following maintenance, repair or replacement work on the valve, and
- d. Within 24 hours following valve actuation due to automatic or manual action or flow through the valve except for valves RH 8701 A and B and RH 8702 A and B.

The provisions of Specification 4.0.4 are not applicable for entry into MODE 3 or 4.

EMERGENCY CORE COOLING SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- b. At least once per 31 days and within 6 hours after each solution volume increase of greater than or equal to 70 gallons by verifying the boron concentration of the accumulator solution. This surveillance is not required when the volume increase makeup source is the RWST and the RWST has not been diluted since verifying that the RWST boron concentration is within the accumulator boron concentration limit, and
-
- c. At least once per 31 days when the RCS pressure is above 1000 psig by verifying that the MCC compartment for each accumulator isolation valve is open and tagged out of service.

4.5.1.2 Each accumulator water level and pressure channel shall be demonstrated OPERABLE at least once per 18 months by the performance of a CHANNEL CALIBRATION.

CONTAINMENT SYSTEMS

3/4.6.2 DEPRESSURIZATION AND COOLING SYSTEMS

CONTAINMENT SPRAY SYSTEM

LIMITING CONDITION FOR OPERATION

3.6.2.1 Two independent Containment Spray Systems shall be OPERABLE with each Spray System capable of taking suction from the RWST and transferring suction to the containment sump.

APPLICABILITY: MODES 1, 2, 3, and 4.

ACTION:

With one Containment Spray System inoperable, restore the inoperable Spray System to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours; restore the inoperable Spray System to OPERABLE status within the next 48 hours or be in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.6.2.1 Each Containment Spray System shall be demonstrated OPERABLE:

- a. At least once per 31 days by 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 its correct position;
- b. By verifying, that on recirculation flow, each pump develops a discharge pressure of greater than or equal to 265 psig when tested pursuant to Specification 4.0.5;
- c. At least once per 18 months during shutdown, by:
 - 1) Verifying that each automatic valve in the flow path actuates to its correct position on a Containment Spray Actuation test signal, and
 - 2) Verifying that each spray pump starts automatically on a Containment Spray Actuation test signal.
- d. At least once per 10 years by performing an air or smoke flow test through each spray header and verifying each spray nozzle is unobstructed.

CONTAINMENT SYSTEMS

3/4.6.4 COMBUSTIBLE GAS CONTROL

HYDROGEN MONITORS

LIMITING CONDITION FOR OPERATION

3.6.4.1 Two independent containment hydrogen monitors shall be OPERABLE.*

APPLICABILITY: MODES 1 and 2.

ACTION:

- a. With one hydrogen monitor inoperable, restore the inoperable monitor to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.
- b. With both hydrogen monitors inoperable, restore at least one monitor to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.1 Each hydrogen monitor shall be demonstrated OPERABLE by the performance of a CHANNEL CHECK and a check that the monitor is in standby mode at least once per 12 hours, an ANALOG CHANNEL OPERATIONAL TEST at least once per 92 days, and at least once each refueling interval by performing a CHANNEL CALIBRATION using five gas samples which shall cover the range from zero volume percent hydrogen (100%N₂) to greater than 20 volume percent hydrogen, balance nitrogen.

*The monitors must be in standby mode to meet the requirement in NUREG-0737, Item II.F.1.6.

CONTAINMENT SYSTEMS

ELECTRIC HYDROGEN RECOMBINERS

LIMITING CONDITION FOR OPERATION

3.6.4.2 Two independent Hydrogen Recombiner Systems shall be OPERABLE.

APPLICABILITY: MODES 1 and 2

ACTION:

With one Hydrogen Recombiner System inoperable, restore the inoperable system to OPERABLE status within 30 days or be in at least HOT STANDBY within the next 6 hours.

SURVEILLANCE REQUIREMENTS

4.6.4.2 Each Hydrogen Recombiner System shall be demonstrated OPERABLE:

- a. At least once each refueling interval, during a Recombiner System functional test that the minimum heater sheath temperature increases to greater than or equal to 1200°F within 90 minutes. Upon reaching 1200°F, increase the temperature controller to maximum setting for 2 minutes and verify that the power is greater than or equal to 38 kW, and
- b. At least once per 18 months by:
 - 1) Performing a CHANNEL CALIBRATION of all recombiner instrumentation and control circuits,
 - 2) Verifying through a visual examination that there is no evidence of abnormal conditions within the recombiners enclosure (i.e., loose wiring or structural connections, deposits of foreign materials, etc.), and
 - 3) Verifying the integrity of all heater electrical circuits by performing a resistance to ground test following the above required functional test. The resistance to ground for any heater phase shall be greater than or equal to 10,000 ohms.

PLANT SYSTEMS

AUXILIARY FEEDWATER SYSTEM

LIMITING CONDITION FOR OPERATION

3.7.1.2 At least two independent steam generator auxiliary feedwater pumps and associated flow paths shall be OPERABLE with:

- a. One motor-driven auxiliary feedwater pump capable of being powered from an ESF Bus, and
- b. One direct-driven diesel auxiliary feedwater pump capable of being powered from a direct-drive diesel engine and an OPERABLE Diesel Fuel Supply System consisting of a day tank containing a minimum of 420 gallons of fuel.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

- a. With one auxiliary feedwater pump inoperable, restore the required auxiliary feedwater pumps to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.
- b. With both auxiliary feedwater pumps inoperable, be in at least HOT STANDBY within 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.2.1 Each auxiliary feedwater pump shall be demonstrated OPERABLE:

- a. At least once per 31 days by:
 - 1) 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 its correct position.
- b. At least once per 92 days on a STAGGERED TEST BASIS by:
 - 1) Verifying that the pump develops a differential pressure of greater than or equal to 1825 psid at a flow of greater than or equal to 85 gpm on the recirculation flow when tested pursuant to Specification 4.0.5;

PLANT SYSTEMS

SURVEILLANCE REQUIREMENTS (Continued)

- c. At least once per 18 months during shutdown by:
- 1) Verifying that each automatic valve in the flow path actuates to its correct position upon receipt of an Auxiliary Feedwater Actuation test signal, and
 - 2) Verifying that the motor-driven pump and the direct-driven diesel pump start automatically upon receipt of each of the following test signals:
 - a) SI or
 - b) Steam Generator Water Level Low-Low from one steam generator, or
 - c) Undervoltage on Reactor Coolant Pump 6.9 kV Buses (2/4), or
 - d) ESF Bus 141 for Unit 1 (Bus 241 for Unit 2) Undervoltage (motor-driven pump only).

4.7.1.2.2 An auxiliary feedwater flow path to each steam generator shall be demonstrated OPERABLE following each COLD SHUTDOWN of greater than 30 days prior to entering MODE 2 by verifying normal flow to each steam generator.

4.7.1.2.3 The auxiliary feedwater pump diesel shall be demonstrated OPERABLE:

- a. At least once per 31 days by verifying the fuel level in its day tank;
- b. At least once per 92 days by verifying that a drain sample of diesel fuel from its day tank, obtained in accordance with ASTM-D4057-1981 is within the acceptable limits specified in Table 1 of ASTM-D975-1977 when checked for viscosity, water, and sediment; and
- c. At least once per 18 months, during shutdown, by subjecting the diesel to an inspection in accordance with its manufacturer's recommendations for this class of service.

PLANT SYSTEMS

CONDENSATE STORAGE TANK

LIMITING CONDITION FOR OPERATION

3.7.1.3 The condensate storage tank (CST) shall be OPERABLE with a contained water level of at least 40%.

APPLICABILITY: MODES 1, 2, and 3.

ACTION:

With the CST inoperable, within 4 hours either:

- a. Restore the CST to OPERABLE status or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours, or
- b. Demonstrate the OPERABILITY of the Essential Service Water System as a backup supply to the auxiliary feedwater pumps and restore the CST to OPERABLE status within 7 days or be in at least HOT STANDBY within the next 6 hours and in HOT SHUTDOWN within the following 6 hours.

SURVEILLANCE REQUIREMENTS

4.7.1.3.1 The CST shall be demonstrated OPERABLE at least once per 12 hours by verifying the contained water level is within its limits when the tank is the supply source for the auxiliary feedwater pumps.

4.7.1.3.2 The Essential Service Water System shall be demonstrated OPERABLE at least once per 12 hours by performing the surveillance specified in Specification 4.7.4a. whenever the Essential Service Water System is the supply source for the auxiliary feedwater pumps.

RADIOACTIVE EFFLUENTS

GAS DECAY TANKS

LIMITING CONDITION FOR OPERATION

3.11.2.6 The quantity of radioactivity contained in each gas decay tank shall be limited to less than or equal to 5×10^4 Curies of noble gases (considered as Xe-133 equivalent).

APPLICABILITY: At all times.

ACTION:

- a. With the quantity of radioactive material in any gas decay tank exceeding the above limit, immediately suspend all additions of radioactive material to the tank and, within 48 hours, reduce the tank contents to within the limit, and describe the events leading to this condition in the next Radioactive Effluent Release Report, pursuant to Specification 6.9.1.7.
- b. The provisions of Specification 3.0.3 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.6 The quantity of radioactive material contained in each gas decay tank shall be determined to be within the above limit at least once per 7 days when radioactive materials are being added to the tank, and at least once per 24 hours during primary coolant system degassing operation.