



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. STN 50-454

BYRON STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 15
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 February 18, 1987, supplemented November 17, 1987 and January 8, 1988, 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 Specification 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:

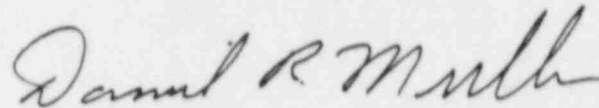
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(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 15 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



Daniel R. Muller, Director
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 22, 1988



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. STN 50-455

BYRON STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 15
License No. NPF-66

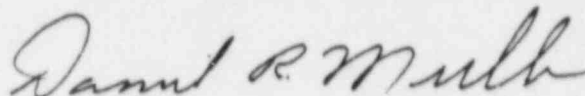
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated February 18, 1987, supplemented November 17, 1987 and January 8, 1988, complies with the standards and requirements of the Atomic Energy Act of 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-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. 15 and revised by Attachment 2 to NPF-60, and the Environmental Protection Plan contained in Appendix B, both of which are 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



Daniel R. Muller, Director
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 22, 1988

ATTACHMENT TO LICENSE AMENDMENT NOS. 15 AND 15
FACILITY OPERATING LICENSE NOS. NFF-37 AND NPF-66
DOCKET NOS. STN-50-454 AND STN 50-455

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
3/4 3-58	3/4 3-58
3/4 3-59	3/4 3-59
3/4 3-60	3/4 3-60
3/4 11-2	3/4 11-2

TABLE 3.3-12

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>ACTION</u>
1. Radioactivity Monitors Providing Alarm and Automatic Termination of Release		
a. Liquid Radwaste Effluent Line (ORE-PR001)	1	31
b. Fire and Oil Sump Discharge (ORE-PR005)	1	34
c. Condensate Polisher Sump Discharge (ORE-PR041)	1	34
2. Radioactivity Monitors Providing Alarm But Not Providing Automatic Termination of Release		
a. Essential Service Water		
1) Unit 1		
a) RCFC 1A and 1C Outlet (1RE-PR002)	1	32
b) RCFC 1B and 1D Outlet (1RE-PR003)	1	32
2) Unit 2		
a) RCFC 2A and 2C Outlet (2RE-PR002)	1	32
b) RCFC 2B and 2D Outlet (2RE-PR003)	1	32
b. Station Blowdown Line (ORE-PR010)	1	32
3. Flow Rate Measurement Devices		
a. Liquid Radwaste Effluent Line (Loop-WX001)	1	33
b. Station Blowdown Line (Loop-CW032)	1	33

TABLE 3.3-12 (Continued)

ACTION STATEMENTS

ACTION 31 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 14 days provided that prior to initiating a release:

- a. At least two independent samples are analyzed in accordance with Specification 4.11.1.1.1, and
- b. At least two technically qualified members of the facility staff independently verify the release rate calculations and discharge line valving.

Otherwise, suspend release of radioactive effluents via this pathway.

ACTION 32 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided that, at least once per 12 hours, grab samples are collected and analyzed for radioactivity at a lower limit of detection of no more than 10^{-7} microCurie/ml.

ACTION 33 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided the flow rate is estimated at least once per 4 hours during actual releases. Pump performance curves generated in place may be used to estimate flow.

ACTION 34 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided grab samples are analyzed for radioactivity at a lower limit of detection as specified in Table 4.11-1:

- a. At least once per 12 hours when the specific activity of the secondary coolant is greater than 0.01 microCurie/gram DOSE EQUIVALENT I-131, or
- b. At least once per 24 hours when the specific activity of the secondary coolant is less than or equal to 0.01 microCurie/gram DOS EQUIVALENT I-131.

TABLE 4.3-8
RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>DIGITAL CHANNEL OPERATIONAL TEST</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>
1. Radioactivity Monitors Providing Alarm and Automatic Termination of Release					
a. Liquid Radwaste Effluent Line (ORE-PR001)	D	P	R(3)#	Q(1)	N.A.
b. Fire and Oil Sump Discharge (ORE-PR005)	D	M	R(3)	Q(1)	N.A.
c. Condensate Polisher Sump Discharge (ORE-PR041)	D	M	R(3)	Q(1)	N.A.
2. Radioactivity Monitors Providing Alarm but Not Providing Automatic Termination of Release					
a. Essential Service Water					
1) Unit 1					
a) RCFC 1A and 1C Outlet (1RE-PR002)	D	M	R(3)#	Q(2)	N.A.
b) RCFC 1B and 1D Outlet (1RE-PR003)	D	M	R(3)#	Q(2)	N.A.
2) Unit 2					
a) RCFC 2A and 2C Outlet (2RE-PR002)	D	M	R(3)#	Q(2)	N.A.
b) RCFC 2B and 2D Outlet (2RE-PR003)	D	M	R(3)#	Q(2)	N.A.
b. Station Blowdown Line (ORE-PR010)	D	M	R(3)#	Q(2)	N.A.
3. Flow Rate Measurement Devices					
a. Liquid Radwaste Effluent Line (Loop-WX001)	D(4)	N.A.	R#	N.A.	Q
b. Station Blowdown Line (Loop-CW032)	D(4)	N.A.	R	N.A.	Q

TABLE 4.11-1

RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM

LIQUID RELEASE TYPE	SAMPLING FREQUENCY	MINIMUM ANALYSIS FREQUENCY	TYPE OF ACTIVITY ANALYSIS	LOWER LIMIT OF DETECTION (LLD) ⁽¹⁾ ($\mu\text{Ci}/\text{ml}$)
1. Batch Release Tanks ⁽²⁾	P Each Batch	P Each Batch	Principal Gamma Emitters ⁽³⁾	5×10^{-7}
			I-131	1×10^{-6}
	P One Batch/M	M	Dissolved and Entrained Gases (Gamma Emitters)	1×10^{-5}
	P Each Batch	M Composite ⁽⁴⁾	H-3	1×10^{-5}
			Gross Alpha	1×10^{-7}
	P Each Batch	Q Composite ⁽⁴⁾	Sr-89, Sr-90	5×10^{-8}
Fe-55			1×10^{-6}	
2. Continuous Releases ⁽⁵⁾	Continuous ⁽⁶⁾	W Composite ⁽⁶⁾	Principal Gamma Emitters ⁽³⁾	5×10^{-7}
			I-131	1×10^{-6}
a. Circulating Water Blowdown	M Grab Sample	M	Dissolved and Entrained Gases (Gamma Emitters)	1×10^{-5}
b. Waste Water Treatment System Discharge to Flume	Continuous ⁽⁶⁾	M Composite ⁽⁶⁾	H-3	1×10^{-5}
			Gross Alpha	1×10^{-7}
c. Condensate Polisher Sump Discharge	Continuous ⁽⁶⁾	Q Composite ⁽⁶⁾	Sr-89, Sr-90	5×10^{-8}
			Fe-55	1×10^{-6}



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. STN 50-456

BRAIDWOOD STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 6
License No. NPF-72

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated February 18, 1987, supplemented November 17, 1987 and January 8, 1988, 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 Specification as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-72 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 6 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

Leard G. Oshen

FOR
Daniel R. Muller, Director
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 22, 1988



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. STN 50-457

BRAIDWOOD STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 6
License No. NPF-75

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated February 18, 1987, supplemented November 17, 1987 and January 8, 1988, 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 Specification as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-75 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 6 and the Environmental Protection Plan contained in Appendix B, both of which were attached to License No. NPF-72, dated July 2, 1987, are hereby incorporated into this license. Attachment 2 contains revisions to Appendix A which 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

Leah O'Brien

for

Daniel R. Muller, Director
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: March 22, 1988

ATTACHMENT TO LICENSE AMENDMENT NOS. 6 AND 6
AND FACILITY OPERATING LICENSE NOS. NPF-72 AND NPF-75
DOCKET NOS. STN-50-456 AND STN 50-457

Revise Appendix A as follows:

<u>Remove Pages</u>	<u>Insert Pages</u>
3/4 3-60	3/4 3-60
3/4 3-61	3/4 3-61
3/4 3-62	3/4 3-62
3/4 11-2	3/4 11-2

BRAIDWOOD - UNITS 1 & 2

3/4 3-60

Amendment No. 6

TABLE 3.3-12

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION

<u>INSTRUMENT</u>	<u>MINIMUM CHANNELS OPERABLE</u>	<u>ACTION</u>
1. Radioactivity Monitors Providing Alarm and Automatic Termination of Release		
a. Liquid Radwaste Effluent Line (ORE-PR001)	1	31
b. Fire and Oil Sump (ORE-PR005)	1	34
c. Condensate Polisher Sump Discharge (ORE-PR041)	1	34
2. Radioactivity Monitors Providing Alarm But Not Providing Automatic Termination of Release		
a. Essential Service Water		
1) Unit 1		
a) RCFC 1A and 1C Outlet (1RE-PR002)	1	32
b) RCFC 1B and 1D Outlet (1RE-PR003)	1	32
2) Unit 2		
a) RCFC 2A and 2C Outlet (2RE-PR002)	1	32
b) RCFC 2B and 2D Outlet (2RE-PR003)	1	32
b. Station Blowdown Line (ORE-PR010)	1	32
3. Flow Rate Measurement Devices		
a. Liquid Radwaste Effluent Line (Loop-WX001)	1	33
b. Station Blowdown Line (Loop-CW032)	1	33

TABLE 3.3-12 (Continued)

ACTION STATEMENTS

ACTION 31 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 14 days provided that prior to initiating a release:

- a. At least two independent samples are analyzed in accordance with Specification 4.11.1.1.1, and
- b. At least two technically qualified members of the facility staff independently verify the release rate calculations and discharge line valving.

Otherwise, suspend release of radioactive effluents via this pathway.

ACTION 32 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided that, at least once per 12 hours, grab samples are collected and analyzed for radioactivity at a lower limit of detection of no more than 10^{-7} microCurie/ml.

ACTION 33 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided the flow rate is estimated at least once per 4 hours during actual releases. Pump performance curves generated in place may be used to estimate flow.

ACTION 34 - With the number of channels OPERABLE less than required by the Minimum Channels OPERABLE requirement, effluent releases via this pathway may continue for up to 30 days provided grab samples are analyzed for radioactivity at a lower limit of detection as specified in Table 4.11-1:

- a. At least once per 12 hours when the specific activity of the secondary coolant is greater than 0.01 microCurie/gram DOSE EQUIVALENT I-131, or
- b. At least once per 24 hours when the specific activity of the secondary coolant is less than or equal to 0.01 microCurie/gram DOSE EQUIVALENT I-131.

TABLE 4.3-8

RADIOACTIVE LIQUID EFFLUENT MONITORING INSTRUMENTATION SURVEILLANCE REQUIREMENTS

<u>INSTRUMENT</u>	<u>CHANNEL CHECK</u>	<u>SOURCE CHECK</u>	<u>CHANNEL CALIBRATION</u>	<u>DIGITAL CHANNEL OPERATIONAL TEST</u>	<u>ANALOG CHANNEL OPERATIONAL TEST</u>
1. Radioactivity Monitors Providing Alarm and Automatic Termination of Release					
a. Liquid Radwaste Effluent Line (ORE-PR001)	D	P	R(3)#	Q(1)	N.A.
b. Fire and Oil Sump Discharge (ORE-PR005)	D	M	R(3)	Q(1)	N.A.
c. Condensate Polisher Sump Discharge (ORE-PR041)	D	M	R(3)	Q(1)	N.A.
2. Radioactivity Monitors Providing Alarm But Not Providing Automatic Termination of Release					
a. Essential Service Water					
1) Unit 1					
a) RCFC 1A and 1C Outlet (1RE-PR002)	D	M	R(3)#	Q(2)	N.A.
b) RCFC 1B and 1D Outlet (1RE-PR003)	D	M	R(3)#	Q(2)	N.A.
2) Unit 2					
a) RCFC 2A and 2C Outlet (2RE-PR002)	D	M	R(3)#	Q(2)	N.A.
b) RCFC 2B and 2D Outlet (2RE-PR003)	D	M	R(3)#	Q(2)	N.A.
b. Station Blowdown Line (ORE-PR010)	D	M	R(3)#	Q(2)	N.A.
3. Flow Rate Measurement Devices					
a. Liquid Radwaste Effluent Line (Loop-WX001)	D(4)	N.A.	R#	N.A.	Q
b. Station Blowdown Line (Loop-CW032)	D(4)	N.A.	R	N.A.	Q

TABLE 4.11-1

RADIOACTIVE LIQUID WASTE SAMPLING AND ANALYSIS PROGRAM

LIQUID RELEASE TYPE	SAMPLING FREQUENCY	MINIMUM ANALYSIS FREQUENCY	TYPE OF ACTIVITY ANALYSIS	LOWER LIMIT OF DETECTION (LLD) ⁽¹⁾ ($\mu\text{Ci}/\text{ml}$)
1. Batch Release Tanks ⁽²⁾	P Each Batch	P Each Batch	Principal Gamma Emitters ⁽³⁾	5×10^{-7}
			I-131	1×10^{-6}
	P One Batch/M	M	Dissolved and Entrained Gases (Gamma Emitters)	1×10^{-5}
	P Each Batch	M Composite ⁽⁴⁾	H-3	1×10^{-5}
			Gross Alpha	1×10^{-7}
	P Each Batch	Q Composite ⁽⁴⁾	Sr-89, Sr-90	5×10^{-8}
			Fe-55	1×10^{-6}
2. Continuous Releases ⁽⁵⁾	Continuous ⁽⁶⁾	W Composite ⁽⁶⁾	Principal Gamma Emitters ⁽³⁾	5×10^{-7}
			I-131	1×10^{-6}
a. Circulating Water Blowdown	M Grab Sample	M	Dissolved and Entrained Gases (Gamma Emitters)	1×10^{-5}
b. Waste Water Treatment Discharge to Circulating Water Discharge	Continuous ⁽⁶⁾	M Composite ⁽⁶⁾	H-3	1×10^{-5}
			Gross Alpha	1×10^{-7}
c. Condensate Polisher Sump Discharge	Continuous ⁽⁶⁾	Q Composite ⁽⁶⁾	Sr-89, Sr-90	5×10^{-8}
			Fe-55	1×10^{-6}