

Docket Nos. STN 50-454, STN 50-455
and STN 50-456, STN 50-457

March 22, 1988

Mr. L. D. Butterfield, Jr.
Nuclear Licensing Manager
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

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Dear Mr. Butterfield:

The Commission has issued the enclosed Amendment No. 15 to Facility Operating License No. NPF-37 and Amendment No. 15 to Facility Operating License No. NPF-66 for the Byron Station, Unit Nos. 1 and 2, respectively and Amendment No. 6 to Facility Operating License No. NPF-72, and Amendment No. 6 to Facility Operating License No. NPF-75 for Braidwood Station, Units No. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications in response to your application transmitted by letter dated February 18, 1987, supplemented November 17, 1987 and January 8, 1988.

These amendments approve changes to the Technical Specifications that add two radiation monitors in each station and add a requirement that a composite sample of sump effluent be taken prior to discharge into the circulating water system.

A copy of the related Safety Evaluation is enclosed. A Notice of Issuance will be included in the Commission's next regular biweekly Federal Register notice.

Sincerely,

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Stephen P. Sands, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Leonard N. Olshan, Project Manager
Project Directorate III-2
Division of Reactor Projects - III,
IV, V and Special Projects

Enclosures:

- | | |
|-------------------------------|------------------------------|
| 1. Amendment No. 15 to NPF-37 | 3. Amendment No. 6 to NPF-72 |
| 2. Amendment No. 15 to NPF-66 | 4. Amendment No. 6 to NPF-75 |
| 5. Safety Evaluation | |

cc: w/enclosures
See next page

w/changes made
Olshan
3/21/88

PDIII-2:PM
LOlshan:bj
3/13/88

~~SPS~~
PDIII-2:PM
SSands
3/22/88

PDIII-2:LA
LLuther
1/88

OGC-Rockville
3/21/88

PDIII-2:PD
DMuller
3/29/88

Mr. L. D. Butterfield, Jr.
Commonwealth Edison Company

Byron/Braidwood

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Mr. L. D. Butterfield, Jr.
Commonwealth Edison Company

- 2 -

Byron/Braidwood

cc:

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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:

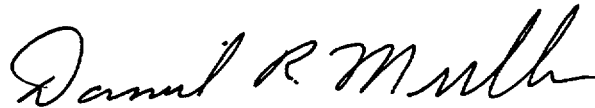
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P PDR

(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. NPF-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

BYRON - UNITS 1 & 2

3/4 3-58

AMENDMENT NO. 15

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⁾ (µCi/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



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

Leaul Oshra
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

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⁾
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}



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 15 TO FACILITY OPERATING LICENSE NO. NPF-37,
AMENDMENT NO. 15 TO FACILITY OPERATING LICENSE NO. NPF-66,
AMENDMENT NO. 6 TO FACILITY OPERATING LICENSE NO. NPF-72
AND AMENDMENT NO. 6 TO FACILITY OPERATING LICENSE NO. NPF-75
COMMONWEALTH EDISON COMPANY
BYRON STATION, UNITS 1 AND 2
BRAIDWOOD STATION, UNITS 1 AND 2
DOCKET NOS. STN 50-454, STN 50-455, STN 50-456, AND STN 50-457
TAC NOS. 64719, 64720, 67113, AND 67114

1.0 INTRODUCTION

By letter dated February 18, 1987, supplemented by letters dated November 17, 1987 and January 8, 1988, Commonwealth Edison Company (the licensee) requested a change to the Technical Specifications for the Byron Station, Units 1 and 2, and Braidwood Station, Units 1 and 2, relating to the addition of two radioactive liquid effluent monitoring instruments at each station and the addition of a requirement that a composite sample of sump effluent be taken prior to discharge into the circulating water system. The licensee requested changes to Table 3.3-12, "Radioactive Liquid Effluent Monitoring Instrumentation," 3.3-12, "Action Statements," 4.3-8, "Radioactive Liquid Effluent Monitoring Instrumentation Surveillance Requirements," and 4.11-1, "Radioactive Liquid Waste Sampling and Analysis Program".

2.0 DISCUSSION

The licensee proposes that the Technical Specifications be revised for the addition of two new radioactive liquid effluent sources per station, their associated monitoring instrumentation, and modifications to the surveillance requirements presented in the Technical Specifications.

The two new release points per station are the condensate cleanup system sump and the fire and oil sump. The Condensate Cleanup (CP) System was proposed as a new release point because operating experience has indicated the need to run the system during normal plant operation. This system was originally intended to be utilized for system flushing during startup. The potential therefore exists for low level radioactivity in the CP sump from regeneration effluent and system leakage. Because activity levels are

anticipated to be negligible and water quality is expected to be acceptable for environmental discharge, sump discharge will be routed to the flume after being monitored. On detection of an unacceptable activity level, the added monitor will alarm, stop sump discharge, and terminate CP operation.

The original plant design for turbine building equipment and floor drains was to collect drain effluent into the oil separator, then route the separated water directly to the radwaste treatment system for processing and release via the release tank. Present operating experience has shown that the water volume is higher than originally anticipated, generating a heavy load for the radwaste treatment system for a negligible reduction in activity release. Therefore, the licensee is proposing that the separated water will be drained to the fire and oil sump, monitored for potential radioactivity, sent to the treated run-off system to ensure environmental standards are met, and then released to the flume. On detection of unacceptable activity levels, the monitor will alarm and automatically halt sump discharge.

3.0 EVALUATION

The staff has evaluated the radiological aspects of the two radiation monitors and composite samplers to monitor discharge from the turbine building fire and oil sump and the condensate polisher (CP) sump and finds the changes meet the acceptable criteria for the process and effluent radiological monitoring instrumentation and sampling systems based on the following regulations and guidance: (1) 10 CFR Part 20, §20.16 as related to radioactivity monitoring of effluents to unrestricted areas; (2) Regulatory Guides 8.8 and 1.21 as related to sampling frequencies, required analyses, instrument alarm/trip setpoints, calibration and sensitivities, gross beta-gamma measurements, etc; (3) 10 CFR Part 50, Appendix I as related to the numerical guides for design objectives and limiting conditions for operation to meet the criterion "as low as is reasonable achievable" given in Appendix I; (4) General Design Criterion 60 as related to control releases of radioactive materials to the environment, and (5) Drawings showing how the monitors are located in the effluent release path and describing the actuation logic of the monitors and how the monitors isolate the valves as per NUREG-0472, "Standard Radiological Effluent Specifications for PWR's, "Revision 2, February 1980.

The staff finds that the licensee's proposed Technical Specification changes adding the radioactive liquid effluent monitoring instruments to Table 3.3-12, new surveillance requirements for these monitors (Table 4.3-8) and new sampling and analysis requirements (Table 4.11-1), meet the current Standard Technical Specifications and are consistent with 10 CFR Part 20, 10 CFR Part 50 Appendix I, Regulatory Guides 8.8 and 1.21, and General Design Criterion 60.

4.0 FINDING OF NO SIGNIFICANT IMPACT

Pursuant to 10 CFR 51.32 the Commission has previously determined in an environmental assessment of the proposed action published in the Federal

Register that granting this amendment will have no significant impact on the environment (53 FR 8824).

5.0 CONCLUSION

We have concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (2) such activities will be conducted in compliance with the Commission's regulations and the issuance of these amendments will not be inimical to the common defense and security or to the health and safety of the public.

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Dated: March 22, 1988