



UNITED STATES
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

August 13, 1997

50-454/455

50-456/457

Ms. Irene Johnson, Acting Manager
Nuclear Regulatory Services
Commonwealth Edison Company
Executive Towers West III
1400 Opus Place, Suite 500
Downers Grove, IL 60515

SUBJECT: ISSUANCE OF AMENDMENTS (TAC NOS. M99038, M99039, M99036 AND M99037)

Dear Ms. Johnson:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 92 to Facility Operating License No. NPF-37 and Amendment No. 92 to Facility Operating License No. NPF-66 for the Byron Station, Unit Nos. 1 and 2, respectively, and Amendment No. 85 to Facility Operating License No. NPF-72 and Amendment No. 85 to Facility Operating License No. NPF-77 for the Braidwood Station, Unit Nos. 1 and 2, respectively. The amendments are in response to your application dated June 9, 1997.

The amendments authorize a change to the realistic dose values for the process gas system rupture in Section 15.0 of the Byron/Braidwood (B/B) Updated Final Safety Analysis Report (UFSAR). During preparation of a UFSAR change package, Commonwealth Edison Company discovered that the Final Safety Analysis Report (FSAR) had not been updated to correct an error from the previous revision of the dose calculation. Since the correct dose value is greater than that previously reported, the consequences of the accident had increased, and an unreviewed safety question resulted.

These amendments are being issued pursuant to the requirements of 10 CFR 50.59(c) because the changes were identified as an unreviewed safety question. No change to the Technical Specifications is required by these amendments.

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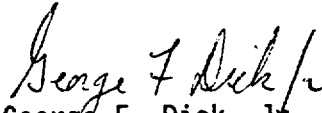
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I. Johnson

- 2 -

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

Sincerely,



George F. Dick, Jr., Senior Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

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

Enclosures: 1. Amendment No. 92 to NPF-37
2. Amendment No. 92 to NPF-66
3. Amendment No. 85 to NPF-72
4. Amendment No. 85 to NPF-77
5. Safety Evaluation

cc w/encl: see next page

I. Johnson

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

Sincerely,

ORIGINAL SIGNED BY:

George F. Dick, Jr., Senior Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-454, STN 50-455,
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cc w/encl: see next page

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NAME	SBAILEY	GDICK	CMOORE	J Hill	CMILLER	RCAPRA
DATE	07/21/97	07/21/97	07/21/97	07/22/97	07/21/97	08/12/97

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with comments as noted. Amendment not to
be issued prior to 8/12/97

I. Johnson

- 2 -

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

Sincerely,

ORIGINAL SIGNED BY:

George F. Dick, Jr., Senior Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-454, STN 50-455,
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with comments as noted. Amendment not to
be issued prior to 8/12/97

I. Johnson
Commonwealth Edison Company

cc:

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Braceville, IL 60407



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. 92
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 June 9, 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 to authorize revision of the Updated Final Safety Analysis Report (UFSAR) as set forth in the application for amendment by the licensee dated June 9, 1997. The licensee shall update the UFSAR to change the realistic dose values for the process gas system rupture in Section 15.0, as authorized by this amendment, in accordance with 10 CFR 50.71(e).

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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

Date of Issuance: August 13, 1997



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. STN 50-455

BYRON STATION, UNIT NO. 2

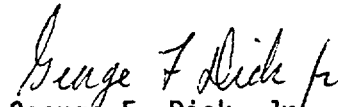
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 92
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 June 9, 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 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 to authorize revision of the Updated Final Safety Analysis Report (UFSAR) as set forth in the application for amendment by the licensee dated June 9, 1997. The licensee shall update the UFSAR to change the realistic dose values for the process gas system rupture in Section 15.0, as authorized by this amendment, in accordance with 10 CFR 50.71(e).

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

Date of Issuance: August 13, 1997



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. STN 50-456

BRAIDWOOD STATION, UNIT NO. 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 85
License No. NPF-72

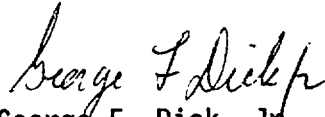
1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated June 9, 1997, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act) and the Commission's rules and 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 to authorize revision of the Updated Final Safety Analysis Report (UFSAR) as set forth in the application for amendment by the licensee dated June 9, 1997. The licensee shall update the UFSAR to change the realistic dose values for the process gas system rupture in Section 15.0, as authorized by this amendment, in accordance with 10 CFR 50.71(e).

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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

Date of Issuance: August 13, 1997



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. STN 50-457

BRAIDWOOD STATION, UNIT NO. 2

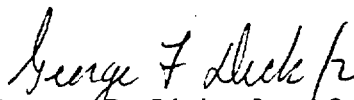
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.85
License No. NPF-77

1. The Nuclear Regulatory Commission (the Commission) has found that:
 - A. The application for amendment by Commonwealth Edison Company (the licensee) dated June 9, 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 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 to authorize revision of the Updated Final Safety Analysis Report (UFSAR) as set forth in the application for amendment by the licensee dated June 9, 1997. The licensee shall update the UFSAR to change the realistic dose values for the process gas system rupture in Section 15.0, as authorized by this amendment, in accordance with 10 CFR 50.71(e).

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

Date of Issuance: August 13, 1997



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NO. 92 TO FACILITY OPERATING LICENSE NO. NPF-37,
AMENDMENT NO. 92 TO FACILITY OPERATING LICENSE NO. NPF-66,
AMENDMENT NO. 85 TO FACILITY OPERATING LICENSE NO. NPF-72,
AND AMENDMENT NO. 85 TO FACILITY OPERATING LICENSE NO. NPF-77
COMMONWEALTH EDISON COMPANY
BYRON STATION, UNIT NOS. 1 AND 2
BRAIDWOOD STATION, UNIT NOS. 1 AND 2
DOCKET NOS. STN 50-454, STN 50-455, STN 50-456 AND STN 50-457

1.0 INTRODUCTION

By letter dated June 9, 1997, Commonwealth Edison Company (ComEd, the licensee) proposed to change the realistic dose values for the process gas system rupture in Section 15.0 of the Byron/Braidwood (B/B) Updated Final Safety Analysis Report (UFSAR). During preparation of a UFSAR change package, ComEd discovered that the Final Safety Analysis Report (FSAR) had not been updated to correct an error from the previous revision of the dose calculation. Since the correct dose value is greater than that previously reported, ComEd determined that the consequences of the accident had increased, and an unreviewed safety question resulted. In accordance with the provisions in 10 CFR 50.59(c), ComEd submitted the change for staff review and approval pursuant to the provisions of 10 CFR 50.90.

The doses reported in UFSAR Section 15.0 for the process gas system rupture (Table 15.0-11 for Byron, and Table 15.0-12 for Braidwood) are determined based on the limiting event for that system, a waste gas storage tank rupture, which is described in UFSAR Section 15.7.1.3. Two sets of doses are reported: realistic doses and conservative doses. Regulatory Guide (RG) 1.70, "Standard Format and Content of Safety Analysis Reports for Nuclear Power Plants," states realistic dose evaluations are not required, but may be included in the UFSAR to illustrate the degree of conservatism in the design calculations (e.g., the conservative doses for B/B). The proposed changes are to the realistic doses. The conservative doses are not affected.

For Byron, the realistic dose at the exclusion area boundary (EAB) is increased from 6.52E-03 rem to 6.53E-03 rem, and the dose at the low population zone (LPZ) is increased from 1.50E-04 rem to 1.51E-04 rem. For Braidwood, the dose at the EAB is increased from 7.11E-03 rem to 7.14E-03 rem, and the dose at the LPZ is increased from 6.62E-04 rem to 6.63E-04 rem.

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These realistic doses from the postulated accident are acceptably small fractions (i.e., less than 10 percent) of the 25 rem whole body dose limit required by 10 CFR 100.11. They are also less than the dose criteria of 0.5 rem at the EAB, as established in Standard Review Plan (SRP) Section 11.3, Branch Technical Position (BTP) ETSB 11-5, "Postulated Radioactive Releases Due to a Waste Gas System Leak or Failure" (NUREG-0800).

2.0 EVALUATION

In Section 11.3 of NUREG-0876, "Safety Evaluation Report Related to the Operation of Byron Station, Units 1 and 2," and NUREG-1002, "Safety Evaluation Report Related to the Operation of Braidwood Station, Units 1 and 2," the staff reported on its evaluation of the licensee's gaseous waste management system. The staff reviewed the system with respect to the acceptance criteria of SRP Section 11.3, "Gaseous Waste Management Systems," and concluded that the system is acceptable based on its conformance of the design, design criteria, and design bases to the applicable regulations and RG. The licensee's proposed changes in the calculated realistic dose for a process gas system rupture do not invalidate the staff's previous conclusions.

Technical Specification (TS) 3.11.2.6 restricts the quantity of radioactivity contained in each gas storage tank. As stated in the TS bases, this restriction provides assurance that, in the event of an uncontrolled release of a tank's contents, the resulting maximum (e.g., conservative) whole body dose to an individual at the EAB will not exceed 0.5 rem, the criteria stated in BTP ETSB 11-5. This restriction is not affected by the proposed changes.

Accordingly, the staff finds the following proposed changes to the realistic doses to be acceptable, as they are small fractions of the 10 CFR Part 100 dose criteria.

- (1) For Byron, the dose at the EAB is increased to $6.53\text{E-}03$ rem; the dose at the LPZ is increased to $1.51\text{E-}04$ rem.
- (2) For Braidwood, the dose at the EAB is increased to $7.14\text{E-}03$ rem; the dose at the LPZ is increased to $6.63\text{E-}04$ rem.

3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Illinois State official was notified of the proposed issuance of the amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to the installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20. The NRC staff has determined that the amendments involve no significant increase in the amounts, and no significant change in the types,

of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendments involve no significant hazards consideration, and there has been no public comment on such finding (62 FR 37079). Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendments.

5.0 CONCLUSION

The Commission has 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, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendments will not be inimical to the common defense and security or to the health and safety of the public. The staff, therefore, concludes that the changes, as stated in this Safety Evaluation, are acceptable and hereby authorizes incorporation of said changes into the UFSAR for Byron Station, Units 1 and 2, and Braidwood Station, Units 1 and 2.

Principal Contributor: S. N. Bailey

Date: August 13, 1997