February 28, 19º

Mr. D. L. Farrar
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. M88540 AND M88541)

Dear Mr. Farrar:

The U.S. Nuclear Regulatory Commission (Commission) has issued the enclosed Amendment No. 60 to Facility Operating License No. NPF-72 and Amendment No. 60 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 January 5, 1994, as supplemented by letters dated April 26, 1994, September 30, 1994, and January 12, 1995.

The amendments change the Braidwood Technical Specifications to remove the requirement to verify, every 18 months, that the control room ventilation can be manually isolated. In addition, the commitment to demonstrate annually the control room ventilation integrity as it relates to the chlorine intrusion concern is removed.

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,

Ramin R. Assa, Project Manager
Project Directorate III-2
Division of Reactor Projects - III/IV
Office of Nuclear Reactor Regulation

Docket Nos. STN 50-456 and STN 50-457

Enclosures: 1. Amendment No. 60 to NPF-72
2. Amendment No. 60 to NPF-77
3. Safety Evaluation

cc w/encls: see next page

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cc:

Mr. William P. Poirier
Westinghouse Electric Corporation
Energy Systems Business Unit
Post Office Box 355, Bay 236 West
Pittsburgh, Pennsylvannia 15230

Joseph Gallo
Gallo & Ross
1250 Eye St., N.W., Suite 302
Washington, DC 20005

Regional Administrator
U.S. NRC, Region III
801 Warrenville Road
Lisle, Illinois 60532-4351

Ms. Bridget Little Rorem
Appleseed Coordinator
117 North Linden Street
Essex, Illinois 60935

Howard A. Learner
Environmental Law and Policy
Center of the Midwest
203 North LaSalle Street
Suite 1390
Chicago, Illinois 60601

U.S. Nuclear Regulatory Commission
Braidwood Resident Inspectors Office
Rural Route #1, Box 79
Braceville, Illinois 60407

Mr. Ron Stephens
Illinois Emergency Services
and Disaster Agency
110 East Adams Street
Springfield, Illinois 62706

Chairman
Will County Board of Supervisors
Will County Board Courthouse
Joliet, Illinois 60434

Ms. Lorraine Creek
Rt. 1, Box 182
Manteno, Illinois 60950

Attorney General
500 South Second Street
Springfield, Illinois 62701

Michael Miller, Esquire
Sidley and Austin
One First National Plaza
Chicago, Illinois 60690

George L. Edgar
Newman & Holtzinger, P.C.
1615 L Street, N.W.
Washington, DC 20036

Illinois Dept. of Nuclear Safety
Office of Nuclear Facility Safety
1035 Outer Park Drive
Springfield, Illinois 62704

Commonwealth Edison Company
Braidwood Station Manager
Rt. 1, Box 84
Braceville, Illinois 60407

EIS Review Coordinator
U.S. Environmental Protection Agency
77 W. Jackson Blvd.
Chicago, Illinois 60604-3590

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. 60
License No. NPF-72

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Commonwealth Edison Company (the licensee) dated January 5, 1994, as supplemented by letters dated April 26, 1994, September 30, 1994, and January 12, 1995, 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.

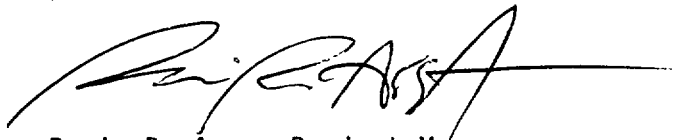
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-72 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 60 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



Ramin R. Assa, 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: February 28, 1995

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. 60
License No. NPF-77

1. The U.S. Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment by Commonwealth Edison Company (the licensee) dated January 5, 1994, as supplemented by letters dated April 26, 1994, September 30, 1994, and January 12, 1995, 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.

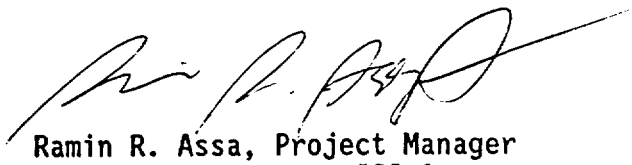
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-77 is hereby amended to read as follows:

(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 60 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. 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 if its issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Ramin R. Assa, 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: February 28, 1995

ATTACHMENT TO LICENSE AMENDMENT NOS. 60 AND 60

FACILITY OPERATING LICENSE NOS. NPF-72 AND NPF-77

DOCKET NOS. STN 50-456 AND STN 50-457

Replace the following pages of the Appendix "A" Technical Specifications with the attached pages. The revised pages are identified by amendment number and contains a vertical line indicating the area of change. The page marked with an asterisk is provided for convenience.

Remove Pages	Insert Pages
*3/4 7-15	*3/4 7-15
3/4 7-16	3/4 7-16

2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample from the Emergency Makeup System obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 0.175% when tested at a temperature of 30°C and a relative humidity of 70%; and

3) Verifying a system flow rate of 6000 cfm ± 10% for the Emergency Makeup System and 49,500 cfm ±10% for the Recirculation System when tested in accordance with ANSI N510-1980.

d. After every 720 hours of Emergency Makeup System operation by verifying within 31 days after removal, that a laboratory analysis of a representative carbon sample obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 0.175% when tested at a temperature of 30°C and a relative humidity of 70%;

e. At least once per 18 months by:

1) Verifying that the pressure drop across the combined HEPA filters and charcoal adsorber banks is less than 6.0 inches Water Gauge while operating the Emergency Makeup System at a flow rate of 6000 cfm ± 10%,

2) Verifying that on a Safety Injection or High Radiation-Control Room Outside Air Intake test signal, the system automatically switches into a makeup mode of control room ventilation with flow through the Emergency Makeup System HEPA filters and charcoal adsorber banks and the recirculation charcoal adsorber;

3)# Verifying that the Emergency Makeup System maintains the control room at a positive nominal pressure of greater than or equal to 1/8 inch Water Gauge relative to ambient pressure in areas adjacent to the control room area when operating an Emergency Makeup System at a flowrate of 6,000 cfm ±10% and the recirculation charcoal adsorber at a flowrate of 49,500 cfm ± 10%.

4) Verifying that the heaters dissipate 27.2 ± 2.7 kW when tested in accordance with ANSI N510-1980.

5)# Verifying that the Emergency Makeup System maintains the Upper Cable Spreading Area at a positive nominal pressure of greater than or equal to 0.02 inches Water Gauge relative to the ambient pressure in areas adjacent to the upper cable spreading area

#Prior to 5% Rated Thermal Power (RTP), Cycle 1, these surveillance requirements are: 3), 5) Verify that the Control Room boundary is maintained at positive pressure with respect to all adjacent areas.

SURVEILLANCE REQUIREMENTS (Continued)

(except for adjacent control room areas pressurized as specified above) when operating an Emergency Makeup System at a flow rate of 6,000 cfm ± 10% and the recirculation charcoal adsorber at a flowrate of 49,500 cfm ± 10%.

f. After each complete or partial replacement of a HEPA filter bank, by verifying that the cleanup system satisfies the in-place penetration testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a DOP test aerosol while operating the Emergency Makeup System at a flow rate of 6000 cfm ± 10%; and

g. After each complete or partial replacement of a charcoal adsorber bank in the Emergency Makeup System by verifying that the cleanup system satisfies the in-place penetration testing acceptance criteria of less than 0.05% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating the system at a flow rate of 6000 cfm ± 10%.

h. At least once per 18 months or (1) after any structural maintenance on the charcoal adsorber housings, or (2) following painting, fire or chemical release in any ventilation zone communicating with the recirculation charcoal adsorber by:

(1) Verifying that the recirculation charcoal adsorber satisfies the in-place penetration testing acceptance criteria of less than 2% total bypass and uses the test procedure guidance in Regulatory Positions C.5.a, and C.5.d of Regulatory Guide 1.52, Revision 2, March 1978, and the system flow rate is 49,500 cfm ± 10% for the recirculation charcoal adsorber;

(2) Verifying, within 31 days after removal, that a laboratory analysis of a representative carbon sample from the recirculation charcoal adsorber obtained in accordance with Regulatory Position C.6.b of Regulatory Guide 1.52, Revision 2, March 1978, meets the laboratory testing criteria of Regulatory Position C.6.a of Regulatory Guide 1.52, Revision 2, March 1978, for a methyl iodide penetration of less than 1% when tested at a temperature of 30°C and a relative humidity of 70%; and

(3) Verifying a system flow rate of 49,500 cfm ± 10% for the Recirculation Charcoal Adsorber when tested in accordance with ANSI N510-1980.

i. After each complete or partial replacement of a charcoal adsorber bank in the Recirculation Charcoal Adsorber System by verifying that the cleanup system satisfies the in-place penetration testing acceptance criteria of less than 0.1% in accordance with ANSI N510-1980 for a halogenated hydrocarbon refrigerant test gas while operating at a system flowrate of 49,500 cfm ± 10%.

j. After every 720 hours of Recirculation Charcoal Adsorber operation by verifying within 31 days after removal, that a laboratory analysis of

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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 60 TO FACILITY OPERATING LICENSE NO. NPF-72

AND AMENDMENT NO. 60 TO FACILITY OPERATING LICENSE NO. NPF-77

COMMONWEALTH EDISON COMPANY

BRAIDWOOD STATION, UNIT NOS. 1 AND 2

DOCKET NOS. STN 50-456 AND STN 50-457

1.0 INTRODUCTION

By letter dated January 5, 1994, Commonwealth Edison Company (ComEd, the licensee) proposed changes to the Braidwood Station, Unit Nos. 1 and 2, Technical Specifications (TS), Section 4.7.6.e.6., which would remove a surveillance requirement to verify, every 18 months, that the control room ventilation system can be isolated manually and placed in the recirculation mode of operation. The operators would initiate this manual isolation in response to a report of a chlorine release in the vicinity of the Braidwood Station. The licensee also requested to remove a commitment to demonstrate control room integrity on a periodic basis.

By letter dated April 26, 1994, ComEd provided a revised evaluation of significant hazards considerations. By letter dated September 30, 1994, the licensee committed to perform periodic surveys in the Braidwood Station's vicinity to ensure that any new chlorine transportation, storage and production would not introduce a new risk to the control room personnel. By letter dated January 12, 1995, the licensee incorporated the commitment to survey the Braidwood Station area for new sources of chlorine in the evaluation of significant hazards considerations.

2.0 BACKGROUND

By letter dated June 3, 1986, the licensee provided an analysis to demonstrate that the chlorine monitors for the control room intake were not required. The licensee's analysis involved a survey of the offsite sources of chlorine within five miles of the station, a calculation of the toxic gas and infiltration, and a probability of the rupture of a chlorine tank car on the Norfolk and Western Railroad. By letter dated March 4, 1987, the NRC staff approved the licensee's proposal to remove the chlorine detectors from the control room ventilation system. In its safety evaluation, the NRC staff required the licensee to demonstrate that the control room ventilation could be isolated, and required the licensee to demonstrate annually the control room integrity as it relates to the chlorine intrusion concern. By letter dated May 6, 1987, the licensee submitted a request to include a TS surveillance to verify that the control room ventilation can be placed in

recirculation mode manually and committed to demonstrate control room integrity. The licensee's commitment and TS surveillance were approved with the issuance of NUREG-1002, Supplement 3, "Safety Evaluation Report" dated May 1987.

3.0 EVALUATION

By letter dated January 5, 1994, the licensee provided a new evaluation and survey to demonstrate that the chlorine hazard to the control room had become practically zero. This analysis was initiated because the Norfolk and Western Railroad tracks near the vicinity of Braidwood Station were removed, thereby reducing the potential for a chlorine spill. The 1986 analysis and subsequent requirement to demonstrate control room ventilation integrity were based on the fact that chlorine was transported on the railroad tracks.

The 1994 analysis was completed by Sargent and Lundy engineers to evaluate the effects of a postulated offsite chlorine release on control room habitability and was conducted in two parts. The first part consisted of calculating the minimum distance from the control room intake as a function of chlorine spillage. This calculation determined that, for a one ton spillage quantity, the minimum distance from the control room intake to meet the Regulatory Guide 1.95 limit of 15 parts per million, is 4900 feet. The calculation also determined the minimum acceptable distance for a stationary 90 ton spillage to be 6.4 miles. The second part of analysis consisted of conducting a survey of stationary users of chlorine and transported shipments of chlorine. Sargent and Lundy conducted the stationary chlorine users survey within the 10 mile radius of the station, because it would envelope the critical radius of 6.4 miles for the largest container size, which is 90 tons. The results of the survey showed that there were no stationary users within ten miles that would pose a toxic threat to the control room personnel. Sargent and Lundy then conducted a transported chlorine survey within a 10 mile radius of the Braidwood Station. The survey indicated that there were no railroads within this radius that could transport chlorine and the largest shipment by truck would be one ton. The analysis determined the probability of an accidental release from a truck on State Route 53 or 129, which are near Braidwood Station, to be 2.0×10^{-6}. The probability that when the concentration of chlorine in the control room reaches toxic limit, it will incapacitate the operators and cause a core damaging accident resulting in fission products release in excess of 10 CFR, Part 100 is below 0.1. With the probability of chlorine release of 2.0×10^{-6}, the overall probability of such an event is, therefore, within the acceptable limits of NUREG-0800, SRP 2.2.3.II. The licensee's analysis concluded that because of low probability of release from a transported chlorine source and no potential for stationary chlorine release that could pose a threat to control room habitability, the commitment to demonstrate annually the control room ventilation integrity as it relates to the chlorine intrusion concern and the surveillance requirement, TS Section 4.7.6.e.6., to demonstrate manual isolation of control room ventilation can be removed.

In addition to the above analysis, the licensee has committed to perform a chlorine survey every 3 years and to perform associated evaluations to ensure that the risk to the control room personnel from any potential chlorine accident is maintained sufficiently small. Additionally, the licensee is committed to document the results in its annual reports. In case the licensee becomes aware of a potential chlorine hazard, either through the survey or other means, the licensee should take appropriate actions to minimize the risk to the control room personnel and inform the NRC in writing (including a reference to this safety evaluation). Finally, the licensee will continue to meet the requirements of NRC's March 4, 1987, Safety Evaluation Report by maintaining a notification communications with Will County, in the event of chlorine accident, and by maintaining the requirement to isolate the control room, in case of a chlorine release accident.

The staff concludes that the licensee's removal of the commitment to demonstrate annually the control room ventilation integrity as it relates to chlorine intrusion concern and surveillance requirement, TS Section 4.7.6.e.6., to demonstrate manual isolation of control room ventilation meet the relevant requirements of 10 CFR Part 100. This conclusion is based on the following. The licensee's analyses have identified potential accidents related to the presence of hazardous material or activities in the site vicinity which could affect the plant and from these the licensee has demonstrated that the plant is adequately protected and can be operated with an acceptable degree of safety with regard to these potential accidents. In addition, the removal of the railroad tracks from the vicinity of Braidwood have reduced the probability of the chlorine release. Finally, the licensee's commitment to periodically survey the Braidwood vicinity for potential new sources of chlorine will provide assurance that no new toxic threats to the control room habitability will go unnoticed. Based on the lower probability of a chlorine release accident, the licensee's commitment to maintain notification communication with Will County, the requirement to isolate the control room ventilation in case of a reported chlorine release, a chlorine survey every three years and the retention of the surveillance requirement in the station's TS to periodically verify (at least once every 18 months) the control room ventilation system's capability to pressurize the control room, the staff has determined that the removal of the commitment to demonstrate annually the control room ventilation integrity as it relates to chlorine intrusion concern and removal of control room ventilation manual isolation surveillance is consistent with the guidance of SRP Section 6.4 and is, therefore, acceptable.

4.0 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.

5.0 ENVIRONMENTAL CONSIDERATION

The amendments change a surveillance requirement. 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 (60 FR 4930). 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.

6.0 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.

Principal Contributor: R. Assa

Date: February 28, 1995