

August 4, 1994

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

Mr. D. L. Farrar, Manager
Nuclear Regulatory Services
Commonwealth Edison Company
Executive Towers West III, Suite 500
1400 OPUS Place
Downers Grove, Illinois 60515

Dear Mr. Farrar:

SUBJECT: BYRON STATION, UNITS 1 AND 2, AND BRAIDWOOD STATION, UNITS 1 AND 2,
POSITIVE MODERATOR TEMPERATURE COEFFICIENT AND REDUCED THERMAL FLOW
(TAC NOS. M89092, M89093, M89072, M89091)

The U.S. Nuclear Regulatory Commission has forwarded the enclosed "Notice of Consideration of Issuance of Amendment to Facility Operating License, Proposed No Significant Hazards Consideration Determination, and Opportunity for a Hearing" to the Office of the Federal Register for publication.

This notice relates to your application of March 23, 1994, as supplemented on July 26, 1994. The proposed changes would revise the plant's technical specifications (TS) to permit: (1) use of a positive moderator coefficient for upcoming fuel loadings, and (2) a reduced thermal flow in the event the extent of steam generator tube plugging exceeds 15% of the tubes. The requested changes that are unit and cycle specific, are so noted on the applicable TS pages.

Sincerely,

Original signed by
Ramin R. Assa for:

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

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Enclosure:
Notice

cc w/enclosure:
See next page

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Docket File	NRC & LPDRs	ACRS (10)
PD III-2 R/F (2)	J. Roe	OPA
C. Moore (2)	J. Zwolinski	OC/LFDCB
R. Assa	E. Adensam	B. Clayton, RIII
G. Dick	OGC	
R. Capra	D. Hagan	

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LA: PDI II-2 <i>[Signature]</i>	PM: PD III-2 <i>[Signature]</i>	PM: PDI II-2 <i>[Signature]</i>	D: PD III-2 <i>[Signature]</i>
C. Moore	R. Assa:lm	G. Dick <i>[Signature]</i>	R. Capra <i>[Signature]</i>
8/4/94	8/4/94	8/4/94	8/5/94
(YES) NO	(YES) NO	(YES) NO	(YES) NO

Name: BB89230.LTR

[Handwritten initials]
CP-1

Mr. D. L. Farrar
Commonwealth Edison Company

cc:

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UNITED STATES NUCLEAR REGULATORY COMMISSIONCOMMONWEALTH EDISON COMPANYDOCKET NOS. STN 50-454, STN 50-455, STN 50-456, STN 50-457NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO
FACILITY OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS
CONSIDERATION DETERMINATION, AND OPPORTUNITY FOR A HEARING

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of amendments to Facility Operating License Nos. NPF-37, NPF-66, NPF-72, and NPF-77, issued to Commonwealth Edison Company (the licensee), for operation of Byron Station, Units 1 and 2, located in Ogle County, Illinois and Braidwood Station, Units 1 and 2, located in Will County, Illinois.

The proposed amendments consist of two parts: Part one, would revise "Moderator Temperature Coefficient (MTC)" Technical Specifications (TSs) to allow the use of a slightly positive MTC for the core design. The licensee has stated that a positive MTC will reduce the burnable rod requirements and improve operational flexibility. Because of using a positive MTC, the TSs would be revised to permit a higher boron concentration in the refueling water storage tank, the reactor coolant system (RCS) accumulators, and the refueling cavity, in order to ensure adequate shutdown margin is maintained at all times. Part two, would revise the TSs to reduce the required RCS flow to offset any reduction in flow due to increased steam generator tube plugging. Additionally, the associated Bases for the above TSs would be revised to describe the basis for the TS requirements.

Because Byron, Unit 1, and Braidwood, Unit 2, will be in refueling outage in the fall of 1994, the proposed TS changes will apply to them. Byron, Unit 2 and Braidwood, Unit 1 will continue to operate in accordance

with the current TSs. The licensee's submittal identified the appropriate unit applicability of the TSs pertaining to the positive MTC and the required RCS flows.

Before issuance of the proposed license amendment, the Commission will have made findings required by the Atomic Energy Act of 1954, as amended (the Act) and the Commission's regulations.

The Commission has made a proposed determination that the amendment request involves no significant hazards consideration. Under the Commission's regulations in 10 CFR 50.92, this means that operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated; or (2) create the possibility of a new or different kind of accident from any accident previously evaluated; or (3) involve a significant reduction in a margin of safety. As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

As required by 10 CFR 50.91(a), the licensee has provided its analysis of the issue of no significant hazards consideration, which is presented below:

- A. The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.
 - (1) The reduced thermal design flow and positive moderator temperature coefficient program includes corresponding increases to the [refueling water storage tank] RWST and accumulator required boron concentration. The analysis program and associated boron concentration changes will not affect the operability and integrity of plant systems and components. The analysis program also does not result in a condition that would challenge the

design, material, and construction standards of the plant systems and components. Additionally, the safety functions of the evaluated systems and components remain unchanged. The safety analyses necessary to support the reduced [thermal design flow] TDF and [positive moderator temperature coefficient] PMTC program were performed (WCAP 13964) and found to be acceptable and consistent with the Byron and Braidwood original safety analysis bases. All Departure from Nucleate Boiling (DNB) Ratio (DNBR) design limits were determined such that there was a 95 percent probability at a 95 percent confidence level that a DNBR value of 1.25 for a typical and thimble cell were verified to have been met. The present Technical Specification limit for Nuclear Enthalpy Rise Hot Channel Factor, F_{NH}^{40} , of less than 1.65 ensures that the limiting DNB ratio during normal operations and operational transients (Condition I and Condition II events) is greater than or equal to the DNBR limit of the correlation being applied thus fuel integrity will not be challenged.

The accidents which are found to be sensitive to PMTC were analyzed as part of this effort and the results were found to be acceptable. On a cycle-by-cycle basis, the impact of PMTC on Anticipated Trip Without Scram (ATWS) risk will be addressed by determining the Unfavorable Exposure Time (UET) per established Westinghouse Owners Group methodology, with corrective actions to be taken as appropriate to assure acceptable risk. The increase in the RWST and accumulator boron concentration will have no adverse impact on the previously evaluated accidents. The SGTP/TDF/PMTC program does not affect the integrity of the safety related systems and components such that their function to control radiological consequences is affected and all fission barriers will remain intact. The effects on offsite doses have been considered. The incorporation of a PMTC, a reduction in TDF and increased tube plugging levels will result in a small increase in offsite doses, however, the total doses remain a small fraction of the 10 CFR 100 limits. As such, the accident analysis acceptance criteria continue to be satisfied. Therefore, the probability or consequences of an accident previously analyzed in the [Updated Final Safety Analysis Report] UFSAR is not increased by the SGTP/TDF/PMTC program.

B. The proposed changes do not create the possibility of a new or different type of accident from any accident previously evaluated.

- (2) The methodology and manner of plant operation as a result of the proposed changes is unchanged. The increased SGTP, reduced TDF, and PMTC program, which includes changes to the RWST and accumulator boron concentration, does not impact the safe operation of the reactor provided that the existing and proposed Limiting Conditions for Operation (LCOs) and the associated action requirements are satisfied.

The reactor response to normal temperature fluctuations will be different due to PMTC, however, the normal reactor control systems, as designed, will continue to maintain a stable primary system temperature and reliable power production. The assumptions do not create any new failure modes that could adversely impact safety related equipment. The related Safety Limits and LCOs in the plant Technical Specifications will be evaluated and satisfied for each future reload core design via the 10 CFR 50.59 process. All DNBR Limits have been satisfied. The typical and thimble fuel cells were verified to maintain a DNBR value of 1.25 at a 95 percent probability and 95 percent confidence level. Other than the analysis for tube plugging, the proposed changes do not involve any equipment additions or modifications at the stations. Currently installed equipment will not be operated in a manner different than previously designed. Changes will be made to technical data within the existing station procedures, however, the analytical methods used to determine the data also remain unchanged. All aspects of the SGTP/TDF/PMTC program have been evaluated, and no new or different accidents or failure modes have been identified for any system or component important to safety. No new credible limiting single failure has been created.

Because the SGTP/TDF/PMTC program does not adversely affect the integrity of the steam generator or any other equipment, it is determined that the proposed changes do not create the possibility of a new or different type of accident from any accident previously evaluated.

C. The proposed changes do not involve a significant reduction in a margin of safety.

- (3) The performance and integrity of the evaluated safety-related systems and components are not affected by the proposed changes. The radiological consequences of all previously analyzed accidents remain unchanged. The reduced TDF and PMTC program, which includes changes to the RWST and accumulator boron concentration, will have no effect on the availability, operability, or performance of the evaluated safety-related systems or components. The reactor response to normal temperature fluctuations will be different due to PMTC, however, the normal reactor control systems, as designed, will continue to maintain a stable primary system temperature and reliable power production. The margin of safety associated with the licensing basis safety analysis is not significantly reduced by the proposed changes. All acceptance criteria for the specific UFSAR Chapter 15 safety analyses (Non-LOCA and LOCA) have been satisfactorily evaluated and verified using NRC approved methodologies. Therefore, there is no significant reduction in the margin of safety as defined in the bases of any affected Technical Specification.

The NRC staff has reviewed the licensee's analysis and, based on this review, it appears that the three standards of 10 CFR 50.92(c) are satisfied. Therefore, the NRC staff proposes to determine that the amendment request involves no significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within 30 days after the date of publication of this notice will be considered in making any final determination.

Normally, the Commission will not issue the amendment until the expiration of the 30-day notice period. However, should circumstances change during the notice period such that failure to act in a timely way would result, for example, in derating or shutdown of the facility, the Commission may issue the license amendment before the expiration of the 30-day notice period, provided that its final determination is that the amendment involves

no significant hazards consideration. The final determination will consider all public and State comments received. Should the Commission take this action, it will publish in the FEDERAL REGISTER a notice of issuance and provide for opportunity for a hearing after issuance. The Commission expects that the need to take this action will occur very infrequently.

Written comments may be submitted by mail to the Rules Review and Directives Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and should cite the publication date and page number of this FEDERAL REGISTER notice. Written comments may also be delivered to Room 6D22, Two White Flint North, 11455 Rockville Pike, Rockville, Maryland, from 7:30 a.m. to 4:15 p.m. Federal workdays. Copies of written comments received may be examined at the NRC Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555.

The filing of requests for hearing and petitions for leave to intervene is discussed below.

By September 14, 1994 , the licensee may file a request for a hearing with respect to issuance of the amendment to the subject facility operating license and any person whose interest may be affected by this proceeding and who wishes to participate as a party in the proceeding must file a written request for a hearing and a petition for leave to intervene. Requests for a hearing and a petition for leave to intervene shall be filed in accordance with the Commission's "Rules of Practice for Domestic Licensing Proceedings" in 10 CFR Part 2. Interested persons should consult a current copy of 10 CFR 2.714 which is available at the Commission's Public Document Room, the Gelman

Building, 2120 L Street, NW., Washington, DC 20555 and at the local public document rooms, which for Byron is located at the Byron Public Library, 109 N. Franklin, Byron, Illinois 61010; and for Braidwood is located at the Wilmington Township Public Library, 201 S. Kankakee Street, Wilmington, Illinois 60481. If a request for a hearing or petition for leave to intervene is filed by the above date, the Commission or an Atomic Safety and Licensing Board, designated by the Commission or by the Chairman of the Atomic Safety and Licensing Board Panel, will rule on the request and/or petition; and the Secretary or the designated Atomic Safety and Licensing Board will issue a notice of hearing or an appropriate order.

As required by 10 CFR 2.714, a petition for leave to intervene shall set forth with particularity the interest of the petitioner in the proceeding, and how that interest may be affected by the results of the proceeding. The petition should specifically explain the reasons why intervention should be permitted with particular reference to the following factors: (1) the nature of the petitioner's right under the Act to be made party to the proceeding; (2) the nature and extent of the petitioner's property, financial, or other interest in the proceeding; and (3) the possible effect of any order which may be entered in the proceeding on the petitioner's interest. The petition should also identify the specific aspect(s) of the subject matter of the proceeding as to which petitioner wishes to intervene. Any person who has filed a petition for leave to intervene or who has been admitted as a party may amend the petition without requesting leave of the Board up to 15 days prior to the first prehearing conference scheduled in the proceeding, but such an amended petition must satisfy the specificity requirements described above.

Not later than 15 days prior to the first prehearing conference scheduled in the proceeding, a petitioner shall file a supplement to the petition to intervene which must include a list of the contentions which are sought to be litigated in the matter. Each contention must consist of a specific statement of the issue of law or fact to be raised or controverted. In addition, the petitioner shall provide a brief explanation of the bases of the contention and a concise statement of the alleged facts or expert opinion which support the contention and on which the petitioner intends to rely in proving the contention at the hearing. The petitioner must also provide references to those specific sources and documents of which the petitioner is aware and on which the petitioner intends to rely to establish those facts or expert opinion. Petitioner must provide sufficient information to show that a genuine dispute exists with the applicant on a material issue of law or fact. Contentions shall be limited to matters within the scope of the amendment under consideration. The contention must be one which, if proven, would entitle the petitioner to relief. A petitioner who fails to file such a supplement which satisfies these requirements with respect to at least one contention will not be permitted to participate as a party.

Those permitted to intervene become parties to the proceeding, subject to any limitations in the order granting leave to intervene, and have the opportunity to participate fully in the conduct of the hearing, including the opportunity to present evidence and cross-examine witnesses.

If a hearing is requested, the Commission will make a final determination on the issue of no significant hazards consideration. The final determination will serve to decide when the hearing is held.

If the final determination is that the amendment request involves no significant hazards consideration, the Commission may issue the amendment and make it immediately effective, notwithstanding the request for a hearing. Any hearing held would take place after issuance of the amendment.

If the final determination is that the amendment request involves a significant hazards consideration, any hearing held would take place before the issuance of any amendment.

A request for a hearing or a petition for leave to intervene must be filed with the Secretary of the Commission, U.S. Nuclear Regulatory Commission, Washington, DC 20555, Attention: Docketing and Services Branch, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555, by the above date. Where petitions are filed during the last 10 days of the notice period, it is requested that the petitioner promptly so inform the Commission by a toll-free telephone call to Western Union at 1-(800) 248-5100 (in Missouri 1-(800) 342-6700). The Western Union operator should be given Datagram Identification Number N1023 and the following message addressed to Mr. Robert A. Capra: petitioner's name and telephone number, date petition was mailed, plant name, and publication date and page number of this FEDERAL REGISTER notice. A copy of the petition should also be sent to the Office of the General Counsel, U.S. Nuclear Regulatory Commission, Washington, DC 20555, and to Michael I. Miller, Esquire; Sidney and Austin, One First National Plaza, Chicago, Illinois 60690, attorney for the licensee.

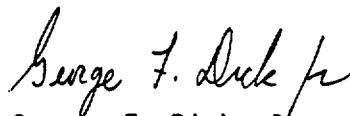
Nontimely filings of petitions for leave to intervene, amended petitions, supplemental petitions and/or requests for hearing will not be

entertained absent a determination by the Commission, the presiding officer or the presiding Atomic Safety and Licensing Board that the petition and/or request should be granted based upon a balancing of the factors specified in 10 CFR 2.714(a)(1)(i)-(v) and 2.714(d).

For further details with respect to this action, see the application for amendment dated March 11, 1994, which is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC 20555 and at the local public document room located at the local public document rooms, which for Byron is located at the Byron Public Library, 109 N. Franklin, P.O. Box 434, Byron, Illinois 61010; and for Braidwood is located at the Wilmington Public Library, 201 S. Kankakee Street, Wilmington, Illinois 60481.

Dated at Rockville, Maryland, this 4th day of August 1994.

FOR THE NUCLEAR REGULATORY COMMISSION



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