

July 21, 1988

Docket Nos.: 50-454 and 50-455

DISTRIBUTION:

Mr. Henry E. Bliss
Nuclear Licensing Manager
Commonwealth Edison Company
Post Office Box 767
Chicago, Illinois 60690

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DHagan	PDIII-2 Plant File
SSands	EJordan

Dear Mr. Bliss:

SUBJECT: EMERGENCY TECHNICAL SPECIFICATION CHANGE - BYRON STATION, UNITS
1 AND 2 (TAC NOS. 68505 AND 68506)

The Commission has issued the enclosed Amendment No. 20 to Facility Operating License No. NPF-37 and Amendment No. 20 to Facility Operating License No. NPF-66 for the Byron Station, Unit Nos. 1 and 2, respectively. The amendments consist of changes to the Technical Specifications in response to your application transmitted by letter dated June 22, 1988, supplemented July 14, 1988 and July 18, 1988.

These amendments approve a change to 3.7.5.e.(2) of the technical specification action statement concerning the ultimate heat sink to state that the provisions of Technical Specification 3.0.4 are not applicable.

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,

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

Enclosures:

1. Amendment No. 20 to NPF-37
2. Amendment No. 20 to NPF-66
3. Safety Evaluation

cc w/enclosures:
See next page

*See previous concurrence

PDIII-2:PM	PDIII-2:LA	*OGC-Rockville	PDIII-2:PD	DRSP
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and STN 50-455

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See next page

See Note

PDIII-2:PM
LOlshan:km
7/29/88

PDIII-2:LA *22* OGC-Rockville
LLuther
7/2/88

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PDIII-2:PD
DM *7/21*
7/21/88

DRS
GHolahan
7/21/88



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

July 21, 1988

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3. Safety Evaluation

cc w/enclosures:
See next page

Mr. Henry E. Bliss
Commonwealth Edison Company

Byron Station
Units 1 and 2

cc:

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Chairman, Ogle County Board
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ESI Review Coordinator
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Commonwealth Edison Company
Byron Station Manager
4450 North German Church Road
Byron, Illinois 61010



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-454

BYRON STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 20
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 22, 1988, supplemented July 14, 1988 and July 18, 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-37 is hereby amended to read as follows:

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(2) Technical Specifications

The Technical Specifications contained in Appendix A as revised through Amendment No. 20 and the Environment 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



Gary Holahan, Acting Director
Division of Reactor Projects - III,
IV, V and Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 21, 1988



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

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-455

BYRON STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 20
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 22, 1988, supplemented July 14, 1988 and July 18, 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 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 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. 20 and revised by Attachment 2 to NPF-60, and the Environmental Protection Plan contained in Appendix B, both of which were 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



Gary Holahan, Acting Director
Division of Reactor Projects - III,
IV, V and Special Projects

Attachment:
Changes to the Technical
Specifications

Date of Issuance: July 21, 1988

ATTACHMENT TO LICENSE AMENDMENT NOS. 20 AND 20
FACILITY OPERATING LICENSE NOS. NPF-37 AND NPF-66
DOCKET NOS. 50-454 AND 50-455

Revise Appendix A as follows:

Remove Pages

3/4 7-14

Insert Pages

3/4 7-14

PLANT SYSTEMS

LIMITING CONDITION FOR OPERATION (Continued)

ACTION (Continued)

- c. With one essential service water makeup pump inoperable, restore the essential service water makeup pump to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- d. With the essential service water pump discharge water temperature not meeting the above requirement, be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- e. With the minimum Rock River water level not meeting the above requirement, notify the NRC within 1 hour in accordance with the procedure of 10 CFR 50.72 of actions or contingencies to ensure an adequate supply of cooling water to the Byron Station for a minimum of 30 days, verify the Rock River flow within 1 hour, and:
 - (1) If Rock River flow is less than 700 cubic feet per second (cfs) be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours, or
 - (2) If Rock River flow is equal to or greater than 700 cfs continue verification procedure every 12 hours or until Rock River water level exceeds 670.6 feet MSL (the provisions of Specification 3.0.4 are not applicable), or
 - (3) If Rock River level is equal to or less than 664.7 feet MSL be in at least HOT STANDBY within the next 6 hours and COLD SHUTDOWN within the following 30 hours
- f. With one deep well inoperable and:
 - (1) The Rock River water level predicted, through National Weather Service flood forecasts, to exceed 702 feet MSL, or
 - (2) The Rock River water level at or below 670.6 feet MSL, or
 - (3) A tornado watch issued by the NWS that includes the area for the Byron Station.

Notify the NRC within 1 hour in accordance with the procedure of 10 CFR 50.72 of actions or contingencies to ensure an adequate supply of cooling water to the Byron Station for a minimum of 30 days and restore both wells to OPERABLE status before the Rock River water level exceeds 702 feet MSL or the minimum Rock River level or flow falls below 664.7 feet MSL or 700 cfs, respectively, or within 72 hours, whichever occurs first, or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

SURVEILLANCE REQUIREMENTS

4.7.5 The UHS shall be determined OPERABLE at least once per:

- a. 24 hours by verifying the water level in each UHS cooling tower basin to be greater than or equal to 873.75 feet MSL. (50%),



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

SUPPORTING AMENDMENT NO. 20 TO FACILITY OPERATING LICENSE

NOS. NPF-37 AND NPF-66

COMMONWEALTH EDISON COMPANY

BYRON STATION, UNITS 1 AND 2

DOCKET NOS. 50-454 AND 50-455

1.0 INTRODUCTION

By letter dated June 22, 1988, Commonwealth Edison Company (CECo), the licensee, submitted a proposed amendment to Facility Operating License Nos. NPF-37 and NPF-66 for Byron Station, Units 1 and 2. The proposed amendment request changes to the Technical Specifications to exempt the action statement in Technical Specification (TS) 3.7.5.e(2) from the provisions of TS 3.0.4. By letter dated July 14, 1988, the licensee requested that this amendment be processed on an emergency basis to allow Unit 2, which had tripped, to return to Mode 1. By letter dated July 15, 1988, the staff issued a Temporary Waiver of Compliance to allow the unit to return to Mode 1, but requested additional technical information. The licensee provided the additional information by letter dated July 18, 1988.

2.0 DISCUSSION AND EVALUATION

The ultimate heat sink for Byron Station is the two cooling tower basins. Assuming a loss-of-coolant accident in one unit and an orderly shutdown of the other unit, the available water in the basins would last about one day. To satisfy the design basis requirement of cooling capability for 30 days, two redundant makeup systems are provided: two onsite deep wells and the Rock River. The limiting condition for operation (LCO) in Technical Specification 3.7.5.e requires that Rock River water level be at or above 670.6 feet mean Sea Level. If the water level goes below 670.6 feet, and the river flow is greater than 700 cfs, the action statement in 3.7.5.e.(2) requires that river flow be verified every 12 hours or until the river water level exceed 670.6.

Technical Specification 3.0.4 prohibits entry into an operational mode unless the conditions for the LCO are met without relying on the provisions in the action statements. The proposed amendment would revise action statement 3.7.5.e.(2) to state that the provisions of 3.0.4 do not apply.

Generic letter 87-09, issued May 4, 1987, identifies several potential improvements to the Technical Specifications for all plants and encouraged licensees to propose changes to their Technical Specifications to incorporate these improvements. One suggested improvement dealt with the applicability of 3.0.4. The generic letter states "For an LCO that has Action Requirements permitting

continued operation for an unlimited period of time, entry into an operation mode or other specified condition of operation should be permitted in accordance with the Action Requirements." Action requirement 3.7.5.e(2) does permit continued operation for an unlimited period of time, provided that river flow is verified every 12 hours. Thus, the proposed amendment is consistent with Generic Letter 87-09.

By letter dated July 18, 1988, the licensee provided additional technical justification for the proposed amendment. The 670.6 foot Rock River level in the Technical Specifications is the level at which sufficient river flow is available such that the Oregon dam could fail and river level would remain above 664 feet. This ensures adequate net positive suction head (NPSH) for the essential service water makeup pumps. Above 670.6 feet river flow does not need to be verified. Below 670.6 feet, level is not an accurate indication of an adequate water source for the essential service water makeup pumps, so flow must be measured. The licensee's analysis of the Rock River has determined that a minimum flow of 700 cfs is required to maintain an adequate NPSH for the essential service water makeup pumps. This flow corresponds to a river level of 664.7. Thus, the 670.6 feet level is essentially an alarm setpoint that requires verifying the river flow on a 12-hour cycle. The actual allowed minimum river level is 664.7. The staff had reviewed and approved these levels prior to licensing of Byron Station, Unit 1.

Since the proposed amendment complies with Generic Letter 87-09, and there is a technical basis for allowing operation below a river level of 670.6 feet, the staff finds the amendment acceptable.

3.0 ENVIRONMENTAL CONSIDERATION

These amendments involve a change in the installation or use of the facilities components located within the restricted areas as defined in 10 CFR 20. The staff has determined that these 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 now made a final no significant hazards finding with respect to these amendments. Accordingly, these amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR Sec 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 these amendments.

4.0 FINDINGS OF EMERGENCY WARRANTING AN AMENDMENT WITHOUT NOTICE

The proposed amendments are to revise a Technical Specification ACTION Statement concerning the ultimate heat sink. The particular ACTION Statement in Technical Specification 3/4.7.5 involves the Rock River water level and flow. The Rock River is one of two makeup sources for the ultimate heat sink at Byron Station. The ongoing drought in the mid-western part of the country has caused the level in the river to drop below the limit specified in the Limiting Condition for Operation of the ultimate heat sink technical specification. That limit is 670.6 feet mean sea level (MSL). As a result, Byron Station has entered the ACTION Statement requirement 3.7.5.e. The action requirement

permits reactor operation to continue for an unlimited period of time as long as river flow remains greater than 700 cubic feet per second (cfs) and river level remains above 664.7 feet MSL. River flow must be verified every 12 hours under these conditions until level exceeds 670.6 feet MSL.

General Technical Specification 3.0.4 applies to Technical Specification 3.7.5. According to Specification 3.0.4, entry into an operational mode or other specified condition cannot be made unless the conditions of the limiting condition for operation are met without reliance on the provisions contained in the ACTION requirements. As a result of the scram on Unit 2, the unit cannot be restarted because the LCO would not be satisfied without reliance on an action requirement, even though the action requirement would permit continued operation.

The licensee's application for the Technical Specification change has been timely. The licensee had submitted this request for a standard amendment to the Technical Specifications on June 22, 1988 in anticipation of continued low water level and flow conditions of the Rock River. Also, the need for power in that region of the country (Commonwealth Edison's service territory) is heightened because several other units are down in addition to Byron 2 and Zion 1, and Dresden, Quad Cities and LaSalle are derated due to river and lake temperature limitations. As a result, Byron Unit 2 is needed to provide power to the service territory and needs to be returned to power as soon as possible.

On Thursday, July 14, 1988, at approximately 1:14 a.m., Byron Unit 2 experienced an unexpected shutdown due to the inadvertent opening of the two feeder breakers that connect the Unit Aux and System Transformers to the Unit 2 non-safety related bus. The unit was in Mode 3 and could not mode changes to come back up in power because of the ACTION Statement in Technical Specification 3/4.7.5. Subsequently, the licensee supplemented its June 22, 1988 letter requesting an Emergency License Amendment.

The staff finds that failure to grant the proposed change in a timely manner would create an undue hardship in light of the conditions in that region of the nation. Additionally, the staff finds that the licensee could not reasonably have avoided this situation, that the licensee has responded in a timely manner, and has not delayed its application to take advantage of the Emergency License Amendments provision of 10 CFR 50.91. Accordingly, the staff includes that the licensee has satisfied the requirements of 10 CFR 50.91(a)(5), and that a valid emergency exists.

5.0 FINAL NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION

Commonwealth Edison Company (the licensee) has completed, as part of their review, an evaluation and determination that the proposed amendment involves no significant hazards conditions. According to 10 CFR 50.92(c), a proposed amendment to an operating license involves no significant hazards considerations if 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.

This proposed amendment request for Byron Units 1 and 2 revises the Technical Specification ACTION requirement concerning the Rock River water level and flow. The ACTION requirement is being revised to state that the provision of Technical Specification 3.0.4 are not applicable. This will have the effect of permitting changes in Operational Modes while relying on the ACTION requirements.

The licensee has addressed the three criteria, stated above, in connection with this proposed amendment and has presented the following evaluation:

- (1) Water level and flow in the Rock River have no effect on the probability of previously evaluated accidents. Therefore, the probability of previously evaluated accidents will not be increased.

The affected ACTION requirement permits reactor operation to continue as long as river flow and level stay above minimum requirements. The minimum flow and level limits that assure adequate suction for the essential service water makeup pumps are not being changed by this amendment. As a result, the consequences of previously evaluated accidents will not be increased.

- (2) This proposed amendment does not allow any new mode of operation beyond what is already permitted by the action requirement. In addition, this amendment does not allow any modification to the plan. Therefore, operation of the facility in accordance with the proposed amendment will not create the possibility of a new or different kind of accident from any accident previously evaluated.
- (3) Since the technical specification minimum flow and level limits for the Rock River are not being changed, this amendment does not involve a significant reduction in a margin of safety.

The staff has confirmed the basis of the no significant hazards findings described in the notice published in the Federal Register on July 8, 1988 (53 FR 25710). Additionally, the staff, in reviewing the licensee's request for the above amendment, determined that should this request be implemented, it would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, does not create the possibility of an accident of a type different from any evaluated previously, and does not involve a significant reduction in a margin of safety; the amendment does not involve a significant hazards conditions, (2) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, and (3) such activities will be conducted in compliance with the Commission's regulations and the issuance of this amendment will not be inimical to the common defense and security or the health and safety of the public.

The State of Illinois was informed by telephone on July 18, 1988, of the staff's no significant hazards consideration determination. The State contact had no comments on the determination.

Principal Contributor: S. Sands, L. O'Leary, NRR/PD3-2

Dated: July 21, 1988