December 21, 1990

DISTRIBUTION
Docket File
PDIII-2 r/f
BBoger, 14E4
JZwolinski
CMoore
LOlshan
WShafer, RIII
NRC & Local PDRs
DHagan, MNBB 3206
ACRS (10)
GPA/PA
OGC
Plant File

Docket No. 50-254

Mr. Thomas J. Kovach
Nuclear Licensing Manager
Commonwealth Edison Company-Suite 300
OPUS West III
1400 OPUS Place
Downers Grove, Illinois 60515

Dear Mr. Kovach:

SUBJECT: NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT - QUAD CITIES NUCLEAR POWER STATION, UNIT 1 (TAC NO. 79288)

Enclosed is a copy of a "Notice of Consideration of Issuance of Amendment to Facility Operating License and Proposed No Significant Hazards Consideration Determination and Opportunity for Hearing" concerning your application for amendment dated December 18, 1990. This Notice was forwarded to the Office of the Federal Register for publication.

Sincerely,

Original Signed By:

Leonard N. Olshan, Project Manager
Project Directorate III-2
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation

Enclosure:
As stated

cc w/enclosure:
See next page

OFC	:LA:PDIII-2	:PM:PDIII-2	:D:PDIII-2	:	:
NAME	:CMOORE	:LOLSHAN:ta	:RBARRETT	:	:
DATE	:12/21/90	:12/21/90	:12/21/90	:	:

OFFICIAL RECORD COPY
Document Name: INDIVIDUAL NOTICE 79288

cc:

Mr. Stephen E. Shelton
Vice President
Iowa-Illinois Gas and
Electric Company
P. O. Box 4350
Davenport, Iowa 52808

Michael I. Miller, Esq.
Sidley and Austin
One First National Plaza
Chicago, Illinois 60690

Mr. Richard Bax
Station Manager
Quad Cities Nuclear Power Station
22710 206th Avenue North
Cordova, Illinois 61242

Resident Inspector
U. S. Nuclear Regulatory Commission
22712 206th Avenue North
Cordova, Illinois 61242

Chairman
Rock Island County Board
of Supervisors
1504 3rd Avenue
Rock Island County Office Bldg.
Rock Island, Illinois 61201

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

Regional Administrator, Region III
U. S. Nuclear Regulatory Commission
799 Roosevelt Road, Bldg. #4
Glen Ellyn, Illinois 60137

Robert Neumann
Office of Public Counsel
State of Illinois Center
100 W. Randolph
Suite 11-300
Chicago, Illinois 60601

UNITED STATES NUCLEAR REGULATORY COMMISSION

COMMONWEALTH EDISON COMPANY

DOCKET NO. 50-254

NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO FACILITY OPERATING LICENSE AND PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION DETERMINATION AND OPPORTUNITY FOR HEARING

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuance of an amendment to Facility Operating License No. DPR-29, issued to the Commonwealth Edison Company (the licensee) for operation of Quad Cities Nuclear Power Station, Unit 1, located in Rock Island County, Illinois.

The amendment would revise the Technical Specifications to reflect a proposed modification to the fast acting solenoid valves which initiate rapid closure of the turbine control valves. The new design uses a pressure switch, instead of a limit switch, to initiate a reactor scram.

The proposed amendment is required prior to startup from the current refueling outage, which is scheduled for the end of January 1991.

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 request for amendment 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.

Commonwealth Edison has reviewed the proposed amendment in accordance with the criteria delineated in 10 CFR 50.91 and has concluded that the proposed amendment does not present a Significant Hazards Consideration. The basis for this determination is as follows:

1. The proposed change does not involve a significant increase in the probability or consequences of an accident.

   The turbine control valve fast closure scram is provided to anticipate the rapid increase in pressure and neutron flux resulting from the fast closure of the turbine control valves due to a load reject and subsequent failure of the bypass valves (UFSAR section 14.1.2, 3.2.5.4). The turbine control valves are required to fast close as rapidly as possible to prevent overspeed of the turbine-generator rotor. The rapid closure of the control valves causes a sudden reduction of the steam flow which results in an increase to reactor pressure. The scram is provided to prevent the violation of the minimum critical power ratio (MCPR) safety limit.

   The use of a pressure switch (in lieu of the limit switch) does not involve a significant increase in the probability of the transient. Upon actuation of the fast acting solenoid, the new pressure switch will sense the decreasing electro-hydraulic control (EHC) fluid (indicative of the control valve closure) and provide a reactor scram. The use of the pressure switch, therefore, provides the same function as the limit switch. In addition, the logic for the RPS trip remains the same. The pressure switches on fast acting solenoid valves for control valves #1 and #2 input to the Reactor Protection System (RPS) Channel A. Either pressure switch will cause the RPS channel to trip. Similarly, the pressure switches on the fasting acting solenoid valves for control valves #3 and #4 input into Reactor Protection System Channel B. In order to achieve a full reactor scram, both RPS channels must be tripped.

   The use of the pressure switch does not affect the limiting parameter (MCPR) of the transient. As such, there would be no sequence of events which would lead to the safety limit being exceeded and barrier integrity would be assured. Additionally, the proposed change would not change, degrade or prevent the responses of systems assumed in the accident(s) nor alter any assumptions previously made in evaluating the radiological consequences of an accident described (above) in the SAR.

   The consequences of the turbine/generator load reject with the subsequent failure of the bypass valves are not significantly increased by this change. The pressure switch provides a scram signal to RPS when the turbine control valves close rapidly in the same time period as the position switch in place. The use of a pressure switch to input into the Reactor Protection System is widely used throughout the industry and has been shown to be reliable. The results of the accident (the lowest MCPR achieved) are, therefore, not significantly affected and are bounded by the existing analysis. The existing analysis concludes that under this transient, the site boundary doses are well within the 10 CFR 100 limits.

2. The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The significant difference between the existing valve design and the proposed design is the use of a pressure switch in lieu of a limit switch. The use of the pressure switch eliminates the failure mode associated with the limit switch and inherently introduces its own failure mode. The failure of the tubing which connects the pressure switch to the solenoid valve would initiate a scram signal. The use of the pressure switch to input into the Reactor Protection System is widely used throughout the industry and has been shown to reliable. Based on industry experience, the new design of the fast acting solenoid valve has been more reliable in actuating the fast closure of control valves than the use of the exiting design.

The logic for the RPS trip remains unchanged. In order to create a reactor scram, the logic is arranged such that actuation of the pressure switches for the fast acting solenoid valves on control valve #1 or #2 and #3 or #4 will initiate a reactor scram. Therefore, in order for the scram function to fail, two pressure switches would have to fail within the same RPS channel (which is the same RPS failure mode as the existing design).

The fast closure of the turbine control valves is considered to be an anticipatory reactor scram. The reactor pressure and neutron flux would increase significantly in the event of the turbine fast closure without a scram; however, the reactor pressure (1060 psig) or the high neutron flux scrams provide backup to the turbine fast closure scram, in the event that sensor fails to actuate RPS.

The existence of the new failure mode, therefore, does not introduce the possibility of a new or different kind of accident than previously evaluated.

3. The proposed change does not involve a significant reduction in the margin of safety.

The limiting event associated with the turbine control valve fast closure is the load reject with failure of the bypass valves. A reactor scram is initiated, when the turbine control valves fast close, to anticipate the increase in reactor pressure and neutron flux, thereby ensuring that the MCPR safety limit is not violated. The use of the pressure switch does not affect the margin of safety associated with the MCPR safety limit since the pressure switch will initiate the reactor scram within the same time period as the existing design. The trip setpoint was calculated to ensure that a reactor scram will be initiated when the turbine control valves start to close rapidly.

The proposed fast acting solenoid valves are designed such that the pressure switch will be actuated within 30 milliseconds of the time the control valves start to close. Also, current Technical Specifications require that the RPS trip actuator contacts be actuated

within 50 milliseconds of the actuation of the pressure switch. These times are consistent with the design values used in the Reload Licensing calculation to analyze the load reject without bypass valve transient. The trip setpoint was calculated such that the trip signal will be generated within the 30 milliseconds after the start of the control valve fast closure. Verification of the 30 millisecond actuation will be conducted during post modification testing. This modification, therefore, does not involve a significant reduction in the margin of safety.

Accordingly, the Commission proposes to determine that this change does not involve a significant hazards consideration.

The Commission is seeking public comments on this proposed determination. Any comments received within fifteen (15) days after the date of publication of this notice will be considered in making any final determination. The Commission will not normally make a final determination unless it receives a request for a hearing.

Written comments may be submitted by mail to the Regulatory Publications Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555, and should cite the publication date and page number of this FEDERAL REGISTER notice.

Written comments may also be delivered to Room P-223, Phillips Building, 7920 Norfolk Avenue, Bethesda, Maryland, from 7:30 a.m. to 4:15 p.m. Copies of written comments received may be examined at the NRC Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C. The filing of requests for hearing and petitions for leave to intervene is discussed below.

By January 30, 1991 , 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 petition for leave to intervene. Request for a hearing and petitions 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, N.W., Washington, D.C. 20555 and at the Local Public Document Room located at the Dixon Public Library, 221 Hennepin Avenue, Dixon, Illinois 61021. 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 fifteen (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 fifteen (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 the amendment is issued before the expiration of 30-days, the Commission will make a final determination on the issue of no significant hazards considerations. The final determination will serve to decide when the hearing is held.

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

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

Normally, the Commission will not issue the amendment until the expiration of the 15-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 15-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 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.

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, D.C. 20555, Attention: Docketing and Services Branch, or may be delivered to the Commission's Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C., by the above date. Where petitions are filed

during the last ten (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) 325-6000. The Western Union operator should be given Datagram Identification Number 3737 and the following message addressed to Richard J. Barrett (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, D.C. 20555, and to Michael I. Miller, Esquire; Sidley 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 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 December 18, 1990, which is available for public inspection at the Commission's Public Document Room, the Gelman Building, 2120 L Street, N.W., Washington, D.C. 20555, and at the Local Public Document Room, the Dixon Public Library, 221 Hennepin Avenue, Dixon, Illinois 61021.

Dated at Rockville, Maryland, this 21st day of December, 1990.

FOR THE NUCLEAR REGULATORY COMMISSION

Richard J. Barrett, Project Manager
Project Directorate III-2
Division of Reactor Projects III/IV/V
Office of Nuclear Reactor Regulation