

PI-22

December 29, 1992

Docket No. 50-373

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 (TAC NO. M83797)

The Commission has requested the Office of the Federal Register to publish the enclosed "Notice of Consideration of Issuance of Amendment to Facility Operating License, Proposed No Significant Hazards Consideration Determination, and Opportunity for Hearing." This notice relates to your application for amendment dated June 5, 1992.

The proposed amendment would change Technical Specification 5.0, "Design Features," to address the planned rerack of the spent fuel pool at LaSalle County Station, Unit 1.

Sincerely,

Original signed by:

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

Enclosure:
Notice

cc w/enclosure:
See next page

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Mr. Thomas J. Kovach
Commonwealth Edison Company

LaSalle County Station
Unit Nos. 1 and 2

cc:

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UNITED STATES NUCLEAR REGULATORY COMMISSIONCOMMONWEALTH EDISON COMPANYDOCKET NO. 50-373NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO
FACILITY OPERATING LICENSE, 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. NPF-11, issued to Commonwealth Edison Company (CECo, the licensee), for operation of the LaSalle County Station, Unit 1, located in LaSalle County, Illinois.

The proposed amendment requests changes to Technical Specification 5.0, "Design Features" to address the planned rerack of the spent fuel pool at the LaSalle County Station. The proposed rerack would increase the spent fuel pool storage capacity from 1080 to 3986 storage cells. The added capacity would extend the projected loss of the full core discharge capability date from 2002 to 2013.

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:

- 1) Would operation of the facility in accordance with the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated?

In the course of the analysis, CECO has considered the following potential accident scenarios:

1. A fuel assembly drop in the spent fuel pool.
2. Tool drops from the elevated worktable.
3. Loss of spent fuel pool cooling system flow.
4. A seismic event.
5. Rack (heavy load) drop during [rack installation].

It has been concluded that the proposed modification to the spent fuel pool does not increase the probability of accident scenarios 1-4 since the increase in storage capacity is not assumed to be an initiator of events involving the loss of spent fuel pool cooling, a dropped spent fuel assembly in the spent fuel pool, or a seismic event. A tool drop from the elevated worktable, although not a previously analyzed accident, is bounded by the consequences of the fuel drop accident.

CECo has also considered the probability of an accident resulting from a postulated rack (heavy load) drop during the [installation] process. LaSalle Technical Specification 3.9.7.b. restricts movement of loads heavier than the weight of a single spent fuel assembly from being carried over fuel stored in the spent fuel pool. All work in the spent fuel pool area will be controlled and performed in strict accordance with specific written procedures and administrative controls to prevent the movement of a rack directly over any fuel, all of which will be stored in the Unit 2 Spent Fuel Storage Pool. Therefore the probability of an accident resulting from the drop of a rack module on spent fuel is [very low].

* * * * *

Accordingly, the proposed Technical Specification and the associated modification does not involve an increase in the probability of an accident previously evaluated, or an accident of a different type.

CECo has evaluated the consequences of a fuel assembly drop in the spent fuel pool and determined that the criticality acceptance criterion, $k_{eff} \leq 0.95$, is not violated. In addition, CECO determined that the radiological consequences of a fuel assembly drop are bounded by the [Updated Final Safety Analysis Report] UFSAR analyses. Analyses demonstrate that the calculated doses are well within 10 CFR Part 100 guidelines. The results of an analysis show that a dropped fuel assembly on the racks will not distort the racks such that stored fuel assemblies would be impacted. Thus, the consequences of this type of accident are not significantly changed from the previously evaluated spent fuel assembly drops.

The spent fuel pool system is a passive system with the exception of the Fuel Pool Cooling and Cleanup system and HVAC equipment. The redundancies in the cooling system and the HVAC hardware are not reduced by the planned storage densification. The extent of active hardware in these systems is only marginally changed. Therefore, the probability of occurrence or malfunction of safety equipment leading to loss of spent fuel pool cooling flow is not increased.

The consequences of a loss of spent fuel pool cooling system flow have been evaluated and it was determined that sufficient time remains available to provide an alternate means for cooling in the event of a complete failure of the cooling system. Thus, the consequences of this type of accident are not increased from previously evaluated loss of cooling system flow accidents.

The consequences of a seismic event have been evaluated. The new racks are designed and will be fabricated to meet the requirements of applicable portions of the NRC Regulatory Guides and published standards. The new free-standing racks are designed so that the integrity of both the racks and the pool structure is maintained during and after a seismic event with no resultant damage to stored fuel. Thus, the consequences of a seismic event are not increased from previously evaluated events.

The probability and consequences of a spent fuel cask drop will not be affected by the replacement of the racks. LaSalle Technical Specification 3.9.7. restricts movement of spent fuel casks from traveling over any region of the spent fuel pool. During the reracking of the Unit 1 Spent Fuel Storage Pool, all spent fuel will be stored in the Unit 2 Spent Fuel Storage Pool.

The consequences of a rack (heavy load) drop during [installation] have been considered. There is no equipment which is essential to the safe shutdown of the reactor or employed to mitigate the consequences of an accident which is beneath, adjacent to or otherwise within the area of influence of any loads that will be handled during the expansion modification. An analysis was also performed to determine the effect on the integrity of the spent fuel

pool structure following the free fall of the heaviest rack module. The analysis concluded that the maximum load due to the rack drop event is well below the cumulative impact load produced during the seismic event, and as such is bounded by the seismic analysis. Therefore, the consequences of a rack (heavy load) drop during construction are not increased from previously evaluated events.

In summary, it is concluded that the proposed amendment to replace the spent fuel racks in the Unit 1 spent fuel pool does not involve an increase in the probability or consequences of an accident previously evaluated.

- 2) Would operation of the facility in accordance with the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated?

CECo has evaluated the proposed modification in accordance with the guidance of the NRC Position Paper, "OT Position for Review and Acceptance of Spent Fuel Storage and Handling Applications," appropriate NRC Regulatory Guides, appropriate NRC Standard Review Plans, and appropriate Industry codes and standards. In addition, CECO has reviewed several previous NRC Safety Evaluation Reports for rerack applications similar to this proposed modification.

No unproven technology will be utilized either in the construction process or in the analytical techniques necessary to justify the planned fuel storage expansion. The basic reracking technology in this instance has been developed and demonstrated in other applications for fuel pool capacity increases previously approved by the NRC.

Based upon the foregoing, CECO concludes that the proposed Technical Specification and associated reracking modification does not create the possibility of a new or different kind of accident from any accident previously evaluated.

- 3) Would operation of the facility in accordance with the proposed amendment involve a significant reduction in the margin of safety?

* * * * *

The established acceptance criterion for criticality is that the neutron multiplication factor in spent fuel pools shall be less than or equal to 0.95, including all uncertainties, under all conditions. This margin of safety has been adhered to in the criticality analysis methods for the new rack design.

The methods used in the criticality analysis conform to the applicable portions of the appropriate NRC guidance and industry codes, standards, and specifications. In meeting the acceptance

criteria for criticality in the spent fuel pool, the analyses showed that k_{eff} is always less than 0.95, including uncertainties at a 95% confidence and 95% probability. Therefore, the proposed amendment does not involve a reduction in the margin of safety for nuclear criticality, as defined in the UFSAR.

The K-infinity criticality approach for allowing storage of advanced fuel designs in the new Unit 1 fuel racks includes the same type of conservatism that were used in the original analysis performed for the new spent fuel storage racks. Therefore, the use of the K-infinity analysis does not involve a reduction in the margin of safety for nuclear criticality.

Conservative methods were used to calculate the maximum fuel cladding temperature and the increase in temperature of the water in the spent fuel pool. The thermal-hydraulic evaluation used the methods previously employed for evaluations of previously licensed high density spent fuel racks to demonstrate that adequate temperature margin is maintained. The proposed modification will increase the heat load in the spent fuel pool. However, the evaluation shows that the existing spent fuel cooling system will maintain the bulk pool water temperature at or below 140 degrees Fahrenheit with both cooling trains in operation. Thus, it is demonstrated that the peak value of the pool bulk temperature is lower than the temperature guidelines for both normal and abnormal conditions specified in the Standard Review Plan, Section 9.1.3. The evaluation also shows that maximum local water temperatures along the hottest fuel assembly are below the nucleate boiling condition value. Thus, there is no reduction in the margin of safety for thermal hydraulic or spent fuel cooling concerns as defined in the UFSAR.

The main safety function of the spent fuel pool and the racks is to maintain the spent fuel assemblies in a safe configuration through all normal or abnormal loadings. Abnormal loadings which have been considered are the effect of an earthquake and the impact due to the drop of a spent fuel assembly. The mechanical, material, and structural design of the new spent fuel racks is in accordance with applicable portions of "NRC OT Position for Review and Acceptance of Spent Fuel Storage and Handling Applications," dated April 14, 1978, as modified January 18, 1979 and other applicable NRC guidance and industry codes. The rack materials used are comparable with the spent fuel pool and spent fuel assemblies. The structural considerations of the new racks address margins of safety against tilting and deflection or movement, such that the racks, if they do impact each other during the postulated seismic events, will only come in contact with each other at locations designed for that purpose. In addition the spent fuel assemblies remain intact and no criticality concerns exist. Thus the margins of safety as defined in the UFSAR are not reduced by the proposed rerack.

The Finite Element Method was used to evaluate the margins of the spent fuel pool concrete structure. The evaluation demonstrates that the strength margin of safety of the fuel pool structure is maintained.

From the foregoing, it is concluded that the margin of safety against nuclear criticality, structural integrity and material compatibility are consistent with the provision of the LaSalle UFSAR and USNRC regulations. The new worse case maximum bulk pool water temperature is 140 degrees Fahrenheit. This is found to result in a negligible decrease in the time-to-boil stated in the UFSAR. The margin of safety in the pool structure due to thermal loadings is well within the UFSAR specifications.

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 thirty (30) 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 Rules and Directives Review 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 P-223, Phillips Building, 7920 Norfolk Avenue, Bethesda, 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 February 5, 1993, 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 room located at the Public Library of Illinois Valley Community College, Rural Route No. 1, Oglesby, Illinois 61348.

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 Panel, 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 Panel 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 a 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 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.

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.

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, N.W., Washington, DC 20555, 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 (in Missouri 1-(800)-342-6700). The Western Union operator should be given Datagram Identification Number N1023 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, DC 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 presiding Atomic Safety and Licensing Board Panel 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).

The Commission hereby provides notice that this is a proceeding on an application for a license amendment falling within the scope of section 134 of the Nuclear Waste Policy Act of 1982 (NWPA), 42 U.S.C. 10154. Under section 134 of the NWPA, the Commission, at the request of any party to the proceeding, must use hybrid hearing procedures with respect to "any matter which the Commission determines to be in controversy among the parties." The hybrid procedures in section 134 provide for oral argument on matters in controversy, preceded by discovery under the Commission's rules, and the designation, following argument, of only those factual issues that involve a genuine and substantial dispute, together with any remaining questions of law, to be resolved in an adjudicatory hearing. Actual adjudicatory hearings are to be held on only those issues found to meet the criteria of section 134 and set for hearing after oral argument.

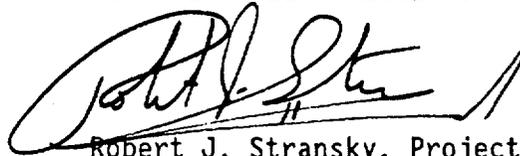
The Commission's rules implementing section 134 of the NWPA are found in 10 CFR Part 2, Subpart K, "Hybrid Hearing Procedures for Expansion of Spent Nuclear Fuel Storage Capacity at Civilian Nuclear Power Reactors" (published at 50 FR 41670, October 15, 1985), and 10 CFR 2.1101 et seq. Under those rules, any party to the proceeding may invoke the hybrid hearing procedures by filing with the presiding officer a written request for oral argument under 10 CFR 2.1109. To be timely, the request must be filed within 10 days of an order granting a request for hearing or petition to intervene. (As outlined above, the Commission's rules in 10 CFR Part 2, Subpart G, and 2.714 in particular, continue to govern the filing of requests for a hearing or

petitions to intervene, as well as the admission of contentions.) The presiding officer shall grant a timely request for oral argument. The presiding officer may grant an untimely request for oral argument only upon showing of good cause by the requesting party for the failure to file on time and after providing the other parties an opportunity to respond to the untimely request. If the presiding officer grants a request for oral argument, any hearing held on the application shall be conducted in accordance with the hybrid hearing procedures. In essence, those procedures limit the time available for discovery and require that an oral argument be held to determine whether any contentions must be resolved in adjudicatory hearing. If no party to the proceedings requests oral argument, or if all untimely requests for oral argument are denied, then the usual procedures in 10 CFR Part 2, Subpart G, apply.

For further details with respect to this action, see the application for amendment dated June 5, 1992, 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 Public Library of Illinois Valley Community College, Rural Route No. 1, Oglesby, Illinois 61348.

Dated at Rockville, Maryland, this 29th day of December 1992.

FOR THE NUCLEAR REGULATORY COMMISSION



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