

March 19, 1997

Mr. Robert G. Byram
Senior Vice President-Nuclear
Pennsylvania Power and Light
Company
2 North Ninth Street
Allentown, PA 18101

SUBJECT: NOTICE OF CONSIDERATION OF ISSUANCE OF AMENDMENT TO FACILITY
OPERATING LICENSE, PROPOSED NO SIGNIFICANT HAZARDS CONSIDERATION
DETERMINATION, AND OPPORTUNITY FOR A HEARING - SUSQUEHANNA STEAM
ELECTRIC STATION, UNIT 2 (TAC NO. M98166)

Dear Mr. Byram:

Enclosed is a copy of the subject notice for your information. This notice
relates to your application dated March 17, 1997, for Susquehanna Steam
Electric Station, Unit 2. Your application proposes changes to the Technical
Specifications to permit the loading of ATRIUM-10 fuel into the reactor core
during CONDITION-5.

This notice will be forwarded to the Office of the Federal Register for
publication.

Sincerely,

/s/

Chester Poslusny, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-388

Enclosure: Notice

cc w/encl: See next page

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

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This notice will be forwarded to the Office of the Federal Register for publication.

Sincerely,

A handwritten signature in cursive script, appearing to read "Chester Poslusny".

Chester Poslusny, Senior Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation

Docket No. 50-388

Enclosure: Notice

cc w/encl: See next page

Mr. Robert G. Byram
Pennsylvania Power & Light Company

Susquehanna Steam Electric Station,
Units 1 & 2

cc:

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Harrisburg, Pennsylvania 17108-1266

Chairman
Board of Supervisors
738 East Third Street
Berwick, PA 18603

UNITED STATES NUCLEAR REGULATORY COMMISSIONPENNSYLVANIA POWER & LIGHT COMPANYDOCKET NO. 50-388NOTICE 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 an amendment to Facility Operating License No. NPF-22, issued to Pennsylvania Power & Light Company (PP&L), (the licensee), for operation of the Susquehanna Steam Electric Station (SSES), Unit 2, located in Luzerne County, PA.

The proposed amendment would modify the Design Features Section 5.3.1 of the Technical Specifications to reflect the Atrium-10 design and would include a Siemens Power Corporation (SPC) topical report reference in Section 6.9.3.2 to reflect mechanical design criteria for this fuel. This change would allow this fuel to be loaded and maintained in the core only under Condition 5, (refueling).

PP&L has indicated that exigent circumstances exist which are a result of the following. PP&L submitted its proposal for amendment for the staff to approve the use of SPC Atrium-10 fuel in SSES, Unit 2 on December 18, 1996 and as supplemented on March 12, 1997. The staff approval has been predicated on the completion of an audit at SPC. Issues raised during the SPC audit have caused an unanticipated delay in completing the staff's review. In its letter, the licensee stated that this delay causes a threat to PP&L's ability to complete the Unit 2 8th refueling and inspection outage as planned and the

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return to Unit 2 operation. This outage has already begun. During the original Unit 2 outage scoping process PP&L stated that it did not anticipate the need for a specific NRC inspection of SPC to support the NRC review and approval of the December 18, 1996 amendment. Further, PP&L reasonably expected that all audit results would be satisfactory and would not impact the current Unit 2 outage schedule. The resultant consequences required the supplemental submittal on March 12, 1997, and requires additional unavoidable NRC staff review which is ongoing. The March 17, 1997 application is only to approve those changes that are applicable to allow fuel to be loaded and maintained in the reactor core only during Operational Condition 5 on an interim basis during the outage and prior to the NRC's approval of the December 18, 1996 and March 12, 1997, requested TS changes, to minimize the delay in startup based on the NRC review of the two submittals discussed above. The staff agrees that exigent conditions exist that were not anticipated by the licensee.

This notice is related to the amendment requested by the December 18, 1996 and March 12, 1997 submittals by Pennsylvania Power and Light Company, but does not affect the previous notice dated March 12, 1997, which was published in the Federal Register on March 18, 1997 (62 FR 12859).

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.

Pursuant to 10 CFR 50.91(a)(6) for amendments to be granted under exigent circumstances, the NRC staff must determine 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. The proposed change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The description of a fuel assembly (Section 5.3.1) is revised to reflect the fact that ATRIUM™-10 contains a central water channel. Since the active fuel length of ATRIUM™-10 is different from that of 9x9-2, reference to an active fuel length of 150 inches is no longer appropriate and was deleted. There is no safety significance to these changes.

Due to the limitation of this proposed change to Operational Condition 5, only a subset of the accident events analyzed in the FSAR [Final Safety Analysis Report] needed to be addressed. All other events were considered and the addition of ATRIUM™-10 fuel to the reactor core in Operational Condition 5 did not increase the probability or consequences of an accident previously evaluated. The events considered are described below.

The maximum allowed enrichment (Section 5.3.1) is increased from 4.0 to 4.5 weight percent U_{235} . Criticality calculations were performed with a KENO Monte Carlo code to ensure that ATRIUM™-10 fuel with a lattice average enrichment of 4.5 weight percent U_{235} can be safely stored in both the new fuel vault and the spent fuel storage pool at Susquehanna. These calculations demonstrated, consistent with current Technical Specifications, that the maximum k-effective of both the new fuel vault and spent fuel storage pool will not exceed 0.95 under the worst credible storage array or accident conditions.

The ATRIUM™-10 fuel assembly is unirradiated and its weight is nearly identical to the current SPC 9x9-2 fuel assembly weight as well as being less than the fuel assembly weight used in the 9x9-2 analyses (680 lbs.). The dose consequences of the current 9x9-2

licensing analyses of the Fuel and Equipment Handling Accidents bound the dose consequences of a Fuel Handling Accident involving ATRIUM™-10 fuel.

The grappling of the ATRIUM™-10 fuel is similar to the 9x9-2, due to the similar bail handle dimensions and assembly weights. Therefore, ATRIUM™-10 fuel is completely compatible with the refueling platform main grapple. Because the assembly weights of the ATRIUM™-10 fuel and the 9x9-2 fuel are essentially the same, the capacity of the refueling platform main hoist will be sufficient to handle the ATRIUM™-10 fuel. Also, the ATRIUM™-10 fuel uses the identical fuel channel design as the 9x9-2 fuel and the lower tie plate has very similar outside dimensions. Therefore, the ATRIUM™-10 fuel is compatible with, and can be safely inserted/placed into the reactor core.

Storage of channelled ATRIUM™-10 fuel in the Reactor Core was evaluated. Core shutdown margin calculations were performed using NRC approved methodology for the beginning of cycle core configuration. Validation of the shutdown margin methodology as it applies to ATRIUM™-10 was done through comparisons to Siemens' Power Corporation analyses and higher-order Monte Carlo calculations. Calculated core shutdown margin for the beginning of cycle core loading is greater than 1.00% Δ k/k which far exceeds the Technical Specification value of 0.38% Δ k/k. Therefore, ATRIUM™-10 fuel can be placed into the U2C9 final core configuration with assurance that the core will remain subcritical with the strongest worth rod withdrawn. A positive core shutdown margin assures protection against the control rod removal error during refueling (FSAR Section 15.4.1.1) because subcriticality is maintained.

In addition, the ATRIUM™-10 fuel assembly dimensions critical to interface with the Spent Fuel Storage Pool and Reactor Vessel are essentially the same as the 9x9-2 design. Therefore, the ATRIUM™-10 can be properly stored.

Included in the revised Technical Specifications via reference (Section 6.9.3.2) is one NRC approved topical report containing the criteria for the design of Siemens Power Corporation fuel. SPC analyses have demonstrated that ATRIUM™-10 fuel complies with the NRC approved criteria thus assuring the structural integrity of the fuel. Compliance with the criteria applicable to Operational Condition 5 assures that ATRIUM™-10 fuel can be safely stored in the spent fuel pool and loaded in the Unit 2 reactor core during Operational Condition 5.

Based on the foregoing, the proposed action does not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

The changes to the Unit 2 Technical Specifications (Design Features and inclusion of the methodology reference) to allow Operational Condition 5 loading of ATRIUM-10 fuel do not require any physical plant modifications (other than loading of the ATRIUMTM-10 assemblies), physically affect any plant components, or entail changes in plant operation. ATRIUMTM-10 fuel assemblies have approximately the same weight, outer dimensions, and the same basic bail handle design as 9x9-2 fuel assemblies and are handled in the same manner as 9x9-2 fuel assemblies. Thus, the proposed change does not create the possibility of a previously unevaluated operator error.

The topical report reference added to Section 6.9.3.2 contains NRC approved acceptance criteria. SPC analyses have been performed according to their Quality Assurance Program which demonstrate compliance with these NRC approved fuel design criteria. Thus, the ATRIUMTM-10 fuel will maintain its structural integrity during core loading.

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

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

The changes to the Unit 2 Technical Specifications discussed in Item 1 above (Design Features and inclusion of the mechanical design methodology reference) will allow loading of ATRIUM-10 fuel in Operational Condition 5. The proposed change does not require any physical plant modifications (other than the loading of the ATRIUMTM-10 fuel), physically affect any plant components, or entail changes in plant operation. Therefore, the proposed change will not jeopardize or degrade the function or operation of any plant system or component governed by Technical Specifications. The analyses performed provide assurance that the ATRIUMTM-10 fuel will remain subcritical during storage and core loading and meets the requirements of Technical Specification 5.6 and, thus, an equivalent margin of safety is maintained.

ATRIUMTM-10 fuel assemblies have approximately the same weight, outer dimensions, and the same basic bail handle design as 9x9-2 fuel assemblies and are handled in the same manner as 9x9-2 fuel assemblies. The dose consequences of the Fuel and Equipment Handling Accidents are not increased and, thus, an equivalent margin of safety is maintained.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

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 14 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 14-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 14-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. The Commission expects that the need to take this action will occur very infrequently.

Written comments may be submitted by mail to the Chief, Rules Review and Directives Branch, Division of Freedom of Information and Publications Services, Office of Administration, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, 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, 11545 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.

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

By April 24, 1997 , 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, and at the local public document room located at the Osterhout Free Library, Reference Department, 71 South Franklin Street, Wilkes-Barre, PA 18701. 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 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 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 the amendment is issued before the expiration of the 30-day hearing period, the Commission will make a final determination on the issue of no significant hazards consideration. If a hearing is requested, 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 20555-0001, 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, 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 John F. Stolz, Director, Project Directorate I-2: 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 20555-0001, and to Jay Silberg, Esquire, Shaw, Pittman, Potts and Trowbridge, 2300 N Street NW., Washington, DC 20037, attorney for the licensee.

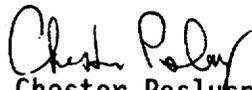
Nontimely filings of petitions for leave to intervene, amended petitions, supplemental petitions and/or requests for hearing will not be entertained absent a determination by the Commission, the presiding officer or the presiding Atomic Safety and Licensing Board that the petition and/or request should 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 17, 1997, which is available for public inspection at

the Commission's Public Document Room, the Gelman Building, 2120 L Street, NW., Washington, DC, and at the local public document room, located at the Osterhout Free Library, Reference Department, 71 South Franklin Street, Wilkes-Barre, PA 18701.

Dated at Rockville, Maryland, this 19th day of March 1997.

FOR THE NUCLEAR REGULATORY COMMISSION



Chester Poslusny, Project Manager
Project Directorate I-2
Division of Reactor Projects - I/II
Office of Nuclear Reactor Regulation