

September 5, 1995

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

SUBJECT: ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT,  
INCREASE IN THE LICENSED DISCHARGE FUEL ASSEMBLY EXPOSURE FOR SPC  
9X9-2 FUEL, SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2 (TAC  
NOS. M91663 AND M91666)

Dear Mr. Byram:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application dated February 2, 1995. In that submittal, you requested a change to the Technical Specifications for Susquehanna Steam Electric Station, Units 1 and 2, which would increase the licensed discharge fuel assembly exposure for SPC 9X9-2 fuel from the current 40 GWD/MTU to 45 GWD/MTU. This change would reflect the implementation of the higher fuel burnup rate as previously approved by the Commission in a letter dated December 10, 1994.

The assessment is being forwarded to the Office of the Federal Register for publication.

Sincerely,

original signed by  
Chester Poslusny, Sr. Project Manager  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Docket Nos. 50-387/388

Enclosure: Environmental Assessment

cc w/encl: See next page

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

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Pennsylvania Power and Light Company  
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Sincerely,

A handwritten signature in cursive script, reading "Chester Poslusny", is positioned above the typed name.

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

Docket Nos. 50-387/388

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cc w/encl: See next page

Mr. Robert G. Byram  
Pennsylvania Power & Light Company

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Units 1 & 2

cc:

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UNITED STATES NUCLEAR REGULATORY COMMISSION  
PENNSYLVANIA POWER & LIGHT COMPANY  
DOCKET NOS. 50-287 AND 50-388  
SUSQUEHANNA STEAM ELECTRIC STATION, UNITS 1 AND 2  
ENVIRONMENTAL ASSESSMENT AND FINDING OF  
NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering issuing an amendment to Susquehanna Steam Electric Station, Units 1 and 2, Technical Specifications to permit the implementation of an increase in the allowable exposure of Siemens' 9X9-2 fuel from 40 GWD/MTU to 45 GWD/MTU. Pennsylvania Power and Light Company (PP&L) (the licensee), on May 31, 1994, submitted to the Commission for review, Topical Report PL-NF-94-005-P, "Technical Basis for SPC 9X9-2 Extended Fuel Exposure at Susquehanna SES." This report provided a technical justification for the increased fuel burnup and the staff subsequently approved the report as indicated in its letter to PP&L dated December 15, 1994.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed action would amend the Susquehanna Steam Electric Station (SSES), Units 1 and 2, Technical Specifications (TS) to permit the implementation of an increase in the allowable exposure of Siemens' 9X9-2 fuel from 40 GWD/MTU to 45 GWD/MTU. The proposed action is in accordance with the licensee's application for amendment dated February 2, 1995.

The Need for the Proposed Action:

NRC approval of this TS change, as applied to the Unit 1, Cycle 9, and Unit 2, Cycle 8, will establish a new, higher fuel burnup rod-average limit of 45 MWD/MTU and will permit the licensee to continue to operate the plant through the end of each of these specified cycles, exceeding the current fuel burnup limit of 40 GWD/MTU, without affecting the safe operation of each reactor.

Environmental Impacts of the Proposed Action

The Commission completed its evaluation of the proposed action and the above referenced topical report and found it to be acceptable. In addition the TS changes implementing the higher fuel burnup limit have also been found to be acceptable. The safety considerations associated with extended irradiation of nuclear fuel have been evaluated by the NRC staff and the staff has concluded that such changes would not adversely affect plant safety. The proposed changes have no adverse affect on the probability of any accident. The increased burnup may slightly change the mix of fission products that might be released in the event of a serious accident, but such changes would not significantly affect the consequences of serious accidents. Routine radiological effluents are not affected. As a result, there is no increase in individual or cumulative radiation exposure.

The environmental impacts of transportation resulting from the use of higher enrichment and extended irradiation are discussed in the staff assessment entitled, "NRC Assessment of the Environmental Effects of Transportation Resulting from Extended Fuel Enrichment and Irradiation." This assessment was published in the FEDERAL REGISTER on August 11, 1988 (53 FR 30355), as corrected on August 24, 1988 (53 FR 32322), in connection with the

Shearon Harris Nuclear Power Plant, Unit 1: Environmental Assessment and Finding of No Significant Impact. As indicated therein, the environmental cost contribution of an increase in fuel enrichment of up to 5 weight percent U-235 and irradiation limits of up to 60 Gigawatt Days per Metric Ton (GWD/MT) are either unchanged, or may in fact be reduced from those summarized in Table S-4 as set forth in 10 CFR 51.52(c). These findings are applicable to the proposed increase in the allowable exposure of Siemens' 9X9-2 fuel for the Susquehanna units. Accordingly, the Commission concludes that this proposed action would result in no significant radiological environmental impact.

With regard to potential nonradiological impacts, the proposed change will in no way affect environs located outside the restricted area as defined in 10 CFR Part 20. It does not affect nonradiological plant effluents and has no other environmental impact. Therefore, the Commission concludes that there are no significant nonradiological environmental impacts associated with the proposed change in the fuel exposure limit.

Alternatives to the Proposed Action:

Since the Commission has concluded there is no measurable environmental impact associated with the proposed action, any alternatives with equal or greater environmental impact need not be evaluated. As an alternative to the proposed action, the staff considered denial of the proposed action. Denial of the application would result in no change in current environmental impacts. The environmental impacts of the proposed action and the alternative action are similar.

Alternative Use of Resources:

This action does not involve the use of any resources not previously considered in the Final Environmental Statement for the Susquehanna Steam Electric Station, Units 1 and 2.

Agencies and Persons Consulted:

In accordance with its stated policy, on July 7, 1995, the staff consulted with the Pennsylvania State official, David Ney of the Department of Radiation Protection, regarding the environmental impact of the proposed action. The State official had no comments.

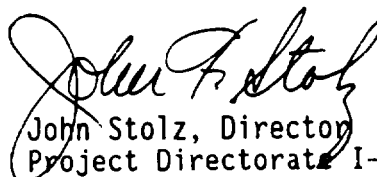
FINDING OF NO SIGNIFICANT IMPACT

Based upon the environmental assessment, the Commission concludes that the proposed action will not have a significant effect on the quality of the human environment. Accordingly, the Commission has determined not to prepare an environmental impact statement for the proposed action.

For further details with respect to the proposed action, see the licensee's letter dated February 2, 1995, 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, Pennsylvania 18701.

Dated at Rockville, Maryland, this 5th day of September 1995.

FOR THE NUCLEAR REGULATORY COMMISSION



John Stolz, Director  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation