

August 8, 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 ALLOWABLE MAIN STEAM ISOLATION VALVE (MSIV) LEAK RATE  
AND DELETION OF MSIV LEAKAGE CONTROL SYSTEM, SUSQUEHANNA STEAM  
ELECTRIC STATION, UNITS 1 AND 2 (TAC NOS. M91013 AND M91014)

Dear Mr. Byram:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application dated November 21, 1994, as supplemented by letters dated February 21, 1995, March 28, 1995, April 10, 1995, May 24, 1995, and June 23, 1995. The original application requested an amendment to the Susquehanna Steam Electric Station, Units 1 & 2, Technical Specifications to reflect the design change which would remove the main steamline isolation valve (MSIV) leakage control system (LCS) from each unit. The February 21, 1995 submittal requested a modification to an existing 10 CFR Part 50, Appendix J exemption. The proposed amendment would permit an increase in the allowable leak rate for the main steam isolation valves and the deletion of the MSIV LCS. The proposed exemption from 10 CFR Part 50, Appendix J, Sections II.H.4, III.C.2, and III.C.3, would permit the deletion of the MSIV LCS and allow the use of an alternate leakage pathway.

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

Sincerely,  
/s/

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

Sincerely,

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

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

Mr. Robert G. Byram  
Pennsylvania Power & Light Company

Susquehanna Steam Electric Station,  
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 an exemption from the requirements of 10 CFR Part 50, Appendix J, Sections II.H.4, III.C.2, and III.C.3, for Facility Operating Licenses No. NPF-14 and NPF-22 respectively, issued to Pennsylvania Power & Light Company, (the licensee), for operation of the Susquehanna Steam Electric Station (SSES), Units 1 and 2, located in Luzerne County, Pennsylvania.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed action would grant an exemption from 10 CFR Part 50, Appendix J, Sections II.H.4, III.C.2, and III.C.3 for SSES, Units 1 and 2, in conjunction with the removal of the main steam isolation valve (MSIV) leakage control system (LCS) and the proposed use of an alternative pathway.

Appendix J, Sections II.H.4 and III.C.2 of 10 CFR Part 50, require leak rate testing of MSIVs at the calculated peak containment pressure related to the design basis accident, and Section III.C.3 of Appendix J requires that the measured MSIV leak rates be included in the combined local leak rate test results. The proposed deletion of the MSIV LCS and proposed use of an

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alternate leakage pathway affects the description of an existing exemption (NUREG-0776) which allows the leak rate testing of the MSIVs at a reduced pressure and allows the exclusion of the measured MSIV leakage from the combined local leak rate test results.

The proposed action is in accordance with the licensee's application for exemption dated February 21, 1995.

The Need for the Proposed Action:

The proposed exemption is similar to the current exemption from 10 CFR Part 50, Appendix J, Sections II.H.4, III.C.2. The exemption is needed since the design of the MSIVs is such that testing in the reverse direction tends to unseat the MSIV and would result in a meaningless test. The total observed MSIV leak rate resulting from a leakage test where two MSIVs on one steam line are tested utilizing a reduced pressure (22.5 psig) will continue to be assigned to the penetration. The proposed exemption is also similar to the current exemption from 10 CFR Part 50, Appendix J, Section III.C.3. The licensee proposes that the MSIV leakage rate will continue to be accounted for separately in the radiological site analysis in accordance with the existing exemption. However, the existing exemption from 10 CFR Part 50, Appendix J, Section III.C.3 will not be applicable when the MSIV LCS is replaced with an Alternate Treatment Path (ATP) (main steam lines and condenser).

The proposed action regarding the TS amendment will reduce the need for repairs of the MSIVs, resolve concerns associated with the current LCS performance capability at high MSIV leakage rates, and provide an effective method for dealing with a potential MSIV leakage during a postulated loss-of-coolant accident (LOCA). Many boiling water reactors have difficulty meeting

their MSIV leakage rate limits. Extensive repair, rework, and retesting efforts have negative effects on the outage costs and schedules, as well as significant impact on the licensee's as low as is reasonable achievable (ALARA) radiological exposure programs. The alternatives proposed by the licensee to deal with the MSIV leakage make use of components (main steam lines and condenser) that are expected to remain intact and serviceable following a design basis LOCA.

Environmental Impacts of the Proposed Action:

The Commission has completed its evaluation of the proposed action and concludes that this action will not increase the probability or consequences of accidents, no changes are being made in the types of any effluents that may be released offsite, and there is no significant increase in the allowable individual or cumulative occupational radiation exposure. Regarding the exemption, the MSIV leakage, along with the containment leakage is used to calculate the maximum radiological consequences of a design basis accident. Section 15.6.5 of the SSES Final Safety Analysis Report (FSAR) identifies that standard and conservative assumptions have been used to calculate the offsite and control room doses, including the doses due to MSIV leakage, which could potentially result from a postulated LOCA. Further, the control room and offsite doses resulting from a postulated LOCA have recently been recalculated using currently accepted assumptions and methods. These analyses have demonstrated that the total leakage rate of 300 scfh results in dose exposures for the control room and offsite that remain within the requirements of 10 CFR Part 100 for offsite doses and 10 CFR Part 50, Appendix A, for the control room doses.

The change will not increase the probability or consequences of accidents, no changes are being made in the types of any effluents that may be released offsite, and there is no significant increase in the allowable individual or cumulative occupational radiation exposure. Accordingly, the Commission concludes that there are no significant radiological environmental impacts associated with the proposed action.

With regard to potential nonradiological impacts, the proposed action does involve features located entirely within the restricted area as defined in 10 CFR Part 20. It does not affect nonradiological plant effluents and has no other environmental impact. Accordingly, the Commission concludes that there are no significant nonradiological environmental impacts associated with the proposed action.

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 21, 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 8th day of August 1995.

FOR THE NUCLEAR REGULATORY COMMISSION



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