

February 1, 1995

Mr. George A. Hunger, Jr.  
Director-Licensing, MC 62A-1  
PECO Energy Company  
Nuclear Group Headquarters  
Correspondence Control Desk  
P.O. Box No. 195  
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SUBJECT: ENVIRONMENTAL ASSESSMENT AND FINDING OF NO SIGNIFICANT IMPACT,  
INCREASE IN ALLOWABLE MAIN STEAM ISOLATION VALVE (MSIV) LEAK RATE  
AND DELETION OF MSIVs LEAKAGE CONTROL SYSTEM, LIMERICK GENERATING  
STATION, UNITS 1 AND 2 (TAC NOS. M88609 AND M88656)

Dear Mr. Hunger:

Enclosed is a copy of the Environmental Assessment and Finding of No Significant Impact related to your application dated January 14, 1994, as supplemented by letters dated August 1, October 25, December 13, and December 22, 1994 (two letters). The original application requested an amendment to the Technical Specifications (TS). One of the December 22, 1994, submittals 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 (MSIV) and the deletion of the MSIV leakage control system (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/

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

Docket Nos. 50-352/353

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

Sincerely,

A handwritten signature in cursive script that reads "Frank Rinaldi".

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

Docket Nos. 50-352/353

Enclosure: Environmental Assessment

cc w/encl: See next page

Mr. George A. Hunger, Jr.  
PECO Energy Company

Limerick Generating Station,  
Units 1 & 2

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UNITED STATES NUCLEAR REGULATORY COMMISSION  
PHILADELPHIA ELECTRIC COMPANY  
DOCKET NOS. 50-352 AND 50-353  
LIMERICK GENERATING STATION, UNITS 1 AND 2  
ENVIRONMENTAL ASSESSMENT AND FINDING OF  
NO SIGNIFICANT IMPACT

The U.S. Nuclear Regulatory Commission (the Commission) is considering two actions: (1) issuance of an exemption from the requirements of 10 CFR 50, Appendix J, and (2) an amendment to Facility Operating License Nos. NPF-39 and NPF-85, issued to Philadelphia Electric Company (the licensee), for operation of the Limerick Generating Station (LGS), Units 1 and 2, located in Montgomery County, Pennsylvania.

ENVIRONMENTAL ASSESSMENT

Identification of the Proposed Action:

The proposed action would grant 1) an exemption from 10 CFR Part 50, Appendix J, Sections II.H.4, III.C.2, and III.C.3, and 2) an amendment to change the Technical Specifications (TS) for the Limerick Generating Station (LGS), 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 alternate leakage pathway.

10 CFR Part 50, Appendix J, Sections II.H.4 and III.C.2 require leak rate testing of MSIVs at the calculated peak containment pressure related to the design basis accident, and Section III.C.3 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 alternate leakage pathway affects the description of an existing exemption (NUREG-0991, and its

Supplement 3), which allows the leak rate testing of the MSIVs at a reduced pressure and allows exclusion of the measured MSIV leakage from the combined local leak rate test results.

The proposed TS amendment would permit an increase in the allowable MSIV leakage rate from 11.5 standard cubic feet per hour (scfh) to 100 scfh for any one MSIV and a combined maximum pathway leakage rate of 200 scfh for all four main steam lines, and would delete TS requirements for the currently installed MSIV LCS, because the proposed system removal makes the TS inapplicable.

The proposed action for the TS amendments is in accordance with the licensee's application for amendment dated January 14, 1994, as supplemented by letters dated August 1, October 25, December 13, and December 22, 1994; and the proposed action for the exemption is in accordance with a letter dated December 22, 1994.

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 and 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 valve 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 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 (BWRs) 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 reasonably achievable (ALARA) radiological exposure programs. The alternatives proposed by the licensee to deal with 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 actions related to the granting of an exemption from 10 CFR Part 50, Appendix J, Sections II.H.4, III.C.2, and III.C.3, and for the TS changes proposed by the licensee, and concludes that the proposed actions 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 LGS Updated Final Safety Analysis Report (UFSAR) 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 200 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.

Regarding the TS change, deletion of the MSIV LCS will reduce the overall occupational dose exposures and reduce the generation of low level radioactive waste due to the elimination of maintenance and surveillance activities associated with the system. The dose exposure associated with deleting the system will satisfy the ALARA requirements, and will be less than the dose which would result from maintenance and surveillance activities associated with the present system, if utilized for the remainder of the plant life. Thus, radiological releases will not differ significantly from those determined previously, and the proposed amendment does not otherwise affect facility radiological effluent or occupational exposures.

Therefore, there will not be a significant increase in the types and amounts of any effluent that maybe released offsite and, as such, the proposed amendment does not alter any initial conditions assumed for the design basis

accidents previously evaluated and the alternate system is capable of mitigating the design basis accidents.

Furthermore, the proposed exemption will not result in a significant increase to the LOCA doses previously evaluated against offsite and main control room dose limits contained in 10 CFR Part 100 and 10 CFR Part 50, Appendix A, General Design Criteria 19.

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

Alternatives to the Proposed Action:

Since the Commission has concluded there is no measurable environmental impact associated with the proposed actions, any alternatives with equal or greater environmental impact need not be evaluated. As an alternative to the proposed actions, the staff considered denial of the proposed actions. 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 LGS, Units 1 and 2.

Agencies and Persons Consulted:

In accordance with its stated policy, the staff consulted with the Pennsylvania State official regarding the environmental impact of the proposed actions. The State official had no comments.

FINDING OF NO SIGNIFICANT IMPACT

Based upon the environmental assessment, the Commission concludes that the proposed actions 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 actions.

For further details with respect to the proposed actions, see the licensee's letter dated January 14, 1994, as supplemented by letters dated August 1, October 25, December 13, and December 22, 1994 (two submittals), which are 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 Pottstown Public Library, 500 High Street, Pottstown, PA 19464.

Dated at Rockville, Maryland, this 1st day of February 1995.

FOR THE NUCLEAR REGULATORY COMMISSION



Frank Rinaldi, Acting Director  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation