

December 22, 1994

Mr. George A. Hunger, Jr.  
Director-Licensing, MC 62A-1  
PECO Energy Company  
Nuclear Group Headquarters  
Correspondence Control Desk  
P. O. Box No. 195  
Wayne, Pennsylvania 19087-0195

SUBJECT: EXEMPTION FROM CERTAIN REQUIREMENTS OF 10 CFR PART 50, APPENDIX J, "PRIMARY REACTOR CONTAINMENT LEAKAGE TESTING FOR WATER-COOLED POWER REACTORS", LIMERICK GENERATING STATION, UNITS 1 AND 2 (TAC NOS. M89984 AND M89985)

Dear Mr. Hunger:

The Commission has issued the enclosed exemption from certain requirements of 10 CFR Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors." This exemption is related to your application dated July 22, 1994, to allow a one-time exemption from the 2-year test interval for Type B and C leak rate tests required by 10 CFR Part 50, Appendix J, Sections III.D.2(a) and III.D.3.

The exemption is necessary to allow the continuation of Unit 2 operation within its 24-month operating cycle, until its upcoming third refueling outage scheduled to begin on January 28, 1995.

A copy of the exemption is being forwarded to the Office of the Federal Register for publication.

Sincerely,

/s/

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

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P PDR

Docket Nos. 50-352/353

Enclosure: As stated

cc w/encl: See next page

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

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Sincerely,

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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: As stated

cc w/encl: See next page

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

Limerick Generating Station,  
Units 1 & 2

cc:

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State College, PA 16803

UNITED STATES OF AMERICA  
NUCLEAR REGULATORY COMMISSION

In the Matter of	)	
	)	
PHILADELPHIA ELECTRIC COMPANY	)	
	)	
(LIMERICK GENERATING STATION, UNITS 1 AND 2)	)	Docket Nos. 50-352 and 50-353

EXEMPTION

I.

Philadelphia Electric Company (the licensee), is the holder of Facility Operating License Nos. NPF-39 and NPF-85, which authorize operation of the Limerick Generating Station (LGS), Units 1 and 2. The licenses provide, among other things, that the licensee is subject to all rules, regulations, and orders of the Nuclear Regulatory Commission (the Commission) now and hereafter in effect.

The facilities consist of two boiling water reactors located in Montgomery County, Pennsylvania.

II.

Section 50.54(o) of 10 CFR Part 50 requires that primary reactor containments for water cooled power reactors be subject to the requirements of Appendix J to 10 CFR Part 50. Appendix J contains the leakage test requirements, schedules, and acceptance criteria for tests of the leak tight integrity of the primary reactor containment and systems and components which penetrate the containment. Section III.D.2(a) of Appendix J to 10 CFR Part 50 requires that Type B leak rate tests, except for air locks, be performed during reactor shutdown for refueling, or other convenient intervals, but in

no case at intervals greater than 2 years. Type B tests are intended to detect local leaks and to measure leakage across each pressure-containing or leakage-limiting boundary for certain reactor containment penetrations.

Section III.D.3 of Appendix J to 10 CFR Part 50 requires that Type C leak rate tests be performed during each reactor shutdown for refueling but in no case at intervals greater than 2 years. Type C tests are intended to measure containment isolation valve leakage rates for certain containment isolation valves.

### III.

By letter dated July 22, 1994, the licensee requested a one-time exemption from the Commission's regulations. The subject exemption is from the requirements of 10 CFR Part 50, Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors," Sections III.D.2(a) and III.D.3, to allow the two-year interval to be exceeded by no more than 26 days for the 68 leak tests. In its request, the licensee provided a list of the affected penetrations and associated plant-specific leak test procedures, and the dates when the current leak tests will expire.

This exemption is being requested in order to avoid an early reactor shutdown to comply with the 2-year testing interval, and to allow for shutdown scheduling flexibility following the third, Unit 2, operating cycle. Currently, LGS Unit 2 is using a new core design which allows the intervals between reactor shutdowns for refueling to extend beyond the maximum-allowable, two-year testing period. Prior to the current operating cycle, local leak rate tests were performed in conjunction with an 18-month refueling cycle. The use of the extended-cycle core designs has been recognized as a

growing trend in the industry as discussed in Generic Letter 91-04, "Changes in Technical Specification Surveillance Intervals to Accommodate a 24-Month Fuel Cycle," dated April 2, 1991.

The licensee has divided the affected leak tests into two categories: 1) those that will expire prior to the scheduled outage beginning on January 28, 1995, and 2) those that will expire during the period that follows, up to February 19, 1995. There are 22 leak rate tests which are listed in Table 1 of the licensee's July 22, 1994 request in the first category, and 46 additional tests, listed in Tables 2, 3 and 4 of the licensee's request in the second category. The earliest of these tests falls due on January 24, 1995, 4 days prior to the scheduled shutdown. The licensee has requested an exemption for up to 26 days which will allow the unit to operate until the beginning of the planned outage without shutting down to perform leak tests, and to allow for flexibility in planning the leak tests during the outage. The licensee has stated that all of the leak rate tests will be performed prior to February 19, 1995.

The licensee has presented information in support of their request for a 26-day extension of the Type B and C test intervals. The Unit 2, as-left, minimum pathway leak rate (i.e., maximum allowable leakage rate for maintaining primary containment), following the second Unit 2 refueling outage, was  $.13 L_a$  (maximum allowable pathway leakage) or 20,625 standard cubic centimeters per minute (sccm), including contributions from the Main Steam Isolation Valves (MSIV); with a maximum pathway leak rate of  $.27 L_a$  or 42,502 sccm, excluding MSIV leakage, in accordance with LGS's current Appendix

J exemption. These as-left leak rates represent a significant margin to the maximum allowable pathway leakage of 158,273 sccm.

The licensee has stated that the 26-day extension of the leak test interval is not likely to decrease the margin between as-found leak rates and the maximum allowable pathway leakage. Also, the licensee has stated that extending the testing interval by 26 days will not significantly impact the integrity of the containment boundary, and therefore, will not significantly impact the consequences of an accident or transient in the unlikely occurrence of an event during the 26 days of power operation.

For the reasons set forth above, the NRC staff concludes there is reasonable assurance that the containment leakage-limiting function will be maintained and that a forced outage to perform Type B and C tests is not necessary. Therefore, the staff finds the requested one-time exemption, to allow the Type B and C tests listed in the licensee's July 22, 1994, submittal to be extended up to 26 days, but not to exceed February 19, 1995, to be acceptable.

#### IV.

Pursuant to 10 CFR 50.12, the Commission may, upon application by any interested person or upon its own initiative, grant exemptions from the requirements of 10 CFR Part 50 when (1) the exemptions are authorized by law, will not present an undue risk to public health and safety, and are consistent with the common defense and security; and 2) when special circumstances are present. Special circumstances are present whenever, according to 10 CFR 50.12(a)(2)(ii), "Application of the regulation in the particular

circumstances would not serve the underlying purpose of the rule or is not necessary to achieve the underlying purpose of the rule...."

The underlying purpose of the rule is to ensure that any potential leakage pathways through the containment boundary are identified within a time span that prevents significant degradation from continuing or being unknown, and long enough to allow the tests to be conducted during scheduled refueling outages. The 2-year maximum interval was originally expected to bound the typical operating cycle, including a limited amount of mid-cycle outage time. The advent of advance fuel types has made it possible to operate the facility for a 2-year maximum interval. Based on the as-left leak rates for LGS, Units 1 and 2, we find that application of the regulation is not necessary to meet the underlying purpose of the rule in that, taking into consideration the 26-day extension, the components that comprise the primary containment boundary will still be tested at a frequency that is appropriate to those components and their application. In addition, the 26-day extension represents a minimal increase in the existing 2-year interval required by the rule.

V.

Accordingly, the Commission has determined that, pursuant to 10 CFR Part 50.12, an exemption is authorized by law and will not present an undue risk to the public health and safety, and that there are special circumstances present, as specified in 10 CFR 50.12(a)(2). An exemption is hereby granted from the requirements of Sections III.D.2(a) and III.D.3 of Appendix J to 10 CFR Part 50, which requires that Type B and C tests be performed during each reactor shutdown for refueling but in no case at intervals greater than 2 years, for a period of up to 26 days (not to exceed February 19, 1995) from the expiration of the current leak test for the affected penetrations.

Pursuant to 10 CFR 51.32, the Commission has determined that the granting of this exemption will have no significant impact on the quality of the human environment (59 FR 65808 ).

This exemption is effective upon issuance.

FOR THE NUCLEAR REGULATORY COMMISSION

/s/

Steven A. Varga, Director  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland  
this 22nd day of December 1994

OFFICE	PDI-2/LA	PDI-2/PE	PDI-2/PM	OGC	PDI-2/D	DRRE/D
NAME	MO'Brien	TLTurb	FRinaldi	EHOLLER	JStolzk	SVarga
DATE	11/29/94	11/29/94	11/30/94	12/13/94	12/15/94	12/21/94

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12/20/94

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FOR THE NUCLEAR REGULATORY COMMISSION

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Steven A. Varga, Director  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Dated at Rockville, Maryland  
this 22nd day of December 1994