

February 16, 1994

Docket No. 50-352

Mr. George A. Hunger, Jr.  
Director-Licensing, MC 52A-5  
PECO Energy Company  
Nuclear Group Headquarters  
Correspondence Control Desk  
P.O. Box No. 195  
Wayne, Pennsylvania 19087-0195

Dear Mr. Hunger:

SUBJECT: TYPE A CONTAINMENT INTEGRATED LEAKAGE RATE TEST INTERVAL, LIMERICK GENERATING STATION, UNIT 1 (TAC NO. M88331)

The Commission has issued the enclosed Amendment No. 67 to Facility Operating License No. NPF-39 for the Limerick Generating Station, Unit 1. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated November 30, 1993.

This amendment changes the Appendix A TS by allowing the third Type A Containment Integrated Leakage Rate Test in the first 10-year service period to be conducted at Refuel 6.

This TS change is a one-time extension of the current maximum interval from 50 months to 65 months and is consistent with a one-time exemption from Appendix J to 10 CFR Part 50, being issued concurrently under separate cover. The exemption extends the first 10-year service period by approximately 15 months.

A copy of our Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

Sincerely,

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

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PDR ADDCK 05000352  
P PDR

Enclosures:

1. Amendment No. 67 to License No. NPF-39
2. Safety Evaluation

cc w/enclosures:

See next page  
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Docket File	MO'Brien(2)	CGrimes, 11E-21	NRC & Local PDRs
FRinaldi/JShea	PDI-2 Reading	OGC	ACRS(10)
SVarga	DHagan, 3206	OPA	RBarrett
JCalvo	GHill(2), PI-22	OC/LFDCB	
CMiller	EWenzinger, RGN-I	CAnderson, RGN-I	

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OFC	:PDI-2/LA	:PDI-2/PM	:SCSB	:OGC	:PDI-4/D	:
NAME	:MO'Brien	:FRinaldi	:bf	:RBarrett	:CMiller	:
DATE	:2/1/94	:2/1/94	:2/1/94	:2/7/94	:2/16/94	:

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

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Sincerely,

A handwritten signature in cursive script, appearing to read "Frank Rinaldi".

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

Enclosures:

1. Amendment No. 67 to  
License No. NPF-39
2. Safety Evaluation

cc w/enclosures:  
See next page

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

Limerick Generating Station,  
Units 1 & 2

cc:

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

PHILADELPHIA ELECTRIC COMPANY  
DOCKET NO. 50-352  
LIMERICK GENERATING STATION, UNIT 1  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 67  
License No. NPF-39

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Philadelphia Electric Company (the licensee) dated November 30, 1993, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.

2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-39 is hereby amended to read as follows:

Technical Specifications and Environmental Plan

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 67 , are hereby incorporated into this license. Philadelphia Electric Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. This license amendment is effective as of its date of issuance.

FOR THE NUCLEAR REGULATORY COMMISSION



Charles L. Miller, Director  
Project Directorate I-2  
Division of Reactor Projects - I/II  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: February 16, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 67

FACILITY OPERATING LICENSE NO. NPF-39

DOCKET NO. 50-352

Replace the following pages of the Appendix A Technical Specifications with the attached page. The revised page identified by Amendment number and is contains vertical lines indicating the areas of change. Overleaf page is provided to maintain document completeness.\*

Remove

3/4 6-3  
3/4 6-4

Insert

3/4 6-3  
3/4 6-4\*

## CONTAINMENT SYSTEMS

### LIMITING CONDITION FOR OPERATION (Continued)

#### ACTION: (Continued)

- b. The combined leakage rate for all penetrations and all valves listed in Table 3.6.3-1, except for main steam line isolation valves\* and valves which are hydrostatically tested per Table 3.6.3-1, subject to Type B and C tests to less than or equal to  $0.60 L_a$ , and
- c. The leakage rate to less than or equal to 11.5 scf per hour for any one main steam line through the isolation valves, and
- d. The combined leakage rate for all containment isolation valves in hydrostatically tested lines which penetrate the primary containment to less than or equal to 1 gpm times the total number of such valves,

prior to increasing the reactor coolant system temperature above 200°F.

### SURVEILLANCE REQUIREMENTS

4.6.1.2 The primary containment leakage rates shall be demonstrated at the following test schedule and shall be determined in conformance with the criteria specified in Appendix J of 10 CFR Part 50 using the methods and provisions of ANSI 45.4-1972 and BN-TOP-1 and verifying the result by the Mass Point Methodology described in ANSI N56.8-1981:

- a. Three Type A Overall Integrated Containment Leakage Rate tests shall be conducted at 40 +/- 10 month intervals during shutdown at  $P_a$ , 44.0 psig, during each 10-year service period. The third test of each set shall be conducted during the shutdown for the 10-year plant inservice inspection.\*\*
- b. If any periodic Type A test fails to meet  $0.75 L_a$ , the test schedule for subsequent Type A tests shall be reviewed and approved by the Commission. If two consecutive Type A tests fail to meet  $0.75 L_a$ , a Type A test shall be performed at least every 18 months until two consecutive Type A tests meet  $0.75 L_a$ , at which time the above test schedule may be resumed.
- c. The accuracy of each Type A test shall be verified by a supplemental test which:
  1. Confirms the accuracy of the test by verifying that the difference between the supplemental data and the Type A test data is within  $0.25 L_a$ . The formula to be used is:  $[L_o + L_{am} - 0.25 L_a] \leq L_c \leq [L_o + L_{am} + 0.25 L_a]$  where  $L_c$  = supplemental test result;  $L_o$  = superimposed leakage;  $L_{am}$  = measured Type A leakage.
  2. Has duration sufficient to establish accurately the change in leakage rate between the Type A test and the supplemental test.
  3. Requires the quantity of gas injected into the containment or bled from the containment during the supplemental test to be between  $0.75 L_a$  and  $1.25 L_a$ .

\* Exemption to Appendix "J" to 10 CFR Part 50.

\*\* The interval between the second and third Overall Integrated Leakage Rate tests of the first 10-year service period will be extended to the sixth Unit 1 refueling outage. As a result, the duration of the first 10-year service period will be extended to the end of the sixth Unit 1 refueling outage.

## CONTAINMENT SYSTEMS

### SURVEILLANCE REQUIREMENTS (Continued)

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- d. Type B and C tests shall be conducted with gas at  $P_a$ , 44.0 psig\*, at intervals no greater than 24 months except for tests involving:
  - 1. Air locks,
  - 2. Main steam line isolation valves,
  - 3. Containment isolation valves in hydrostatically tested lines which penetrate the primary containment, and
- e. Air locks shall be tested and demonstrated OPERABLE per Surveillance Requirement 4.6.1.3.
- f. Main steam line isolation valves shall be leak tested at least once per 18 months.
- g. Containment isolation valves in hydrostatically tested lines which penetrate the primary containment shall be leak tested at least once per 18 months.
- h. The provisions of Specification 4.0.2 are not applicable to Specifications 4.6.1.2a., 4.6.1.2b., 4.6.1.2c., 4.6.1.2d., and 4.6.1.2e.

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\*Unless a hydrostatic test is required per Table 3.6.3-1.





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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 67 TO FACILITY OPERATING LICENSE NO. NPF-39

PHILADELPHIA ELECTRIC COMPANY  
LIMERICK GENERATING STATION, UNIT 1

DOCKET NO. 50-352

1.0 INTRODUCTION

By letter dated November 30, 1993, Philadelphia Electric Company submitted a request for changes to the Limerick Generating Station (LGS), Unit 1, Technical Specifications (TS). The requested changes would allow a one-time extension of the third Type A Containment Integrated Leakage Rate Test (CILRT), by approximately 15 months in the first 10-year service period.

2.0 EVALUATION

The existing TS 4.6.1.2.a. states that three Type A tests (Overall Integrated Containment Leakage Rate) shall be conducted at  $40 \pm 10$ -month intervals during shutdown at  $P_a$  (44 psig) during each 10-year service period. The 50-month maximum interval for the third Type A test within the first 10-year service period would be extended to approximately 65 months. This extension will prevent performing four CILRTs, one more than required, within the first 10-year service period. The benefit of not performing the additional CILRT is a reduction in personnel radiation exposure. A dose saving will be realized from eliminating contamination, reducing exposure for venting and draining, and from setup and restoration of instrumentation required to perform the test.

Data from the pre-operational (August 1984), first (August 1987) and second (November 1990) CILRT, at LGS, Unit 1, indicates that most of the measured leakage is from the containment penetrations and not from the containment barrier. The "as-left" leakage rates were well below the 10 CFR Part 50 Appendix J limit. Both Appendix J and the TS require that the leakage rate be less than 75% of  $L_a$  to allow for deterioration in leakage paths between tests. The allowable leakage rate,  $L_a$ , is 0.5 wt.%/day. Therefore, the established acceptable limit is  $< 0.375$  wt.%/day. The "as-left" leakage rates for the pre-operational and first two CILRTs were 0.225%, 0.178% and 0.334% wt.%/day, which are below the acceptance limit. The Type B and C test (Local Leakage Rate Test or LLRT) program also provides assurance that containment integrity has been maintained. LLRTs demonstrate operability of components and penetrations by measuring penetration and valve leakage. Additionally, there have been no modifications made to the plant that could adversely affect the test results.

The only failure of the CILRT occurred during the August 1987 test. During this CILRT, the leakage rate was 1.0 wt.%/day. The licensee determined that the excessive leakage was caused by packing gland leaks on nine containment atmosphere control (CAC) system valves. This failure was caused by a maintenance error and was not age related. The configuration of the CAC valves was subsequently modified by the licensee so that the LLRT would identify any packing leaks in the future. In addition, all containment inboard isolation valves that are located outside containment (i.e., the same configurations as the CAC valves) were reviewed and modified by the licensee to ensure that the packing would be subject to the LLRT pressure.

Since the licensee has justified the leaktight integrity of the containment based on previous leakage test results, the staff concludes that a one-time extension of approximately 15 months beyond the maximum permitted test interval will not have a significant safety impact. The staff, therefore, concludes that the licensee's requested one-time schedular test interval extension for conducting the third CILRT of the first 10-year service period is acceptable.

### 3.0 STATE CONSULTATION

In accordance with the Commission's regulations, the Pennsylvania State official was notified of the proposed issuance of the amendment. The State official had no comments.

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a surveillance requirement. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (58 FR 67858). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

### 5.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: F. Rinaldi

Date: February 16, 1994