

March 29, 1996

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, PA 19087-0195

SUBJECT: LIMERICK GENERATING STATION, UNITS 1 AND 2 (TAC NOS. M94604 AND M94605)

Dear Mr. Hunger:

The Commission has issued the enclosed Amendment No. 115 to Facility Operating License No. NPF-39 and Amendment No. 77 to Facility Operating License No. NPF-85 for the Limerick Generating Station, Units 1 and 2. These amendments consist of changes to the Technical Specifications (TSs) in response to your application dated December 22, 1995.

The amendments change to TS 3.6.1.8, "Drywell and Suppression Chamber Purge System," increasing the drywell and suppression chamber purge system operating time limit from 90 hours each 365 days to 180 hours each 365 days.

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

Docket Nos. 50-352/353

- Enclosures: 1. Amendment No. 115 to License No. NPF-39
- 2. Amendment No. 77 to License No. NPF-85
- 3. Safety Evaluation

cc w/encls: See next page

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UNITED STATES  
NUCLEAR REGULATORY COMMISSION

WASHINGTON, D.C. 20555-0001

March 29, 1996

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Director-Licensing, MC 62A-1  
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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

Docket Nos. 50-352/353

Enclosures: 1. Amendment No. <sup>115</sup> to  
License No. NPF-39  
2. Amendment No. <sup>77</sup> to  
License No. NPF-85  
3. Safety Evaluation

cc w/encls: See next page

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

Limerick Generating Station,  
Units 1 & 2

cc:

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Chairman  
Board of Supervisors  
of Limerick Township  
646 West Ridge Pike  
Linfield, PA 19468



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. 115  
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 December 22, 1995, 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.

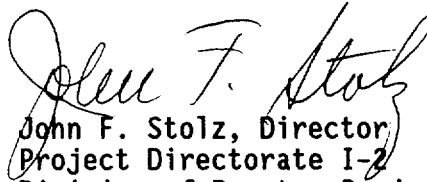
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-39 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 115 , 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, and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, 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: March 29, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 115

FACILITY OPERATING LICENSE NO. NPF-39

DOCKET NO. 50-352

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove

3/4 6-11  
B 3/4 6-2

Insert

3/4 6-11  
B 3/4 6-2

## CONTAINMENT SYSTEMS

### DRYWELL AND SUPPRESSION CHAMBER PURGE SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

3.6.1.8 The drywell and suppression chamber purge system may be in operation for up to 180 hours each 365 days with the supply and exhaust isolation valves in one supply line and one exhaust line open for inerting, deinerting, or pressure control.\*

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

#### ACTION:

- a. With a drywell and/or suppression chamber purge supply and/or exhaust isolation valve open, except as permitted above, close the valve(s) within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

#### SURVEILLANCE REQUIREMENTS

---

4.6.1.8 Before being opened, the drywell and suppression chamber purge supply and exhaust butterfly isolation valves shall be verified not to have been open for more than 180 hours in the previous 365 days.\*

---

\*Valves open for pressure control are not subject to the 180 hour per 365 day limit provided the 1-inch/2-inch bypass line is being utilized.

## CONTAINMENT SYSTEMS

### BASES

---

#### 3/4.6.1.5 PRIMARY CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment will be maintained comparable to the original design standards for the life of the unit. Structural integrity is required to ensure that the containment will withstand the maximum calculated pressure in the event of a LOCA. A visual inspection in conjunction with Type A leakage tests is sufficient to demonstrate this capability.

#### 3/4.6.1.6 DRYWELL AND SUPPRESSION CHAMBER INTERNAL PRESSURE

The limitations on drywell and suppression chamber internal pressure ensure that the calculated containment peak pressure does not exceed the design pressure of 55 psig during LOCA conditions or that the external pressure differential does not exceed the design maximum external pressure differential of 5.0 psid. The limit of - 1.0 to + 2.0 psig for initial containment pressure will limit the total pressure to  $\leq 44$  psig which is less than the design pressure and is consistent with the safety analysis.

#### 3/4.6.1.7 DRYWELL AVERAGE AIR TEMPERATURE

The limitation on drywell average air temperature ensures that the containment peak air temperature does not exceed the design temperature of 340°F during steam line break conditions and is consistent with the safety analysis.

#### 3/4.6.1.8 DRYWELL AND SUPPRESSION CHAMBER PURGE SYSTEM

The drywell and suppression chamber purge supply and exhaust isolation valves are required to be closed during plant operation except as required for inerting, deinerting and pressure control. The 180 hours per 365 day limit on purge valve operation is imposed to protect the integrity of the SGTS filters. Analysis indicates that should a LOCA occur while this pathway is being utilized, the associated pressure surge through the (18 or 24") purge lines will adversely affect the integrity of SGTS. This limit is not imposed, however, on the subject valves when pressure control is being performed through the 2-inch bypass line, since a pressure surge through this line does not threaten the OPERABILITY of SGTS.





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

PHILADELPHIA ELECTRIC COMPANY  
DOCKET NO. 50-353  
LIMERICK GENERATING STATION, UNIT 2  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No.77  
License No. NPF-85

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Philadelphia Electric Company (the licensee) dated December 22, 1995, 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-85 is hereby amended to read as follows:

Technical Specifications

The Technical Specifications contained in Appendix A and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 77, 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, and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



John F. Stolz, 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: March 29, 1996

ATTACHMENT TO LICENSE AMENDMENT NO. 77

FACILITY OPERATING LICENSE NO. NPF-85

DOCKET NO. 50-353

Replace the following pages of the Appendix A Technical Specifications with the attached pages. The revised pages are identified by Amendment number and contain vertical lines indicating the area of change.

Remove

3/4 6-11  
B 3/4 6-2

Insert

3/4 6-11  
B 3/4 6-2

## CONTAINMENT SYSTEMS

### DRYWELL AND SUPPRESSION CHAMBER PURGE SYSTEM

#### LIMITING CONDITION FOR OPERATION

---

3.6.1.8 The drywell and suppression chamber purge system may be in operation for up to 180 hours each 365 days with the supply and exhaust isolation valves in one supply line and one exhaust line open for inerting, deinerting, or pressure control.\*

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

#### ACTION:

- a. With a drywell and/or suppression chamber purge supply and/or exhaust isolation valve open, except as permitted above, close the valve(s) within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

#### SURVEILLANCE REQUIREMENTS

---

4.6.1.8 Before being opened, the drywell and suppression chamber purge supply and exhaust butterfly isolation valves shall be verified not to have been open for more than 180 hours in the previous 365 days.\*

---

\*Valves open for pressure control are not subject to the 180 hour per 365 day limit provided the 1-inch/2-inch bypass line is being utilized.

## CONTAINMENT SYSTEMS

### BASES

---

#### 3/4.6.1.5 PRIMARY CONTAINMENT STRUCTURAL INTEGRITY

This limitation ensures that the structural integrity of the containment will be maintained comparable to the original design standards for the life of the unit. Structural integrity is required to ensure that the containment will withstand the maximum calculated pressure in the event of a LOCA. A visual inspection in conjunction with Type A leakage tests is sufficient to demonstrate this capability.

#### 3/4.6.1.6 DRYWELL AND SUPPRESSION CHAMBER INTERNAL PRESSURE

The limitations on drywell and suppression chamber internal pressure ensure that the calculated containment peak pressure does not exceed the design pressure of 55 psig during LOCA conditions or that the external pressure differential does not exceed the design maximum external pressure differential of 5.0 psid. The limit of - 1.0 to + 2.0 psig for initial containment pressure will limit the total pressure to  $\leq 44$  psig which is less than the design pressure and is consistent with the safety analysis.

#### 3/4.6.1.7 DRYWELL AVERAGE AIR TEMPERATURE

The limitation on drywell average air temperature ensures that the containment peak air temperature does not exceed the design temperature of 340°F during steam line break conditions and is consistent with the safety analysis.

#### 3/4.6.1.8 DRYWELL AND SUPPRESSION CHAMBER PURGE SYSTEM

The drywell and suppression chamber purge supply and exhaust isolation valves are required to be closed during plant operation except as required for inerting, deinerting and pressure control. The 180 hours per 365 day limit on purge valve operation is imposed to protect the integrity of the SGTS filters. Analysis indicates that should a LOCA occur while this pathway is being utilized, the associated pressure surge through the (18 or 24") purge lines will adversely affect the integrity of SGTS. This limit is not imposed, however, on the subject valves when pressure control is being performed through the 2-inch bypass line, since a pressure surge through this line does not threaten the OPERABILITY of SGTS.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NOS. 115 AND 77 TO FACILITY OPERATING  
LICENSE NOS. NPF-39 AND NPF-85  
PHILADELPHIA ELECTRIC COMPANY  
LIMERICK GENERATING STATION, UNITS 1 AND 2  
DOCKET NOS. 50-352 AND 50-353

1.0 INTRODUCTION

By letter dated December 22, 1995, the Philadelphia Electric Company (the licensee) submitted a request for changes to the Limerick Generating Station (LGS), Units 1 and 2, Technical Specifications (TSs). The proposed change to TS 3.6.1.8, "Drywell and Suppression Chamber Purge System," would increase the drywell and suppression chamber purge system operating time limit from 90 hours each 365 days to 180 hours each 365 days.

2.0 EVALUATION

At the present time, TS 3.6.1.8 states that, "The drywell and suppression chamber purge system may be in operation for up to 90 hours each 365 days with the supply and exhaust isolation valves in one supply line and one exhaust line open for inerting, deinerting, or pressure control."

The annual limit in operating time of the drywell and suppression chamber purge system during Operating Conditions 1, 2, and 3 was imposed to reduce the probability of, and minimize the consequences of, equipment damage resulting from a loss-of-coolant-accident (LOCA) during the time that the large purge and vent valves are open.

The licensee's submittal of December 22, 1995, requested that the drywell and suppression chamber purge system operation limit be changed from 90 hours in 365 days to 180 hours in 365 days. The request was based on recent operational experience which showed that the drywell and suppression chamber purge system was required for 85.1 hours for LGS Unit 1 during planned and unplanned outages. The licensee's request to extend the allowable operation time of the drywell and suppression chamber purge system from 90 to 180 hours in 365 days is supported by an analysis which demonstrates that the probability of a large early release is still significantly below the staff's safety goal value of 1.0 E-6 per year of reactor operation.

The LGS, Units 1 and 2, Safety Analysis Report (SAR) evaluations and the Level 2 Probabilistic Safety Assessment (PSA) analysis for containment failure have evaluated the risk associated with the proposed change. The main parameter considered is the large early release frequency (LERF), which considers the

release of radioactive material without the occurrence of public evacuation. This condition results in a 3% increase of the LERF from the Level 2 base value of  $2.58 \text{ E-}8$  that considered all PSA initiators. This 3% increase is still well below the staff's safety goal value of  $1.0 \text{ E-}6$  per year of reactor operation.

The NRC staff recognizes the need to provide operational flexibility with regard to the use of the drywell and suppression chamber purge system for the uses specified in LGS's TS 3.6.1.8. The licensee's proposed operating time extension, from 90 to 180 hours per 365 days, provides a reasonable margin to expected operational needs, and the licensee's request is well within the staff's policy limit. The staff approves the changes of the 365-day purge time limit from 90 to 180 hours. However, the staff requests that the licensee submit, within one year, a proposal to remove the purge time limit from the TS and replace it with requirements similar to those stated in the improved TS.

### 3.0 STATE CONSULTATION

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

### 4.0 ENVIRONMENTAL CONSIDERATION

The amendments change a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and change surveillance requirements. The NRC staff has determined that the amendments involve 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 amendments involve no significant hazards consideration, and there has been no public comment on such finding (61 FR 7555). Accordingly, the amendments meet 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 amendments.

### 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 amendments will not be inimical to the common defense and security or to the health and safety of the public.

Principal Contributor: F. Rinaldi

Date: March 29, 1996