

September 7, 1994

Docket Nos. 50-352
and 50-353

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: ISSUANCE OF AMENDMENTS, LIMERICK GENERATING STATION, UNITS 1 AND 2
(TAC NOS. M89429 AND M89430)

The Commission has issued the enclosed Amendment No. 76 to Facility Operating License No. NPF-39 and Amendment No. 37 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 (TS) in response to your application dated April 27, 1994.

These amendments delete TS Surveillance Requirement 4.4.1.1.1, which requires that the reactor recirculation pump discharge valve be demonstrated operable by performing a full-stroke test of the valve prior to reactor thermal power exceeding 25 percent of rated reactor thermal power.

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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Enclosures:

- 1. Amendment No. 76 to License No. NPF-39
- Amendment No. 37 to License No. NPF-85

- 2. Safety Evaluation

cc w/enclosures:

See next page

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

September 7, 1994

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

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

Enclosures:

1. Amendment No. 76 to
License No. NPF-39
Amendment No. 37 to
License No. NPF-85
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. 76
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 April 27, 1994, 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.

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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. 76, 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



Mohan C. Thadani, Acting 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: September 7, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 76

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. Overleaf page is provided to maintain document completeness.*

Remove

3/4 4-2

-

Insert

3/4 4-2

-

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS

4.4.1.1.1 DELETED

4.4.1.1.2 Each pump MG set scoop tube mechanical and electrical stop shall be demonstrated OPERABLE with overspeed setpoints less than or equal to 109% and 107%, respectively, of rated core flow, at least once per 24 months.

4.4.1.1.3 Establish a baseline APRM and LPRM** neutron flux noise value within the regions for which monitoring is required (Specification 3.4.1.1, ACTION c) within 2 hours of entering the region for which monitoring is required unless baselining has previously been performed in the region since the last refueling outage.

4.4.1.1.4 With one reactor coolant system recirculation loop not in operation, at least once per 12 hours verify that:

- a. Reactor THERMAL POWER is $\leq 70\%$ of RATED THERMAL POWER,
- b. The recirculation flow control system is in the Local Manual mode, and
- c. The speed of the operating recirculation pump is $\leq 90\%$ of rated pump speed.
- d. Core flow is greater than 39% when THERMAL POWER is within the restricted zone of Figure 3.4.1.1-1.

4.4.1.1.5 With one reactor coolant system recirculation loop not in operation, within 15 minutes prior to either THERMAL POWER increase or recirculation loop flow increase, verify that the following differential temperature requirements are met if THERMAL POWER is $\leq 30\%$ of RATED THERMAL POWER or the recirculation loop flow in the operating recirculation loop is $\leq 50\%$ of rated loop flow.

- a. $\leq 145^\circ\text{F}$ between reactor vessel steam space coolant and bottom head drain line coolant,
- b. $\leq 50^\circ\text{F}$ between the reactor coolant within the loop not in operation and the coolant in the reactor pressure vessel, and
- c. $\leq 50^\circ\text{F}$ between the reactor coolant within the loop not in operation and the operating loop.

The differential temperature requirements of Specification 4.4.1.1.5b. and c. do not apply when the loop not in operation is isolated from the reactor pressure vessel.

**Detector levels A and C of one LPRM string per core octant plus detectors A and C of one LPRM string in the center of the core should be monitored.



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. 37
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 April 27, 1994, 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. 37, 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



Mohan C. Thadani, Acting 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: September 7, 1994

ATTACHMENT TO LICENSE AMENDMENT NO. 37

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. Overleaf page is provided to maintain document completeness.*

Remove

3/4 4-1a
3/4 4-2

Insert

3/4 4-1a*
3/4 4-2

REACTOR COOLANT SYSTEM

LIMITING CONDITION FOR OPERATION (Continued)

ACTION: (Continued)

2. With 6 hours:
 - Reduce the average power range monitor (APRM) scram and rod block, and rod block monitor Trip Setpoints and Allowable Values, to those applicable for single recirculation loop operation per Specifications 2.2.1, 3.2.2, and 3.3.6, or declare the associated channel(s) inoperable and take the actions required by the referenced specifications, and,
 3. The provisions of Specification 3.0.4 are not applicable.
 4. Otherwise be in at least HOT SHUTDOWN within the next 12 hours.
- b. With no reactor coolant system recirculation loops in operation, immediately initiate action to reduce THERMAL POWER such that it is not within the restricted zone of Figure 3.4.1.1-1 within 2 hours, and initiate measures to place the unit in at least STARTUP within 6 hours and in HOT SHUTDOWN within the next 6 hours.
 - c. With one or two reactor coolant system recirculation loops in operation and total core flow less than 45% but greater than 39% of rated core flow and THERMAL POWER within the restricted zone of Figure 3.4.1.1-1:
 1. Determine the APRM and LPRM** noise levels (Surveillance 4.4.1.1.3):
 - a. At least once per 8 hours, and
 - b. Within 30 minutes after the completion of a THERMAL POWER increase of at least 5% of RATED THERMAL POWER.
 2. With the APRM or LPRM** neutron flux noise levels greater than three times their established baseline noise levels, within 15 minutes initiate corrective action to restore the noise levels within the required limits within 2 hours by increasing core flow or by reducing THERMAL POWER.
 - d. With one or two reactor coolant system recirculation loops in operation and total core flow less than or equal to 39% and THERMAL POWER within the restricted zone of Figure 3.4.1.1-1, within 15 minutes initiate corrective action to reduce THERMAL POWER to within the unrestricted zone of Figure 3.4.1.1-1 or increase core flow to greater than 39% within 4 hours.

**Detector levels A and C of one LPRM string per core octant plus detectors A and C of one LPRM string in the center of the core should be monitored.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS

4.4.1.1.1 DELETED

4.4.1.1.2 Each pump MG set scoop tube mechanical and electrical stop shall be demonstrated OPERABLE with overspeed setpoints less than or equal to 109% and 107%, respectively, of rated core flow, at least once per 24 months.

4.4.1.1.3 Establish a baseline APRM and LPRM** neutron flux noise value within the regions for which monitoring is required (Specification 3.4.1.1, ACTION c) within 2 hours of entering the region for which monitoring is required unless baselining has previously been performed in the region since the last refueling outage.

4.4.1.1.4 With one reactor coolant system recirculation loop not in operation, at least once per 12 hours verify that:

- a. Reactor THERMAL POWER is \leq 70% of RATED THERMAL POWER,
- b. The recirculation flow control system is in the Local Manual mode, and
- c. The speed of the operating recirculation pump is \leq 90% of rated pump speed.
- d. Core flow is greater than 39% when THERMAL POWER is within the restricted zone of Figure 3.4.1.1-1.

4.4.1.1.5 With one reactor coolant system recirculation loop not in operation, within 15 minutes prior to either THERMAL POWER increase or recirculation loop flow increase, verify that the following differential temperature requirements are met if THERMAL POWER is \leq 30% of RATED THERMAL POWER or the recirculation loop flow in the operating recirculation loop is \leq 50% of rated loop flow.

- a. \leq 145°F between reactor vessel steam space coolant and bottom head drain line coolant,
- b. \leq 50°F between the reactor coolant within the loop not in operation and the coolant in the reactor pressure vessel, and
- c. \leq 50°F between the reactor coolant within the loop not in operation and the operating loop.

The differential temperature requirements of Specification 4.4.1.1.5b. and c. do not apply when the loop not in operation is isolated from the reactor pressure vessel.

**Detector levels A and C of one LPRM string per core octant plus detectors A and C of one LPRM string in the center of the core should be monitored.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION
RELATED TO AMENDMENT NOS. 76 AND 37 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 April 27, 1994, the Philadelphia Electric Company (the licensee) submitted a request for changes to the Limerick Generating Station (LGS), Units 1 and 2, Technical Specifications (TS). The requested changes would delete TS Surveillance Requirement (SR) 4.4.1.1.1, which requires that the reactor recirculation pump discharge valve be demonstrated operable by performing a full-stroke test of the valve prior to reactor thermal power exceeding 25 percent of rated reactor thermal power, unless the cycling has been performed within the previous 31 days.

2.0 EVALUATION

Currently, LGS TS SR 4.4.1.1.1 requires that each reactor recirculation system pump discharge valve be demonstrated operable by cycling each valve through at least one complete cycle of full travel during each startup prior to reactor thermal power exceeding 25 percent of the rated reactor thermal power, unless the cycling has been done within 31 days.

The intent of TS SR 4.4.1.1.1 is to satisfy an Emergency Core Cooling System (ECCS) operability requirement for Boiling Water Reactors (BWR) where the reactor recirculation system piping serves as the injection flowpath to the reactor pressure vessel for the Low Pressure Coolant Injection (LPCI) system. At LGS, each LPCI subsystem has its own independent flowpath to the reactor pressure vessel, and does not rely on the reactor recirculation system piping for injecting to the reactor pressure vessel. The LPCI subsystems have dedicated injection nozzles on the reactor vessel which provide the required independent injection flowpath to the reactor vessel. Furthermore, the licensee has stated that the reactor recirculation system pump discharge valves are normally kept open during reactor power operation. These valves are classified as passive safety-related components.

Since the LPCI system at LGS does not rely on the reactor recirculation system piping to perform its ECCS function, and it has an independent flowpath for

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injecting water to reactor pressure vessel, the deletion of TS SR 4.4.1.1.1 does not affect the safe operation of the LGS units. The reactor recirculation system will continue to maintain reactor pressure boundary integrity and to provide sufficient flow through the reactor core to remove heat generated from the fuel. Therefore, the staff has determined that deleting SR 4.4.1.1.1 from TS 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 amendments. The State official had no comments.

4.0 ENVIRONMENTAL CONSIDERATION

The amendments 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 (59 FR 29628). 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 Contributors: T. Liu
F. Rinaldi

Date: September 7, 1994