

Mr. James A. Hutton  
Director-Licensing, MC 62A-1  
PECO Energy Company  
Nuclear Group Headquarters  
Correspondence Control Desk  
P.O. Box No. 195  
Wayne, PA 19087-0195

May 8, 2000

SUBJECT: LIMERICK GENERATING STATION (LGS), UNITS 1 AND 2 - ISSUANCE OF  
AMENDMENT RE: RECIRCULATION SYSTEM MOTOR GENERATOR SET  
STOP SURVEILLANCE REQUIREMENT (TAC NOS. MA5922 AND MA5923)

Dear Mr. Hutton:

The Commission has issued the enclosed Amendment No. 142 to Facility Operating License No. NPF-39 and Amendment No. 104 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 June 22, 1999, as supplemented January 3, 2000.

These amendments remove the recirculation system motor generator set stop surveillance requirement from the LGS Units 1 and 2 TSs.

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

Sincerely,

/RA/

Bartholomew C. Buckley, Sr. Project Manager, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Docket Nos. 50-352 and 50-353

- Enclosures: 1. Amendment No. 142 to  
License No. NPF-39  
2. Amendment No. 104 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

May 8, 2000

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*Bartholomew C. Buckley*

Bartholomew C. Buckley, Sr. Project Manager, Section 2  
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Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

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cc w/encls: See next page

Limerick Generating Station, Units 1 & 2

cc:

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

PECO ENERGY COMPANY

DOCKET NO. 50-352

LIMERICK GENERATING STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 142  
License No. NPF-39

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by PECO Energy Company (the licensee) dated June 22, 1999, as supplemented January 3, 2000, 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. 142 , are hereby incorporated into this license. PECO Energy 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

A handwritten signature in black ink, appearing to read "R. Clifford" followed by a stylized flourish.

James W. Clifford, Chief, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the  
Technical Specifications

Date of Issuance: May 8, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 142

FACILITY OPERATING LICENSE NO. NPF-39

DOCKET NO. 50-352

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

3/4 4-2

6-18a

Insert

3/4 4-2

6-18a

## REACTOR COOLANT SYSTEM

### SURVEILLANCE REQUIREMENTS

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4.4.1.1.1 DELETED

4.4.1.1.2 DELETED

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  $\leq 76.2\%$  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.

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\*\*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.

## ADMINISTRATIVE CONTROLS

### CORE OPERATING LIMITS REPORT

6.9.1.9 Core Operating Limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the CORE OPERATING LIMITS REPORT for the following:

- a. The AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR) for Specification 3.2.1,
- b. MAPFAC(P) and MAPFAC(F) factors for Specification 3.2.1,
- c. The MINIMUM CRITICAL POWER RATIO (MCPR) for Specification 3.2.3,
- d. The MCPR(P) and MCPR(F) adjustment factors for specification 3.2.3,
- e. The LINEAR HEAT GENERATION RATE (LHGR) for Specification 3.2.4,
- f. The power biased Rod Block Monitor setpoints and the Rod Block Monitor MCPR OPERABILITY limits of Specification 3.3.6,
- g. The Reactor Coolant System Recirculation Flow upscale trip setpoint and allowable value for Specification 3.3.6,
- h. DELETED

6.9.1.10 The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following document:

- a. NEDE-24011-P-A "General Electric Standard Application for Reactor Fuel" (Latest approved revision). \*

6.9.1.11 The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as SHUTDOWN MARGIN, transient analysis limits, and accident analysis limits) of the safety analysis are met.

6.9.1.12 The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

### SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the Regional Office of the NRC within the time period specified for each report.

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\* For Cycle 8, specific documents were approved in the Safety Evaluation dated (5/4/98) to support License Amendment No. (127).





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

PECO ENERGY COMPANY

DOCKET NO. 50-353

LIMERICK GENERATING STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 104  
License No. NPF-85

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by PECO Energy Company (the licensee) dated June 22, 1999, as supplemented January 3, 2000, 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. 104, are hereby incorporated in the license. PECO Energy Company shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented within 30 days.

FOR THE NUCLEAR REGULATORY COMMISSION



James W. Clifford, Chief, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the  
Technical Specifications

Date of Issuance: May 8, 2000

ATTACHMENT TO LICENSE AMENDMENT NO. 104

FACILITY OPERATING LICENSE NO. NPF-85

DOCKET NO. 50-353

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

3/4 4-2

6-18a

Insert

3/4 4-2

6-18a

## REACTOR COOLANT SYSTEM

### SURVEILLANCE REQUIREMENTS

---

4.4.1.1.1 DELETED

4.4.1.1.2 DELETED

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  $\leq 76.2\%$  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.

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- 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.

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\*\*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.

## ADMINISTRATIVE CONTROLS

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### CORE OPERATING LIMITS REPORT

6.9.1.9 Core Operating Limits shall be established prior to each reload cycle, or prior to any remaining portion of a reload cycle, and shall be documented in the CORE OPERATING LIMITS REPORT for the following:

- a. The AVERAGE PLANAR LINEAR HEAT GENERATION RATE (APLHGR) for Specification 3.2.1,
- b. MAPFAC(P) and MAPFAC(F) factors for Specification 3.2.1,
- c. The MINIMUM CRITICAL POWER RATIO (MCPR) for Specification 3.2.3,
- d. The MCPR(P) and MCPR(F) adjustment factors for specification 3.2.3,
- e. The LINEAR HEAT GENERATION RATE (LHGR) for Specification 3.2.4,
- f. The power biased Rod Block Monitor setpoints and the Rod Block Monitor MCPR OPERABILITY limits of Specification 3.3.6.
- g. The Reactor Coolant System Recirculation Flow upscale trip setpoint and allowable value for Specification 3.3.6,
- h. DELETED

6.9.1.10 The analytical methods used to determine the core operating limits shall be those previously reviewed and approved by the NRC, specifically those described in the following document:

- a. NEDE-24011-P-A "General Electric Standard Application for Reactor Fuel" (Latest approved revision).

6.9.1.11 The core operating limits shall be determined such that all applicable limits (e.g., fuel thermal-mechanical limits, core thermal-hydraulic limits, ECCS limits, nuclear limits such as SHUTDOWN MARGIN, transient analysis limits, and accident analysis limits) of the safety analysis are met.

6.9.1.12 The CORE OPERATING LIMITS REPORT, including any mid-cycle revisions or supplements, shall be provided upon issuance for each reload cycle to the NRC Document Control Desk with copies to the Regional Administrator and Resident Inspector.

### SPECIAL REPORTS

6.9.2 Special reports shall be submitted to the Regional Administrator of the Regional Office of the NRC within the time period specified for each report.



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

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NOS. 142 AND 104 TO FACILITY OPERATING  
LICENSE NOS. NPF-39 AND NPF-85  
PECO ENERGY COMPANY  
LIMERICK GENERATING STATION, UNITS 1 AND 2  
DOCKET NOS. 50-352 AND 50-353

1.0 INTRODUCTION

By letter dated June 22, 1999 (Reference 1), as supplemented by letter dated January 3, 2000 (Reference 2), PECO Energy Company (the licensee) submitted a request to amend the technical specifications (TS) for Limerick Generating Station, Units 1 and 2 (Limerick 1 and 2). The proposed TS amendment involves removal of the recirculation system motor generator (MG) set stop surveillance requirement. The January 3, 2000, letter provided clarifying information that did not change the initial proposed no significant hazards consideration determination or expand the scope of the original Federal Register Notice.

2.0 EVALUATION

Limerick TS surveillance requirement (SR) 4.4.1.1.2, and the associated TS administrative controls Section 6.9.1.9.h, requires that each reactor recirculation system pump MG set scoop tube mechanical and electrical stop be demonstrated operable with the overspeed setpoints less than or equal to the setpoints as noted in the core operating limits report. The requirements regarding the MG set stops were established to limit the maximum speed of the recirculation pumps during a dual pump slow flow runout providing a limit to the maximum core flow. The Limerick Units 1 and 2 recirculation systems have since been modified to remove the master flow controller, thereby eliminating the possibility of a common mode recirculation pump failure. A single pump slow flow runout is now the most limiting recirculation pump runout. In Reference 2, the licensee provided analyses of the single pump slow flow runout event that do not credit the MG set stops to limit the transient. Flow biased ARTS thermal limits were developed based on these analyses. Since the dual pump slow flow runout event has been eliminated, and the analyses of the single pump slow flow runout event do not credit the MG set stops, the licensee has proposed to remove the TS SR and the associated TS administrative controls section for the MG set stop setpoints. The licensee has proposed to set the MG set stops to values that satisfy operational requirements, and to administratively control the MG set stops.

The Commission's regulatory requirements related to the content of the TS are set forth in 10 CFR 50.36. In particular, 10 CFR 50.36(c)(3), "Surveillance requirements," states:

Surveillance requirements are requirements relating to test, calibration, or inspection to assure that the necessary quality of systems and components is maintained, that facility operation will be within safety limits, and that the limiting conditions for operation will be met.

The staff has reviewed the licensee's submittal and supporting analyses. Since the MG set stops are no longer required to assure that safety limits are satisfied, the staff finds it acceptable to modify the TS to eliminate the TS SR and associated TS administrative controls section for MG set stop setpoints.

### 3.0 SUMMARY

The staff has reviewed the licensee's proposed TS changes related to removal of the SR for the reactor recirculation system MG set stops. Based on the review, the staff concludes that the proposed TS changes are acceptable.

### 4.0 STATE CONSULTANT

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

### 5.0 ENVIRONMENTAL CONSIDERATION

The amendments change the 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 (64 FR 48864). The amendments also relate to changes in recordkeeping, reporting, or administrative procedures or requirements. Accordingly, the amendments meet the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9) and (c)(10). 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.

### 6.0 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: A. Cubbage

Date: May 8, 2000

## 7.0 REFERENCES

1. Letter from Garrett D. Edwards, PECO Energy Company, to U.S. NRC, "Limerick Generating Station, Units 1 and 2, Technical Specification Change Request No. 99-01-0, Removal of Recirculation System MG Set Stop Surveillance Requirement," dated June 22, 1999.
2. Letter from Garrett D. Edwards, PECO Energy Company, to U.S. NRC, "Limerick Generating Station, Units 1 and 2, Response to Request for Additional Information - Technical Specification Change Request Relating to Removal of Recirculation System Motor Generator Set Scoop Tube Mechanical and Electrical Stop Surveillance Requirement (TSCR 99-01-0)," dated January 3, 2000.