

September 19, 2001

Mr. Oliver D. Kingsley  
President, Exelon Nuclear  
Exelon Generation Company, LLC  
200 Exelon Way, KSA 3-E  
Kennett Square, PA 19348

SUBJECT: LIMERICK GENERATING STATION, UNITS 1 AND 2 - ISSUANCE OF  
AMENDMENT RE: LOOSE PARTS MONITORING SYSTEM (TAC NOS.  
MB1836 AND MB1839)

Dear Mr. Kingsley:

The Commission has issued the enclosed Amendment No. 153 to Facility Operating License No. NPF-39 and Amendment No. 117 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 April 23, 2001.

These amendments deleted the loose parts monitoring system (LPMS) from the Limerick Generating Station, Units 1 and 2, TSs and Bases.

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/**

Christopher Gratton, 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. 153 to  
License No. NPF-39  
2. Amendment No. 117 to  
License No. NPF-85  
3. Safety Evaluation

cc w/encls: See next page

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DISTRIBUTION:

MO'Brien	WBeckner	PUBLIC	CGratton
JWermiel	PDI-2 R/F	OGC	ACRS
EAdensam	GHill (4)	JClifford	BPlatchek, RI
DStarkey			

Accession Number: ML012200231

OFFICE	PDI-2/PM	PD1-2/PM	PDI-2/LA	OGC	SRXB	PDI-2/SC
NAME	CGratton	DStarkey	MO'Brien	RHoefling	JWermiel	JClifford
DATE	9/10/01	9/6/01	9/12/01	9/18/01	9/19/01	9/19/01

Official Record Copy

Limerick Generating Station, Units 1 & 2

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EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-352

LIMERICK GENERATING STATION, UNIT 1

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 153  
License No. NPF-39

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Exelon Generation Company, LLC (the licensee) dated April 23, 2001, 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. 153, are hereby incorporated into this license. Exelon Generation 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

**/RA/**

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: September 19, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 153

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

x  
xix  
3/4 3-97  
B 3/4 3-7

Insert

x  
xix  
3/4 3-97  
B 3/4 3-7

EXELON GENERATION COMPANY, LLC

DOCKET NO. 50-353

LIMERICK GENERATING STATION, UNIT 2

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 117  
License No. NPF-85

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment by Exelon Generation Company, LLC (the licensee) dated April 23, 2001, 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. 117, are hereby incorporated in the license. Exelon Generation 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

**/RA/**

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: September 19, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 117

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

x  
xix  
3/4 3-97  
B 3/4 3-7

Insert

x  
xix  
3/4 3-97  
B 3/4 3-7

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 153 TO FACILITY OPERATING  
LICENSE NO. NPF-39  
AND AMENDMENT NO. 117 TO FACILITY OPERATING  
LICENSE NO. NPF-85  
EXELON GENERATION COMPANY, LLC  
LIMERICK GENERATING STATION, UNITS 1 AND 2  
DOCKET NOS. 50-352 AND 50-353

## 1.0 INTRODUCTION

By letter dated April 23, 2001, the Exelon Generation Company, LLC (the licensee) submitted a request for changes to the Limerick Generating Station, (LGS) Units 1 and 2, Technical Specifications (TSs). The requested changes would delete the loose parts monitoring system (LPMS) from the LGS Units 1 and 2 TSs and Bases.

## 2.0 BACKGROUND

As discussed in Section 4.4.6.1 of the LGS Units 1 and 2 Updated Final Safety Analysis Report (UFSAR), the LPMS was designed in conformance with Regulatory Guide (RG) 1.133, "Loose-Parts Detection Program for the Primary System of Light-Water Cooled Reactors," Revision 1, May 1981, to detect and alarm for loose parts in the reactor coolant system. Loose parts are metallic objects that can be physically moved by the reactor flow. A secondary function of the system is to assist the operators in locating the detected loose parts. The LPMS is used for information purposes only and is not a safety-related system. This system has no trip function and is not relied upon by other systems for input or data.

The deletion of the LPMS has been evaluated in the Boiling Water Reactor Owners' Group (BWROG) Topical Report NEDC-32975P, "Regulatory Relaxation for BWR Loose Parts Monitoring Systems". In a Safety Evaluation (SE) dated January 25, 2001, the Nuclear Regulatory Commission (NRC) approved Topical Report NEDC-32975P. The NRC staff determined that the Topical Report is acceptable for referencing in licensing applications to the extent specified under the limitations in the report and in the associated SE. It is also noted that 19 BWRs were licensed without any requirement for an LPMS.

## 3.0 EVALUATION

In Topical Report NEDC-32975P, the BWROG reported on the effectiveness of the LPMS

installed in some BWR plants and proposed eliminating the LPMS requirements. The BWROG stated that although loose parts have been detected on a few occasions: (1) the BWROG did not identify any BWR that was shut down due to the impact of loose parts, (2) no LPMS detected a failed or weakened safety-related component, (3) licensees employ an aggressive foreign material exclusion program, and underwater inspection during refueling outages to ensure loose parts do not accumulate in the reactor vessel, (4) experience also showed that components left in the reactor system are retained in low flow regions, which do not pose a safety problem, and (5) small metallic filings and other similar debris could contribute to fuel cladding damage, but the LPMS would not detect this class of debris and the industry has installed debris filters into fuel support pieces which may reduce fuel cladding damage due to fretting.

The NRC staff, in the SE dated January 25, 2001, found that the operating history indicated that LPMS did detect weakened or degraded safety-related components as well as damage to components due to loose parts inadvertently left during maintenance or refueling. However, the LPMSs in use are not reliable or sensitive enough to provide the safety benefits envisioned by RG 1.133. Loose parts can be detected by the normal plant process and monitoring systems and also through visual inspections. Also, operating history does not show a higher incidence or occurrence of damage to safety-related components in plants that have no LPMS installed. The staff concurred in the SE that the safety benefits of the LPMS do not appear to be commensurate with the cost of maintenance and the associated radiation exposure for the plant personnel. The staff concluded in the SE that Topical Report NEDC-32975-P is acceptable for referencing in licensing applications to the extent specified and under the limitations delineated in the SE. Therefore, because the conclusions of the SE are applicable to LGS Units 1 and 2, the LPMS requirements may be removed from the LGS Units 1 and 2 TSs and Bases.

#### 4.0 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.

#### 5.0 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 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 (66 FR 41619). 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.

#### 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: D. Starkey

Date: September 19, 2001