

May 23, 2001

U.S. Nuclear Regulatory Commission  
Attention: Document Control Desk  
Washington, D.C. 20555Subject: Limerick Generating Station, Units 1 and 2  
License Amendment Request 01-00399

Dear Sir/Madam:

Exelon Generation Company, LLC, is submitting License Amendment Request 01-00399, in accordance with 10 CFR 50.90, requesting an amendment to the Technical Specifications (Appendix A) of Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station (LGS), Units 1 and 2. This proposed License Amendment Request will delete Action Statement b. associated with Limiting Condition for Operation 3.4.2 concerning stuck open safety/relief valves. Information supporting this License Amendment Request is contained in Attachment 1 to this letter, and the proposed marked up Technical Specifications (TS) pages and final TS pages are contained in Attachments 2 and 3, respectively. This information is being submitted under affirmation, and the required affidavit is enclosed.

We request your approval of this change on or before November 30, 2001. Additionally, there are no commitments contained within this letter.

We request that if approved, the change become effective within 30 days of issuance.

A copy of this License Amendment Request, including the reasoned analysis about a no significant hazards consideration, is being provided to the appropriate Pennsylvania State official in accordance with the requirements of 10 CFR 50.91(b)(1).

If you have any questions, please do not hesitate to contact us.

Very truly yours,

  
James A. Hutton  
Director - Licensing

Attachments; Affidavit

cc: H. J. Miller, Administrator, Region 1, USNRC  
A. L. Burrirt, USNRC Senior Resident Inspector, LGS  
R. R. Janati, PA Bureau of Radiological Protection

A 001

COMMONWEALTH OF PENNSYLVANIA :  
 : SS.  
COUNTY OF CHESTER :

J. J. Hagan, being first duly sworn, deposes and says:

That he is Senior Vice President of Exelon Generation Company, LLC, the Applicant herein; that he has read the attached License Amendment Request 01-00399, for Limerick Generating Station Facility Operating Licenses NPF-39 and NPF-85, and knows the contents thereof; and that the statements and matters set forth therein are true and correct to the best of his knowledge, information and belief.

  
Senior Vice President

Subscribed and sworn to  
before me this 23<sup>rd</sup> day  
of May 2001.



Notary Public

**Notarial Seal**  
**Vivia V. Gallimore, Notary Public**  
**Tredyffrin Twp., Chester County**  
**My Commission Expires Oct. 6, 2003**  
Member, Pennsylvania Association of Notaries

ATTACHMENT 1

LIMERICK GENERATING STATION  
UNITS 1 and 2

DOCKET NOS. 50-352  
50-353

LICENSE NOS. NPF-39  
NPF-85

LICENSE AMENDMENT REQUEST  
01-00399

SAFETY/RELIEF VALVES

Supporting Information for Change - 4 Pages

## Introduction

Exelon Generation Company, LLC, Licensee under Facility Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station (LGS), Units 1 and 2, requests that the Technical Specifications (TS) contained in Appendix A to the Operating Licenses be amended to delete Action Statement b. associated with Limiting Condition for Operation 3.4.2 concerning stuck open safety/relief valves. The proposed marked up TS pages and final TS pages are contained in Attachments 2 and 3, respectively.

This License Amendment Request provides a discussion and description of the proposed TS change, a safety assessment of the proposed TS change, information supporting a finding of No Significant Hazards Consideration, and information supporting an Environmental Assessment.

## Discussion and Description of the Proposed Change

This License Amendment Request deletes Action Statement b. associated with Limiting Condition for Operation 3.4.2 concerning safety/relief valves. TS Action Statement b. of Limiting Condition for Operation 3.4.2 currently states:

“b. With one or more safety/relief valves stuck open, provided that suppression pool average water temperature is less than 105°F, close the stuck open safety/relief valve(s); if unable to close the stuck open valve(s) within 2 minutes or if suppression pool average water temperature is 110°F or greater, place the reactor mode switch in the Shutdown position.”

Action Statement b. requires that the stuck open safety/relief valve(s) be closed within two (2) minutes, or if suppression pool average water temperature is 110°F or greater, place the reactor mode switch in the Shutdown position. The two (2) minute requirement was incorporated as part of the original LGS, Units 1 and 2 Technical Specifications (NUREG-1149, June 1985 for LGS, Unit 1 and, NUREG-1360, June 1989 for LGS, Unit 2). This requirement was not incorporated into the BWR Standard Technical Specifications (NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," Revision 1, dated April 1995). This change has been approved as part of the conversion to the NUREG-1433 Technical Specifications for a similar boiling water reactor.

Elimination of the two (2) minute requirement is appropriate because Limiting Condition for Operation 3.6.2.1 ("Depressurization Systems – Suppression Chamber"), and plant procedures provide operators with appropriate direction for response to a suppression pool high temperature (which could be caused by a stuck open relief). Providing specific direction to close the valve within two (2) minutes does not provide additional plant protection beyond what is provided for in plant procedures and Technical Specifications (Limiting Condition for Operation 3.6.2.1, "Depressurization Systems – Suppression Chamber"). The two (2) minute requirement represents detailed methods of responding to an event and not necessarily a compensatory action for failure to meet this Limiting Condition for Operation.

### Safety Assessment

As discussed in Section 15.1.4 ("Inadvertent Main Steam Relief Valve Opening"), of the Limerick Generating Station, Units 1 and 2, Updated Final Safety Analysis Report (UFSAR), a main steam relief valve is postulated to inadvertently open. This transient is analyzed as an incident of moderate frequency. As directed by plant procedures, the plant operator must "reclose" the valve as soon as possible and check that reactor and turbine-generator output return to normal. If the valve cannot be closed, plant shutdown should be initiated. The operator will have the time period between the valve first sticking full open and the bulk pool temperature reaching 110°F before entering a scram signal to the reactor.

If it is assumed that the suppression pool is at its maximum operating temperature (95°F) and minimum operating volume with no pool cooling systems in operation when the valve first opens, the operator will have more than 6 minutes before the pool temperature of 110°F is reached. If the above worst-case assumptions were relaxed, the time for operator action would increase. Delaying the reactor scram to 110°F after the valve sticks full open would have no adverse effect on plant safety.

As discussed in UFSAR Sections 15.1.4.4 and 15.1.4.5, the transient resulting from an inadvertent Main Steam Relief Valve (MSRV) opening is a mild depressurization, and therefore has no significant effect on Reactor Coolant Pressure Boundary and containment design pressure limits. While the consequence of this transient does not result in fuel failure, it does result in the discharge of normal coolant activity to the suppression pool via MSRV operation. Because this activity is contained within the primary containment, there is no exposure to operating personnel. This transient does not result in an uncontrolled release to the environment.

Eliminating the two (2) minute scram requirement will allow the operators to devote more time to correcting the safety/relief valve event, and preparation for post-scam actions/depressurization. Limiting Condition for Operation 3.6.2.1 ("Depressurization Systems – Suppression Chamber"), and plant procedures provide operators with appropriate direction for response to a suppression pool high temperature (which could be caused by a stuck open relief). Action Statement b.2.b, associated with Limiting Condition for Operation 3.6.2.1, states that with the suppression pool average water temperature greater than 110°F, place the reactor mode switch in the Shutdown position. Providing specific direction to close the valve within two (2) minutes does not provide additional plant protection beyond what is provided for in plant procedures and Technical Specifications. The two (2) minute requirement represents detailed methods of responding to an event and not a compensatory action for failure to meet this Limiting Condition for Operation (3.4.2, "Safety/Relief Valves"). Therefore, this action can be eliminated with no adverse impact on safety.

The proposed change will not impact the required periodic testing of the safety/relief valves.

Information Supporting a Finding of No Significant Hazards Consideration

We have concluded that the proposed change to the Limerick Generating Station (LGS), Units 1 and 2 Technical Specifications (TS), does not involve a Significant Hazards Consideration. In support of this determination, an evaluation of each of the three (3) standards set forth in 10 CFR 50.92 is provided below.

1. The proposed TS change does not involve a significant increase in the probability or consequences of an accident previously evaluated.

The proposed TS change deletes Action Statement b. associated with Limiting Condition for Operation 3.4.2 concerning safety/relief valves. The two (2) minute action represents detailed methods of responding to an event, and therefore, if eliminated, would not result in increasing the probability of the event, nor act as an initiator of an event. Limiting Condition for Operation 3.6.2.1 ("Depressurization Systems – Suppression Chamber"), and plant procedures provide operators with appropriate direction for response to a suppression pool high temperature (which could be caused by a stuck open relief). Providing specific direction to close the valve within two (2) minutes does not provide additional plant protection beyond what is provided for in plant procedures and Technical Specifications. Therefore, this action can be eliminated, and will not involve a significant increase in the probability or consequences of an accident previously evaluated. Further, this requirement was not incorporated into the BWR Standard Technical Specifications (NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," Revision 1, dated April 1995).

As discussed in Section 15.1.4 ("Inadvertent Main Steam Relief Valve Opening"), of the Limerick Generating Station, Units 1 and 2, Updated Final Safety Analysis Report (UFSAR) a main steam relief valve is postulated to inadvertently open. If it is assumed that the suppression pool is at its maximum operating temperature (95°F) and minimum operating volume with no pool cooling systems in operation when the valve first opens, the operator will have more than 6 minutes before the pool temperature of 110°F is reached. If the above worst case assumptions were relaxed, the time for operator action would increase. Delaying the reactor scram to 110°F after the valve sticks full open would have no adverse effect on plant safety. Deletion of Action Statement b. will not change the sequence of events, or resulting actions of this analysis.

The transient resulting from an inadvertent Main Steam Relief Valve (MSRV) opening is a mild depressurization and therefore has no significant effect on Reactor Coolant Pressure Boundary and containment design pressure limits. While the consequence of this transient does not result in fuel failure, it does result in the discharge of normal coolant activity to the suppression pool via relief valve operation. Because this activity is contained within the primary containment, there is no exposure to operating personnel. This transient does not result in an uncontrolled release to the environment, and therefore, does not increase the consequences of an accident previously evaluated.

2. The proposed TS change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed TS change deletes Action Statement b. associated with Limiting Condition for Operation 3.4.2 concerning safety/relief valves. This change does not change the design or configuration of the plant. The safety/relief valves are accident mitigators. Section 15.1.4 ("Inadvertent Main Steam Relief Valve Opening"), of the Limerick Generating Station, Units 1 and 2, Updated Final Safety Analysis Report (UFSAR), postulates an inadvertent opening of a main steam relief valve. This change will not alter the assumptions or results of this analysis. No new operation or failure modes are created, nor is a system-level failure mode created that is different than those that already exist. Therefore, this change does not create the possibility of a new or different kind of accident from any accident previously evaluated.

3. The proposed TS change does not involve a significant reduction in a margin of safety.

The proposed change does not involve a significant reduction in a margin of safety, nor does it affect any analytical limits. There are no changes to accident or transient core thermal hydraulic conditions, or fuel or reactor coolant boundary design limits, as a result of the proposed change. The proposed change will not alter the assumptions or results of the analysis contained in the UFSAR. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Information Supporting an Environmental Assessment

An Environmental Assessment is not required for the change proposed by this License Amendment Request because the proposed change to the Limerick Generating Station (LGS), Units 1 and 2, Technical Specifications conform to the criteria for "actions eligible for categorical exclusion" as specified in 10 CFR 51.22 (c)(9). The proposed change will have no impact on the environment. The proposed change does not involve a Significant Hazards Consideration as discussed in the preceding section. The proposed change does not involve a significant change in the types, or a significant increase in the amounts, of any effluents that may be released offsite. In addition, the proposed change does not involve a significant increase in individual or cumulative occupational radiation exposure.

Conclusion

We have concluded that the proposed change to the LGS, Units 1 and 2, Technical Specifications does not involve a Significant Hazards Consideration.

ATTACHMENT 2

LIMERICK GENERATING STATION  
UNITS 1 and 2

DOCKET NOS. 50-352  
50-353

LICENSE NOS. NPF-39  
NPF-85

LICENSE AMENDMENT REQUEST  
01-00399

SAFETY/RELIEF VALVES

MARKED UP TECHNICAL SPECIFICATION PAGES

UNIT 1

3/4 4-7

UNIT 2

3/4 4-7

REACTOR COOLANT SYSTEM

3/4.4.2 SAFETY/RELIEF VALVES

LIMITING CONDITION FOR OPERATION

3.4.2 The safety valve function of at least 12 of the following reactor coolant system safety/relief valves shall be OPERABLE with the specified code safety valve function lift settings:\*

- 4 safety/relief valves @ 1170 psig ±3%
- 5 safety/relief valves @ 1180 psig ±3%
- 5 safety/relief valves @ 1190 psig ±3%

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With the safety valve function of one or more of the above required safety/relief valves inoperable, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. With one or more safety/relief valves stuck open, provided that suppression pool average water temperature is less than 105°F, close the stuck open safety/relief valve(s); if unable to close the stuck open valve(s) within 2 minutes or if suppression pool average water temperature is 110°F or greater, place the reactor mode switch in the Shutdown position.
- c. With one or more safety/relief valve acoustic monitors inoperable, restore the inoperable acoustic monitors to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

Deleted

SURVEILLANCE REQUIREMENTS

1.2.1 The acoustic monitor for each safety/relief valve shall be demonstrated OPERABLE with the setpoint verified to be 0.20 of the full open noise level## by performance of a:

- a. CHANNEL FUNCTIONAL TEST at least once per 92 days, and a
- b. CHANNEL CALIBRATION at least once per 24 months\*\*.

4.4.2.2 At least 1/2 of the safety relief valves shall be removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations at least once per 24 months, and they shall be rotated such that all 14 safety relief valves are removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations at least once per 54 months. All safety valves will be recertification tested to meet a ±1% tolerance prior to returning the valves to service.

\* The lift setting pressure shall correspond to ambient conditions of the valves at nominal operating temperatures and pressures.  
\*\* The provisions of Specification 4.0.4 are not applicable provided the Surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.  
# Up to 2 inoperable valves may be replaced with spare OPERABLE valves with lower setpoints until the next refueling.  
## Initial setting shall be in accordance with the manufacturer's recommendation. Adjustment to the valve full open noise level shall be accomplished during the startup test program.

## REACTOR COOLANT SYSTEM

### 3/4.4.2 SAFETY/RELIEF VALVES

#### LIMITING CONDITION FOR OPERATION

3.4.2 The safety valve function of at least 12 of the following reactor coolant system safety/relief valves shall be OPERABLE with the specified code safety valve function lift settings:\*

- 4 safety/relief valves @ 1170 psig  $\pm 3\%$
- 5 safety/relief valves @ 1180 psig  $\pm 3\%$
- 5 safety/relief valves @ 1190 psig  $\pm 3\%$

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

#### ACTION:

- a. With the safety valve function of one or more of the above required safety/relief valves inoperable, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. Deleted Deleted With one or more safety/relief valves stuck open, provided that suppression pool average water temperature is less than 105°F, close the stuck open safety/relief valve(s); if unable to close the stuck open valve(s) within 2 minutes or if suppression pool average water temperature is 110°F or greater, place the reactor mode switch in the Shutdown position.
- c. With one or more safety/relief valve acoustic monitors inoperable, restore the inoperable acoustic monitors to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

#### SURVEILLANCE REQUIREMENTS

4.4.2.1 The acoustic monitor for each safety/relief valve shall be demonstrated OPERABLE with the setpoint verified to be 0.20 of the full open noise level## by performance of a:

- a. CHANNEL FUNCTIONAL TEST at least once per 92 days, and a
- b. CHANNEL CALIBRATION at least once per 24 months\*\*.

4.4.2.2 At least 1/2 of the safety relief valves shall be removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations at least once per 24 months, and they shall be rotated such that all 14 safety relief valves are removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations at least once per 54 months. All safety valves will be recertification tested to meet a  $\pm 1\%$  tolerance prior to returning the valves to service.

- \* The lift setting pressure shall correspond to ambient conditions of the valves at nominal operating temperatures and pressures.
- \*\* The provisions of Specification 4.0.4 are not applicable provided the Surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.
- # Up to 2 inoperable valves may be replaced with spare OPERABLE valves with lower setpoints until the next refueling.
- ## Initial setting shall be in accordance with the manufacturer's recommendation. Adjustment to the valve full open noise level shall be accomplished during the startup test program.

ATTACHMENT 3

LIMERICK GENERATING STATION  
UNITS 1 and 2

DOCKET NOS. 50-352  
50-353

LICENSE NOS. NPF-39  
NPF-85

LICENSE AMENDMENT REQUEST  
01-00399

SAFETY/RELIEF VALVES

FINAL TECHNICAL SPECIFICATION PAGES

UNIT 1

3/4 4-7

UNIT 2

3/4 4-7

## REACTOR COOLANT SYSTEM

### 3/4.4.2 SAFETY/RELIEF VALVES

#### LIMITING CONDITION FOR OPERATION

3.4.2 The safety valve function of at least 12 of the following reactor coolant system safety/relief valves shall be OPERABLE with the specified code safety valve function lift settings:##

- 4 safety/relief valves @ 1170 psig  $\pm 3\%$
- 5 safety/relief valves @ 1180 psig  $\pm 3\%$
- 5 safety/relief valves @ 1190 psig  $\pm 3\%$

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

#### ACTION:

- a. With the safety valve function of one or more of the above required safety/relief valves inoperable, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. DELETED
- c. With one or more safety/relief valve acoustic monitors inoperable, restore the inoperable acoustic monitors to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

#### SURVEILLANCE REQUIREMENTS

4.4.2.1 The acoustic monitor for each safety/relief valve shall be demonstrated OPERABLE with the setpoint verified to be 0.20 of the full open noise level## by performance of a:

- a. CHANNEL FUNCTIONAL TEST at least once per 92 days, and a
- b. CHANNEL CALIBRATION at least once per 24 months\*\*.

4.4.2.2 At least 1/2 of the safety relief valves shall be removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations at least once per 24 months, and they shall be rotated such that all 14 safety relief valves are removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations at least once per 54 months. All safety valves will be recertification tested to meet a  $\pm 1\%$  tolerance prior to returning the valves to service.

\* The lift setting pressure shall correspond to ambient conditions of the valves at nominal operating temperatures and pressures.

\*\* The provisions of Specification 4.0.4 are not applicable provided the Surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.

# Up to 2 inoperable valves may be replaced with spare OPERABLE valves with lower setpoints until the next refueling.

## Initial setting shall be in accordance with the manufacturer's recommendation. Adjustment to the valve full open noise level shall be accomplished during the startup test program.

## REACTOR COOLANT SYSTEM

### 3/4.4.2 SAFETY/RELIEF VALVES

#### LIMITING CONDITION FOR OPERATION

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3.4.2 The safety valve function of at least 12 of the following reactor coolant system safety/relief valves shall be OPERABLE with the specified code safety valve function lift settings: \*#

- 4 safety/relief valves @ 1170 psig  $\pm 3\%$
- 5 safety/relief valves @ 1180 psig  $\pm 3\%$
- 5 safety/relief valves @ 1190 psig  $\pm 3\%$

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With the safety valve function of one or more of the above required safety/relief valves inoperable, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. DELETED
- c. With one or more safety/relief valve acoustic monitors inoperable, restore the inoperable acoustic monitors to OPERABLE status within 7 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

#### SURVEILLANCE REQUIREMENTS

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4.4.2.1 The acoustic monitor for each safety/relief valve shall be demonstrated OPERABLE with the setpoint verified to be 0.20 of the full open noise level### by performance of a:

- a. CHANNEL FUNCTIONAL TEST at least once per 92 days, and a
- b. CHANNEL CALIBRATION at least once per 24 months\*\*.

4.4.2.2 At least 1/2 of the safety relief valves shall be removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations at least once per 24 months, and they shall be rotated such that all 14 safety relief valves are removed, set pressure tested and reinstalled or replaced with spares that have been previously set pressure tested and stored in accordance with manufacturer's recommendations at least once per 54 months. All safety valves will be recertification tested to meet a  $\pm 1\%$  tolerance prior to returning the valves to service.

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\* The lift setting pressure shall correspond to ambient conditions of the valves at nominal operating temperatures and pressures.

\*\* The provisions of Specification 4.0.4 are not applicable provided the Surveillance is performed within 12 hours after reactor steam pressure is adequate to perform the test.

# Up to 2 inoperable valves may be replaced with spare OPERABLE valves with lower setpoints until the next refueling.

### Initial setting shall be in accordance with the manufacturer's recommendation. Adjustment to the valve full open noise level shall be accomplished during the startup test program.