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10 CFR 50.90

September 20, 2005

U. S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, DC 20555-0001

Limerick Generating Station, Units 1 & 2  
Facility Operating License Nos. NPF-39 and NPF-85  
NRC Docket Nos. 50-352 and 50-353

**Subject:** Supplement to the Request for License Amendment Related to  
Proposed Changes to Control Rod Requirements, dated July 22, 2004

**References:** (1) Letter from M. P. Gallagher (Exelon Generation Company, LLC) to  
USNRC, dated July 22, 2004  
(2) Letter from R. J. DeGregorio (Exelon Generation Company, LLC) to  
USNRC, dated December 3, 2004

Exelon Generation Company, LLC (Exelon), in Reference (1) above, requested approval of Technical Specification changes to the control rod operability and surveillance requirements specified in TS 3/4.1.3 at Limerick Generating Station (LGS), Units 1 & 2. Exelon supplemented this License Amendment Request (LAR) with the Reference (2) letter to address a U. S. Nuclear Regulatory Commission (NRC) request for additional information (RAI). To further support the review of this license amendment request, a teleconference between the U. S. Nuclear Regulatory Commission (NRC) and Exelon was held on September 8, 2005.

In the September 8, 2005, teleconference, Exelon agreed to withdraw a proposed change to TS 3.1.3.1.b.1.b) and restore the words "by drive water pressure within the normal operating range", which had been deleted in the Reference (1) submittal. This letter serves to supplement the Reference (1) LAR as a result of this call.

Attachment 1 provides the "markup" of the amended Technical Specification page (page 3/4 1-3) for LGS Units 1 & 2. Attachment 2 provides the "markup" of the Technical Specification Bases pages (for Information only). Attachment 3 provides the Retyped Technical Specification pages. Attachment 4 provides the Retyped Technical Specification Bases pages (for Information only). The attached TS page 3/4 1-3 for each unit should supersede page 3/4 1-3 submitted per the Reference (1) letter.

A001

Supplement to the Request for License Amendment  
Related to Proposed Changes to Control Rod Requirements  
September 20, 2005  
Page 2

There is no adverse impact to the No Significant Hazards Consideration submitted in the Reference (1) letter. There are no additional commitments contained within this letter.

If you have any questions or require additional information, please contact Doug Walker at (610) 765-5726.

I declare under penalty of perjury that the foregoing is true and correct.

Respectfully,

09/20/05  
Executed on

Pamela B. Cowan  
Pamela B. Cowan  
Director - Licensing & Regulatory Affairs  
Exelon Generation Company, LLC

- Attachments:
1. Markup of Technical Specification pages
  2. Markup of Technical Specification Bases pages (*Information only*)
  3. Retyped Technical Specification pages
  4. Retyped Technical Specification Bases pages (*Information only*)

cc R. R. Janati - Commonwealth of Pennsylvania

**ATTACHMENT 1**

**LIMERICK GENERATING STATION  
UNITS 1 AND 2**

Docket Nos. 50-352 & 50-353

License Nos. NPF-39 & NPF-85

License Amendment Request  
"Proposed Changes to Control Rod Requirements"

Markup of Technical Specification Pages

UNITS 1 & 2  
3/4 1-3

## REACTIVITY CONTROL SYSTEMS

### 3/4.1.3 CONTROL RODS

#### CONTROL ROD OPERABILITY

#### LIMITING CONDITION FOR OPERATION

3.1.3.1 All control rods and scram discharge volume vent and drain valves shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3\*\*\*

#### ACTION:

- a. With one <sup>withdrawn</sup> control rod inoperable due to being immovable, as a result of excessive friction or mechanical interference, or known to be untrippable:
1. Within 1 hour:
    - a) Verify that the inoperable <sup>withdrawn</sup> control rod, ~~if withdrawn~~ is separated from all other inoperable control rods by at least two control cells in all directions.
    - b) Disarm the associated directional control valves\*\* either:
      - 1) Electrically, or
      - 2) Hydraulically by closing the drive water and exhaust water isolation valves.

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.
  2. Restore the inoperable <sup>withdrawn</sup> control rod to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.
- b. With one or more control rods trippable but inoperable for causes other than addressed in ACTION a, above:
1. If the inoperable control rod(s) is <sup>withdrawn</sup>, within 1 hour:
    - a) Verify that the inoperable <sup>withdrawn</sup> control rod(s) is separated from all other inoperable <sup>withdrawn</sup> control rods by at least two control cells in all directions, and
    - b) Demonstrate the insertion capability of the inoperable <sup>withdrawn</sup> control rod(s) by inserting the control rod(s) at least one notch by drive water pressure within the normal operating range\*.

\* The inoperable control rod may then be withdrawn to a position no further withdrawn than its position when found to be inoperable.

\*\* May be rearmed intermittently, under administrative control, to permit testing associated with restoring the control rod to OPERABLE status.

\*\*\* OPERATIONAL CONDITION 3 is only applicable to the scram discharge volume vent and drain valves.

## REACTIVITY CONTROL SYSTEMS

### 3/4.1.3 CONTROL RODS

#### CONTROL ROD OPERABILITY

#### LIMITING CONDITION FOR OPERATION

3.1.3.1 All control rods and scram discharge volume vent and drain valves shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3\*\*\*

ACTION:

- a. With one <sup>withdrawn</sup> control rod inoperable due to being immovable, as a result of excessive friction or mechanical interference, or known to be untrippable:
1. Within 1 hour:
    - a) Verify that the inoperable control rod <sup>Withdrawn</sup> ~~if withdrawn~~ is separated from all other inoperable control rods by at least two control cells in all directions.
    - b) Disarm the associated directional control valves\*\* either:
      - 1) Electrically, or
      - 2) Hydraulically by closing the drive water and exhaust water isolation valves.

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.
  2. Restore the inoperable <sup>Withdrawn</sup> control rod to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.
- b. With one or more control rods trippable but inoperable for causes other than addressed in ACTION a, above:
1. If the inoperable control rod(s) is withdrawn, within 1 hour:
    - a) Verify that the inoperable withdrawn control rod(s) is separated from all other inoperable withdrawn control rods by at least two control cells in all directions, and
    - b) Demonstrate the insertion capability of the inoperable withdrawn control rod(s) by inserting the control rod(s) at least one notch by drive water pressure within the normal operating range\*.

\*The inoperable control rod may then be withdrawn to a position no further withdrawn than its position when found to be inoperable.

\*\*May be rearmed intermittently, under administrative control, to permit testing associated with restoring the control rod to OPERABLE status.

\*\*\*OPERATIONAL CONDITION 3 is only applicable to the scram discharge volume vent and drain valves.

**ATTACHMENT 2**

**LIMERICK GENERATING STATION  
UNITS 1 AND 2**

Docket Nos. 50-352 & 50-353

License Nos. NPF-39 & NPF-85

License Amendment Request  
"Proposed Changes to Control Rod Requirements"

Markup of Technical Specification Bases Pages  
*(For information only)*

UNITS 1 & 2  
B 3/4 1-2a

## REACTIVITY CONTROL SYSTEMS

### BASES

#### CONTROL RODS (Continued)

the open position will not impair the isolation function of the system. Additionally, the valves are required to open on scram reset to ensure that a path is available for the SDV piping to drain freely at other times.

When one SDV vent or drain valve is inoperable in one or more lines, the valves must be restored to OPERABLE status within 7 days. The allowable outage time is reasonable, given the level of redundancy in the lines and the low probability of a scram occurring while the valve(s) are inoperable. The SDV is still isolable since the redundant valve in the affected line is OPERABLE. During these periods, the single failure criterion may not be preserved, and a higher risk exists to allow reactor water out of the primary system during a scram.

If both valves in a line are inoperable, the line must be isolated to contain the reactor coolant during a scram. When a line is isolated, the potential for an inadvertent scram due to high SDV level is increased. ACTION "e" is modified by a note ("\*\*\*\*") that allows periodic draining and venting of the SDV when a line is isolated. During these periods, the line may be unisolated under administrative control. This allows any accumulated water in the line to be drained, to preclude a reactor scram on SDV high level. This is acceptable since the administrative controls ensure the valve can be closed quickly, by a dedicated operator, if a scram occurs with the valve open. The 8 hour allowable outage time to isolate the line is based on the low probability of a scram occurring while the line is not isolated and the unlikelihood of significant CRD seal leakage.

Control rods with inoperable accumulators are declared inoperable and Specification 3.1.3.1 then applies. This prevents a pattern of inoperable accumulators that would result in less reactivity insertion on a scram than has been analyzed even though control rods with inoperable accumulators may still be inserted with normal drive water pressure. Operability of the accumulator ensures that there is a means available to insert the control rods even under the most unfavorable depressurization of the reactor.

A control rod is considered trippable if it is capable of fully inserting as a result of a scram signal.

The drive water pressure normal operating range is specified in system operating procedures, which provide ranges for system alignment and control rod motion (exercising).

## REACTIVITY CONTROL SYSTEMS

### BASES

#### CONTROL RODS (Continued)

failure of one valve in the open position will not impair the isolation function of the system. Additionally, the valves are required to open on scram reset to ensure that a path is available for the SDV piping to drain freely at other times.

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**ATTACHMENT 3**

**LIMERICK GENERATING STATION  
UNITS 1 AND 2**

**Docket Nos. 50-352 & 50-353**

**License Nos. NPF-39 & NPF-85**

**License Amendment Request  
"Proposed Changes to Control Rod Requirements"**

**Retyped Technical Specification Pages**

**UNITS 1 & 2**

**3/4 1-3**

## REACTIVITY CONTROL SYSTEMS

### 3/4.1.3 CONTROL RODS

#### CONTROL ROD OPERABILITY

#### LIMITING CONDITION FOR OPERATION

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3.1.3.1 All control rods and scram discharge volume vent and drain valves shall be OPERABLE.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3\*\*\*

#### ACTION:

- a. With one withdrawn control rod inoperable due to being immovable, as a result of excessive friction or mechanical interference, or known to be untrippable:

1. Within 1 hour:

- a) Verify that the inoperable withdrawn control rod is separated from all other inoperable withdrawn control rods by at least two control cells in all directions.
- b) Disarm the associated directional control valves\*\* either:
- 1) Electrically, or
  - 2) Hydraulically by closing the drive water and exhaust water isolation valves.

Otherwise, be in at least HOT SHUTDOWN within the next 12 hours.

2. Restore the inoperable withdrawn control rod to OPERABLE status within 48 hours or be in at least HOT SHUTDOWN within the next 12 hours.

- b. With one or more control rods trippable but inoperable for causes other than addressed in ACTION a, above:

1. If the inoperable control rod(s) is withdrawn, within 1 hour:

- a) Verify that the inoperable withdrawn control rod(s) is separated from all other inoperable withdrawn control rods by at least two control cells in all directions, and
- b) Demonstrate the insertion capability of the inoperable withdrawn control rod(s) by inserting the control rod(s) at least one notch by drive water pressure within the normal operating range\*.

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\* The inoperable control rod may then be withdrawn to a position no further withdrawn than its position when found to be inoperable.

\*\* May be rearmed intermittently, under administrative control, to permit testing associated with restoring the control rod to OPERABLE status.

\*\*\* OPERATIONAL CONDITION 3 is only applicable to the scram discharge volume vent and drain valves.

REACTIVITY CONTROL SYSTEMS

3/4.1.3 CONTROL RODS

CONTROL ROD OPERABILITY

LIMITING CONDITION FOR OPERATION

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**ATTACHMENT 4**

**LIMERICK GENERATING STATION  
UNITS 1 AND 2**

Docket Nos. 50-352 & 50-353

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Retyped Technical Specification Bases Pages  
*(For information only)*

UNITS 1 & 2  
B 3/4 1-2a

## REACTIVITY CONTROL SYSTEMS

### BASES

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#### CONTROL RODS (Continued)

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## REACTIVITY CONTROL SYSTEMS

### BASES

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