

Exelon Nuclear  
200 Exelon Way  
Kennett Square, PA 19348

www.exeloncorp.com

10 CFR 50.55a

October 10, 2006

U.S. Nuclear Regulatory Commission  
Attn: Document Control Desk  
Washington, DC 20555

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

Subject: Proposed Alternative Associated with the Second Ten-Year Interval Inservice Testing (IST) Program – Relief Request No. 51-VRR-3

In accordance with 10 CFR 50.55a, "Codes and standards," paragraph (a)(3)(i), Exelon Generation Company, LLC (EGC), is requesting relief from the American Society of Mechanical Engineers (ASME) OM Code, 1990 Edition, "Code for Operation and Maintenance of Nuclear Power Plants", on the basis that the proposed alternative provides an acceptable level of quality and safety. Specifically, attached for your review and approval is a proposed alternative for Limerick Generating Station (LGS), Units 1 and 2, that will permit testing (i.e., disassembly, inspection, and partial flow testing) of Residual Heat Removal (RHR) System check valves during any plant mode.

Your approval is requested by October 10, 2007.

If you have any questions, please contact Thomas R. Loomis (610) 765-5510.

Very truly yours,

*Pamela B. Cowan*

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Director, Licensing and Regulatory Affairs

Attachment: 1) Relief Request No. 51-VRR-3

cc: S. J. Collins, Regional Administrator, Region I, USNRC  
S. Hansell, USNRC Senior Resident Inspector, LGS  
R. Guzman, Project Manager [LGS] USNRC  
J. Kim, Project Manager [LGS] USNRC

## RELIEF REQUEST NO. 51-VRR-3

### 1. ASME Code Components Affected:

Category: C – self actuating

Valves: 51-1F046A, 51-2F046A  
51-1F046B, 51-2F046B  
51-1F046C, 51-2F046C  
51-1F046D, 51-2F046D

System: Residual Heat Removal (RHR) System

Valve Function: These check valves open to pass sufficient flow to protect the RHR pumps from overheating when operating in low flow or shutoff head conditions. The valves provide a recirculation flow path to the Suppression Pool prior to establishing a flow path to the Reactor Vessel.

### 2. Applicable Code Edition and Addenda:

The Limerick Generating Station (LGS), Units 1 and 2, Inservice Testing Program for the second interval complies with the ASME-OM Code 1990 Edition. The second interval commenced on January 8, 2000 and will conclude on January 7, 2010.

### 3. Applicable Code Requirement:

ASME OM Code-1990, ISTC 4.5.4(c), "Valve Obturator Movement," and Generic Letter 89-04, "Guidance on Developing Acceptable In-service Testing Programs," Attachment 1, Position 2, "Alternative to Full Flow Testing of Check Valves," paragraph (c), allows grouping of check valves while testing during a refuel outage only.

### 4. Reason For Request:

The applicable code requirements allow grouping of check valves while testing during a refuel outage only. The proposed relief request will permit testing (i.e., disassembly, inspection, and partial flow testing) of the check valves during any plant mode. Testing of check valves during system outage windows will provide greater flexibility in performance testing, and reduce the burden of testing these valves only during a refueling outage when plant manpower and critical path time is at a premium.

## 5. Proposed Alternative and Basis for Use

The proposed alternative test would be to perform code testing on the identified valves approximately every two (2) years, with no restriction on plant mode. This relief is requested in accordance with 10 CFR 50.55a(a)(3)(i) in that the alternative testing provides an acceptable level of quality and safety.

In accordance with GL 89-04, Attachment 1, Position 2, paragraph (c), a sample disassembly and inspection plan has been adopted for the check valves identified above. This plan groups the valves of identical construction, which are used in similar applications, and requires testing (at least) one valve in each group during each refueling outage. Input criteria to the group selections included valve design features and materials, service conditions, and piping arrangement considerations.

Testing of these valves during any plant mode of operation provides an acceptable level of quality and safety for the following reasons:

- 1) All OM Code-1990 requirements, specifically, the disassembly and inspection, and the refueling outage (approximately two (2) year) frequency, are being met.
- 2) The test frequency of approximately every two (2) years is the same length of time between refueling outages. There will be four valves in each group. There will be one group of valves for each unit. All valves will be tested at least once every six years.
- 3) Testing of these valves during plant operation will not lessen the quality of the tests as compared to testing during a refueling outage.
- 4) Performing these tests during any mode increases system availability during outages, and reduces manpower demands during outages.
- 5) The associated subsystems of RHR will be in a scheduled maintenance window. Maintenance is scheduled using approved maintenance procedures, which have incorporated the guidance of the maintenance rule. All work will use approved plant procedures, and controls, and will be in regulatory compliance.
- 6) RHR maintenance window durations will be governed by the Allowed Outage Times (AOTs) for the RHR system. RHR AOTs are provided in the LGS, Units 1 and 2 Technical Specifications. The limiting LCO for the 'A' and 'B' loops is Suppression Pool Cooling Mode of RHR, which has a 72-hour LCO (Technical Specification 3.6.2.3). The limiting LCO for the 'C' and 'D' loops is Low pressure Coolant Injection (LPCI), which has a 30-day LCO (Technical Specification 3.5.1). The actual length of the system outage is set by work management

guidelines, which suggest completing the system outage within 50% of the AOT. However, flexibility exists to use the total AOT.

- 7) The risk associated with the testing (inspection) of the RHR check valves is assessed using the PARAGON program. This is a risk monitor that assesses risk based on individual system or train availability, in either online or outage mode.
- 8) Corrective actions upon any failure to meet the inspection requirements defined in GL 89-04, Attachment 1, Position 2, "Alternatives to Full Flow Testing of Check Valves" will require restoration of the valve and retesting. In addition the remaining valves in that group will be inspected during the next available system outage. All valves will be inspected prior to the end of the next refueling outage if not prior. A technical evaluation of failures will be performed to evaluate generic implications that may require immediate response.
- 9) Valves are partially stroke tested quarterly during pump testing. In addition a partial stroke will be performed as part of the post- maintenance (inspection) testing.

**6. Duration of the Proposed Alternative:**

The duration of the proposed alternative is for the remainder of the LGS, Units 1 and 2 second interval. The second interval commenced on January 8, 2000 and will conclude on January 7, 2010.

**7. Precedents:**

A similar relief request was approved for LGS, Units 1 and 2 (USNRC Letter dated May 5, 2003, "Limerick Generating Station, Units 1 and 2 – Relief from the Requirements of the American Society of Mechanical Engineers Boiler and Pressure Vessel Code, Section XI, Concerning Check Valve Inservice Testing Program (TAC NOS. MB4804 AND MB4805)")