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10 CFR 50.55a

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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: Response to Request for Additional Information Concerning a Proposed Alternative Associated with the Second Ten-Year Interval Inservice Testing (IST) Program

References:
1) Letter from J. W. Clifford (U.S. Nuclear Regulatory Commission) to J. A. Hutton (PECO Energy Company), dated November 28, 2000
2) Letter from M. P. Gallagher (Exelon Generation Company, LLC) to U.S. Nuclear Regulatory Commission, dated April 12, 2002
3) Letter from C. Gratton (U.S. Nuclear Regulatory Commission) to J. L. Skolds (Exelon Generation Company, LLC), dated July 26, 2002

Dear Sir/Madam:

In the Reference 1 letter, the U.S. Nuclear Regulatory Commission provided approval of alternatives and relief requests associated with the second ten-year interval inservice testing (IST) program for Limerick Generating Station (LGS), Units 1 and 2. In the Reference 2 letter, Exelon Generating Company (Exelon), LLC provided a proposed alternative (GVRR-7) for your review and approval concerning testing of check valves during all modes of operation.

Attached is our response to questions provided in the Reference 3 letter.

If you have any questions, please contact us.

Very truly yours,

Michael P. Gallagher
Director, Licensing & Regulatory Affairs
Mid-Atlantic Regional Operating Group

Attachments:
1 - Response to Request for Additional Information
2 - Relief Request No. GVRR-7

cc: H. J. Miller, Administrator, Region I, USNRC
A. L. Burritt, USNRC Senior Resident Inspector, LGS
C. Gratton, Senior Project Manager, USNRC

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ATTACHMENT 1

Limerick Generating Station, Units 1 and 2

Response to Request for Additional Information
Concerning a Proposed Alternative Associated with the
Second Ten-Year Interval Inservice Testing (IST) Program

QUESTION 1:

Please clarify when the disassembly, inspection, and flow testing of the check valves will be performed (i.e., during all modes of plant operation, or only during plant outages [modes four or five]).

RESPONSE:

The alternative is proposing to test the check valves in any plant mode. The reference to "non-refueling" outages has been deleted. Attached is a revised proposed alternative.

QUESTION 2:

Please provide the following information:

a) the valve groupings for the check valves listed in the proposed alternative.
b) the correct designations for check valves 51-1(2)1116B,D.

RESPONSE:

a)

	Unit 1	Unit 2
GROUP 1	51-1032A,B	51-2032A,B
	51-1F090B,D	51-2F090A,C
GROUP 2	51-1115B,D	51-2115B,D
	51-1116B,D	51-2116B,D
	52-1045B	52-2045B
	52-1046B	52-2046B
GROUP 3	52-1048A,B	52-2048A,B
GROUP 4	52-1061	52-2061
GROUP 5	52-1F030A,B	52-2F030A,B

b) 51-1(2)116B,D is the correct valve designation. The attached proposed alternative contains this change.

QUESTION 3:

Whenever any of the check valves listed in the proposed alternative are disassembled and inspected during plant operation in modes one, two or three:

a) will the associated emergency core cooling (ECCS) system be in a scheduled maintenance status?

b) will isolation, maintenance, and testing be performed using approved plant procedures, controls and in compliance with Title 10 of the Code of Federal Regulations (10 CFR), Section 50.65, "Requirements for monitoring the effectiveness of maintenance at nuclear power plants?"

c) will the ECCS system alignments be controlled by plant procedures?

d) how long will the ECCS system be out of service for the check valve disassembly and flow test?

RESPONSE:

a) Yes, the associated system will be in scheduled maintenance status.

b) Yes, all work will use approved plant procedures, controls and will be in regulatory compliance.

c) Yes, the ECCS system alignments will be controlled by plant procedures.

d) The detailed Technical Specification Allowed Outage Times (AOTs) for the Residual Heat Removal (RHR) and Core Spray (CS) Systems are provided in LGS, Units 1 and 2 Technical Specifications. The Suppression Pool Spray Mode of RHR has a seven (7) day Limiting Condition for Operation (LCO) (3.6.2.2). Suppression Pool Cooling Mode of RHR has a 72-hour LCO (3.6.2.3). These two modes of RHR are loops A and B, which are normally aligned to the heat exchangers. Low Pressure Coolant Injection (LPCI) has a 30-day LCO (3.5.1), which is applicable to RHR loops A, B, C and D (without the heat exchanger). CS has a seven (7) day LCO (3.5.1). Refer to the Technical Specifications for specific conditions. 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.

QUESTION 4:

As required by 10 CFR 50.65(a)(4), "before performing maintenance activities (including but not limited to surveillance, post-maintenance testing, and corrective and preventive maintenance), the licensee shall assess and manage the increase in risk that may result from the proposed maintenance activities." What methods or processes will be used to comply with these requirements when performing disassembly and inspection of check valves as proposed in the proposed alternative? Specifically describe the following:

a) how risk evaluations will be used during maintenance scheduling.

b) how the online risk monitor will be utilized.

b) methods to evaluate risk for assessing activities for components not directly in the probabilistic risk assessment (PRA) model. Are the check valves listed in the relief request contained in the PRA model?

d) how the associated ECCS system will be handled during the check valve work (i.e., will the ECCS system associated with the check valves being disassembled be declared inoperable during check valve maintenance?)

RESPONSE:

a) Maintenance is scheduled by using approved maintenance procedures, which have incorporated the guidance of the maintenance rule.

b) The risk for the testing of the check valves is assessed using the ORAM-SENTINEL program as part of the plant work activities.

c) Risk is not assessed based on individual check valves. This risk-modeling program assesses risk based on an individual system or train, irregardless of plant mode.

d) The impacted system(s) may or may not be ECCS. Typically, check valve work will result in the system becoming inoperable, unless the particular train containing the check valve can be isolated without impacting system function.

QUESTION 5:

Please provide the disassembly and inspection frequency for each group of check valves and the length of the cycle for checking all valves in the group. Please provide the failure rates of these check valves.

RESPONSE:

Groups 1 and 2 are on a six (6) year frequency, requiring at least two (2) valves per refuel cycle to be inspected. Groups 3 and 4 require one (1) valve per refueling outage to be inspected. Group 5 is on a six (6) year frequency requiring at least one (1) valve per refuel cycle to be inspected. Reviewing the past three (3) outages (six (6) years) on each unit revealed one (1) failure out of the 50 valves disassembled and inspected.

ATTACHMENT 2

Limerick Generating Station, Units 1 and 2

Relief Request No. GVRR-7

RELIEF REQUEST NO. GVRR-7

Systems: Condensate Fill for Residual Heat Removal (RHR) System Condensate Fill for Core Spray System

Valves:

51-1F090B	51-2F090A
51-1F090D	51-2F090C
51-1(2)032A,B	51-1(2)115B,D
51-1(2)116B,D	52-1(2)048A,B
52-1(2)061	52-1(2)045B
52-1(2)046B	52-1(2)F030A,B

Category: C

Function: These check valves close to prevent a loss of inventory from the Safeguard Piping Fill System, which is required to maintain the Emergency Core Cooling System (ECCS) discharge headers filled. Those valves located in the discharge lines from Safeguard Piping Fill Pumps 1(2)AP256 and 1(2)BP256 are also required to open to maintain the ECCS discharge lines filled.

Test Requirements: ASME OM Code-1990, ISTC 4.5.2, "Exercising Requirements," and Generic Letter 89-04, "Guidance on Developing Acceptable Inservice Testing Programs," Position 2, "Alternative to Full Flow Testing of Check Valves," paragraph (c), allows grouping of check valves while testing at a refuel outage only.

Justification: In accordance with GL 89-04, 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, maintenance/failure history and piping arrangement considerations.

Testing of these valves during non-outages 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.

3) Testing of these valves during plant operation will not lesson 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.

Alternative Test:

Perform code testing on Safeguard 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.