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10 CFR 50.90

June 27, 2003

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

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: Request for License Amendment Regarding Generic Letter 88-01 Requirements**

Dear Sir/Madam:

Pursuant to 10 CFR 50.90 Exelon Generation Company, LLC (EGC), hereby requests the following amendment to the Technical Specifications (TS), Appendix A of Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station (LGS), Units 1 and 2. This proposed change will revise Technical Specification (TS) 4.0.5.f and associated Bases, and Bases Section 3/4.4.8, with regards to the commitment to perform piping inspections in accordance with Generic Letter (GL) 88-01 ("NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping"), dated January 25, 1988. This change will allow the use of alternate measures approved by the NRC staff in lieu of the requirements of GL 88-01. This information is being submitted under unsworn declaration.

Exelon requests approval of the proposed amendment by February 24, 2004. Once approved, this amendment shall be implemented within 30 days of issuance.

Additionally, there are no commitments contained within this letter.

These proposed changes have been reviewed by the Plant Operations Review Committee and the Nuclear Safety Review Board.

We are notifying the State of Pennsylvania of this application for changes to the TS and Operating License by transmitting a copy of this letter and its attachments to the designated State Official.

A001

Request for License Amendment Regarding  
Generic Letter 88-01 Requirements  
June 27, 2003  
Page 2

If you have any questions or require additional information, please contact Dave Helker at (610) 765-5525.

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

Respectfully,

06-27-03  
Executed on

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

Attachments: 1 - Description of Proposed Changes  
2 - Markup of Proposed Technical Specification/Bases Page Changes  
3 - Typed Pages for Proposed Technical Specification/Bases Page Changes

cc: H. J. Miller, Administrator, Region I, USNRC  
A. L. Burritt, USNRC Senior Resident Inspector, LGS  
S. Wall, Project Manager, USNRC  
R. R. Janati, Commonwealth of Pennsylvania

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## **ATTACHMENT 1 EVALUATION OF PROPOSED CHANGES**

### **1.0 DESCRIPTION**

This letter is a request to amend Operating Licenses NPF-39 and NPF-85 for Limerick Generating Station (LGS), Units 1 and 2.

This proposed change will revise Technical Specification (TS) 4.0.5.f ("Applicability") and associated Bases, and Bases Section 3/4.4.8 ("Structural Integrity"), with regards to the commitment to perform piping inspections in accordance with Generic Letter (GL) 88-01 ("NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping (Generic Letter 88-01)"), dated January 25, 1988 (Reference 1). This change will allow the use of alternate measures approved by the NRC staff in lieu of the requirements of GL 88-01. Information supporting this License Amendment Request is contained in Attachment 1 to this letter, and the proposed marked up TS pages and final TS pages are contained in Attachments 2 and 3, respectively.

### **2.0 PROPOSED CHANGE**

The current LGS, Units 1 and 2, TS Surveillance Requirement (SR) 4.0.5.f ("Applicability") establishes that the Inservice Inspection Program for piping identified in NRC GL 88-01, shall be performed in accordance with the staff positions on schedule, methods and personnel, and sample expansion included in the GL.

EGC proposes to revise the provisions of SR 4.0.5.f and associated Bases, to allow the use of "alternate measures as approved by the NRC staff." Inclusion of these words will allow the use of alternate measures such as approved alternatives to the ASME Boiler and Pressure Vessel Code, or NRC approved BWRVIP (Boiling Water Reactor Vessel and Internals Project) documents, such as BWRVIP-75. The TS Bases Section 3/4.4.8 ("Structural Integrity") will also be revised to include reference to the use of other alternate measures approved by the NRC staff.

### **3.0 BACKGROUND**

By letter dated December 21, 1990 (Reference 2), EGC (formerly Philadelphia Electric Company) requested amendments to Facility Operating License Nos. NPF-39 and NPF-85 for the Limerick Generating Station, Units 1 and 2. These proposed amendments changed the TSs to conform to the NRC staff position on Inservice Inspection (ISI) in GL 88-01.

NRC GL 88-01 provides guidance in the form of NRC positions regarding Intergranular Stress Corrosion Cracking (IGSCC) problems in Boiling Water Reactor (BWR) piping made of austenitic stainless steel that is four (4) inches or larger in nominal diameter and contains reactor coolant at a temperature above 200 degrees F during reactor power operation regardless of ASME Code classification. GL 88-01 requested licensees of operating BWRs and holders of construction permits for BWRs to provide information regarding conformance with the NRC positions. One of the items which the GL requested licensees to address was a TS change to include a statement in the TS section on Inservice Inspection (ISI) that the ISI program for piping covered by the scope of NRC GL 88-01 will be in conformance with the NRC positions on schedule, methods and personnel, and sample expansion included in the GL.

## **ATTACHMENT 1 EVALUATION OF PROPOSED CHANGES**

EGC proposed the following changes in Reference 2 to the TSs in conformance with the guidance in GL 88-01:

1. Add new Surveillance Requirement 4.0.5.f to read "The Inservice Inspection (ISI) Program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the staff positions on schedule, methods and personnel, and sample expansion included in the Generic Letter. Details for implementation of these requirements are included as augmented inspection requirements in the ISI Program." Additionally, a revision to Bases Section 4.0.5 was proposed to indicate that such conformance is as approved in NRC Safety Evaluations dated March 6, 1990 and October 22, 1990.
2. Revise Bases Section 3/4.4.8 on Structural Integrity to include the statement "Additionally, the Inservice Inspection Program conforms to the NRC staff positions identified in NRC Generic Letter 88-01, NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping, as approved in NRC Safety Evaluations dated March 6, 1990 and October 22, 1990." TS Section 3.4.8 requires the structural integrity of ASME Code Class 1, 2, and 3 components be maintained in accordance with Surveillance Requirement 4.4.8 which strictly references TS Section 4.0.5 described in Item #1 above. This revision to Bases Section 3/4.4.8 was being proposed for completeness. No change was required to Surveillance Requirement 4.4.8 for the reasons stated above.

The U. S. NRC approved the proposed changes to the LGS, Units 1 and 2, TS in a Safety Evaluation Report dated March 5, 1991 (Reference 3).

EGC proposes to revise the words contained in TS 4.0.5.f to state that "The Inservice Inspection (ISI) Program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the staff positions on schedule, methods and personnel, and sample expansion included in the Generic Letter, or in accordance with alternate measures approved by the NRC staff."

Inclusion of the words "or in accordance with alternate measures approved by the NRC staff" will permit the use of alternate measures such as U. S. NRC approved alternates to the ASME Code, current or future BWRVIP documents, or other U.S. NRC approved documents.

The TS Bases Section 3/4.4.8 will also be revised to include referencing the use of other alternate measures approved by the NRC staff.

In particular, BWRVIP-75 ("BWR Vessel and Internals Project, Technical Basis for Revisions to Generic Letter 88-01 Inspection Schedules (BWRVIP-75)"), dated October 1999, submitted to the U. S. NRC staff for review by letter dated October 27, 1999 (Reference 4), proposed revisions to the extent and frequencies for piping inspections contained in GL 88-01. The proposed revisions are based on the consideration of inspection results and service experience gained by the industry since the issuance of GL 88-01, and include additional knowledge regarding the benefits for improved BWR water chemistry. The BWRVIP-75 report also provides justification for the proposed inspection criteria for Category A through E welds for the respective conditions of normal water chemistry (NWC) and hydrogen water chemistry (HWC). Incorporation of BWRVIP-75 at LGS, Units 1 and 2 is expected to eliminate approximately two (2) to three (3) weld examinations each outage, and eliminate the corresponding dose.

## **ATTACHMENT 1 EVALUATION OF PROPOSED CHANGES**

As discussed in the NRC Safety Evaluation Report for BWRVIP-75 (Reference 5), the staff found that the BWRVIP-75 guidance is acceptable for licensee referencing as the technical basis for a plant specific request for relief from, or as an alternative to, the ASME Code and 10 CFR 50.55a, in order to use the sample schedules and frequencies specified in the BWRVIP-75 report that are less than those required by the ASME Code. Additionally, the staff's approval of the as-revised BWRVIP-75 report also allows licensees to utilize the as-revised BWRVIP-75 in lieu of licensees' commitments to GL 88-01 and NUREG-0313, Rev. 2, or as the technical basis for a plant-specific request for a license amendment to change technical specifications requiring GL 88-01 or NUREG-0313, Rev. 2 inspections.

NUREG-0313 ("Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping," Revision 2, dated January 1988) (Reference 6) provided the technical bases for the positions included in GL 88-01.

Additionally, NUREG-1433 ("Standard Technical Specifications General Electric Plants, BWR/4," Revision 2, dated April 2001) (Reference 7) does not contain a requirement for inclusion of a commitment to GL 88-01.

### **4.0 TECHNICAL ANALYSIS**

NRC GL 88-01 provided guidance in the form of NRC positions regarding Intergranular Stress Corrosion Cracking (IGSCC) problems in Boiling Water Reactor (BWR) piping made of austenitic stainless steel that is four (4) inches or larger in nominal diameter and contains reactor coolant at a temperature above 200 degrees F during reactor power operation regardless of ASME Code classification. GL 88-01 requested licensees of operating BWRs and holders of construction permits for BWRs to provide information regarding conformance with the NRC positions. One of the items which the GL requested licensees to address was a TS change to include a statement in the TS section on Inservice Inspection (ISI) that the ISI program for piping covered by the scope of NRC GL 88-01 will be in conformance with the NRC positions on schedule, methods and personnel, and sample expansion included in the GL.

The U. S. NRC approved the proposed changes to the LGS, Units 1 and 2, TS in a Safety Evaluation Report dated March 5, 1991 (Reference 3).

EGC proposes to revise the words contained in TS 4.0.5.f to state that "the Inservice Inspection (ISI) Program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the staff positions on schedule, methods and personnel, and sample expansion included in the Generic Letter, or in accordance with alternate measures approved by the NRC staff."

Inclusion of the words "or in accordance with alternate measures approved by the NRC staff" will permit the use of alternate measures such as U. S. NRC approved alternates to the ASME Code, current or future BWRVIP documents, or other U.S. NRC approved documents.

In particular, BWRVIP-75 ("BWR Vessel and Internals Project, Technical Basis for Revisions to Generic Letter 88-01 Inspection Schedules (BWRVIP-75)"), dated October 1999, submitted to the U. S. NRC staff for review by letter dated October 27, 1999 (Reference 4), proposed revisions to the extent and frequencies for piping inspections contained in GL 88-01.

## **ATTACHMENT 1 EVALUATION OF PROPOSED CHANGES**

As discussed in the NRC Safety Evaluation Report for BWRVIP-75 (Reference 5), the staff found that approval of the as-revised BWRVIP-75 report allows licensees to utilize the as-revised BWRVIP-75 in lieu of licensees' commitments to GL 88-01 and NUREG-0313, Revision 2, or as the technical basis for a plant-specific request for a license amendment to change technical specifications requiring GL 88-01 or NUREG-0313, Revision 2 inspections.

### **5.0 REGULATORY ANALYSIS**

#### **5.1 NO SIGNIFICANT HAZARDS CONSIDERATION**

EGC has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 CFR 50.90, "Issuance of amendment," as discussed below:

**1. Does the proposed amendment involve a significant increase in the probability or consequences of an accident previously evaluated.**

Inclusion of the words "or in accordance with alternate measures approved by the NRC staff" to the LGS, Units 1 and 2 TS 4.0.5.f and associated Bases, and Bases Section 3/4.4.8, will permit the use of alternate measures such as U. S. NRC approved alternates to the ASME Code, current or future BWRVIP documents, or other U.S. NRC approved documents, in particular, BWRVIP-75. As discussed in the NRC Safety Evaluation Report for BWRVIP-75 (Reference 5), the staff found that approval of the as-revised BWRVIP-75 report allows licensees to utilize the as-revised BWRVIP-75 in lieu of licensees' commitments to GL 88-01 and NUREG-0313, Revision 2, or as the technical basis for a plant-specific request for a license amendment to change technical specifications requiring GL 88-01 or NUREG-0313, Revision 2 inspections. Additionally, NUREG-1433 ("Standard Technical Specifications General Electric Plants, BWR/4," Revision 2, dated April 2001) (Reference 7) does not contain a requirement for inclusion of a commitment to GL 88-01. Inclusion of the proposed words will ensure that only NRC approved documents or positions will be used in lieu of the requirements of GL 88-01. No physical changes to the facilities will result from the proposed change. The initial conditions and methodologies used in accident analyses remain unchanged. The proposed change does not revise or alter the design assumptions for systems or components used to mitigate the consequences of accidents. Thus, accident analyses results are not affected by this proposed change.

Therefore, this proposed amendment does not involve a significant increase in the probability or consequences of an accident previously evaluated.

**2. Does the proposed amendment create the possibility of a new or different kind of accident from any accident previously evaluated.**

The proposed change revises the TS and Bases to allow the use of alternate measures such as U. S. NRC approved alternates to the ASME Code, current or future BWRVIP documents, or other U.S. NRC approved documents, in particular, BWRVIP-75.

The proposed change does not affect the design or operation of any system, structure, or component (SSC) in the plant. The safety functions of the related SSCs are not changed in any manner, nor is the reliability of any SSC reduced. The change does not affect the manner by which the facility is operated and does not change any facility, structure, system,

## **ATTACHMENT 1 EVALUATION OF PROPOSED CHANGES**

or component. No new or different type of equipment will be installed by this proposed change.

Therefore, the proposed amendment does not create the possibility of a new or different kind of accident from any previously evaluated.

### **3. Does the proposed amendment involve a significant reduction in a margin of safety.**

The proposed change has no impact on the margin of safety of any Technical Specification. There is no impact on safety limits or limiting safety system settings. The change does not affect any plant safety parameters or setpoints. No physical or operational changes to the facility will result from the proposed changes. Therefore, the proposed change does not involve a significant reduction in a margin of safety.

Based on the above, EGC concludes that the proposed amendment presents no significant hazards consideration under the standards set forth in 10 CFR 50.92(c), and, accordingly, a finding of "no significant hazards consideration" is justified.

## **5.2 APPLICABLE REGULATORY REQUIREMENTS/CRITERIA**

As discussed above, NRC GL 88-01 provides guidance in the form of NRC positions regarding Intergranular Stress Corrosion Cracking (IGSCC) problems in Boiling Water Reactor (BWR) piping made of austenitic stainless steel that is four (4) inches or larger in nominal diameter and contains reactor coolant at a temperature above 200 degrees F during reactor power operation regardless of ASME Code classification. GL 88-01 requested licensees of operating BWRs and holders of construction permits for BWRs to provide information regarding conformance with the NRC positions. One of the items which the GL requested licensees to address was a TS change to include a statement in the TS section on Inservice Inspection (ISI) that the ISI program for piping covered by the scope of NRC GL 88-01 will be in conformance with the NRC positions on schedule, methods and personnel, and sample expansion included in the GL.

The TS were revised to incorporate the commitment to GL 88-01 in the Reference 3 U. S. NRC Safety Evaluation Report.

The proposed inclusion of the words "or in accordance with alternate measures approved by the NRC staff" to the TS and Bases will permit the use of alternate measures such as U. S. NRC approved alternatives to the ASME Code, current or future BWRVIP documents, or other U.S. NRC approved documents, in particular, BWRVIP-75. As discussed in the NRC Safety Evaluation Report for BWRVIP-75 (Reference 5), the staff found that approval of the as-revised BWRVIP-75 report allows licensees to utilize the as-revised BWRVIP-75 in lieu of licensees' commitments to GL 88-01 and NUREG-0313, Revision 2, or as the technical basis for a plant-specific request for a license amendment to change technical specifications requiring GL 88-01 or NUREG-0313, Revision 2 inspections.

Additionally, NUREG-1433 ("Standard Technical Specifications General Electric Plants, BWR/4," Revision 2, dated April 2001) (Reference 7) does not contain a requirement for inclusion of a commitment to GL 88-01.



## **ATTACHMENT 1 EVALUATION OF PROPOSED CHANGES**

### **6.0 ENVIRONMENTAL CONSIDERATION**

A review has determined that the proposed amendment would change a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or would change an inspection or surveillance requirement. However, the proposed amendment does not involve (i) a significant hazards consideration, (ii) a significant change in the types or significant increase in the amounts of any effluent that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed amendment meets the eligibility criterion for categorical exclusion set forth in 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

### **7.0 REFERENCES**

1. Generic Letter (GL) 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping (Generic Letter 88-01)", dated January 25, 1988
2. Letter from G. J. Beck (Philadelphia Electric Company), to U. S. NRC, "Technical Specifications Change Request", dated December 21, 1990
3. Letter from R. J. Clark (U. S. NRC) to G. J. Beck (Philadelphia Electric Company), "Generic Letter 88-01, Limerick Generating Station, Units 1 and 2 (TAC NOS. 77293 and 79294)", dated March 5, 1991
4. Letter from C. Terry (BWRVIP) to U. S. NRC, "Project 704 - "BWRVIP Vessel and Internals Project, Technical Basis for Revisions to Generic Letter 88-01 Inspection Schedules (BWRVIP-75)," EPRI Report TR-113932, October, 1999, " dated October 27, 1999
5. Letter from W. H. Bateman (U. S. NRC) to C. Terry (BWRVIP), " Final Safety Evaluation of the "BWRVIP Vessel and Internals Project, BWRVIP Vessel and Internals Project, Technical Basis for Revisions to Generic Letter 88-01 Inspection Schedules (BWRVIP-75)," EPRI Report TR-113932, October 1999 (TAC NO. MA5012)", dated May 14, 2002
6. NUREG-0313, Revision 2, "Technical Report on Material Selection and Processing Guidelines for BWR Coolant Pressure Boundary Piping," dated January 1988
7. "Standard Technical Specifications General Electric Plants, BWR/4," NUREG-1433, Revision 2, dated April 2001

**ATTACHMENT 2**

**Limerick Generating Station, Units 1 and 2**

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

**Revision to GL 88-01 Requirements Contained in Technical Specification (TS)  
4.0.5.f and Associated Bases, and Bases Section 3/4.4.8**

**Markup of Proposed Technical Specification/Bases Page Changes**

**REVISED TS PAGES**

**3/4 0-3 (Unit 1)**

**3/4 0-3 (Unit 2)**

**REVISED TS BASES PAGES**

**B 3/4 0-5 (Unit 1)**

**B 3/4 0-5 (Unit 2)**

**B 3/4 4-6 (Unit 1)**

**B 3/4 4-6 (Unit 2)**

## APPLICABILITY

### SURVEILLANCE REQUIREMENTS (Continued)

ASME Boiler and Pressure Vessel  
Code and applicable Addenda  
terminology for inservice  
inspection and testing activities

Required frequencies  
for performing inservice  
inspection and testing  
activities

Weekly  
Monthly  
Quarterly or every 3 months  
Semiannually or every 6 months  
Every 9 months  
Yearly or annually  
Biennially or every 2 years

At least once per 7 days  
At least once per 31 days  
At least once per 92 days  
At least once per 184 days  
At least once per 276 days  
At least once per 366 days  
At least once per 731 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.
- f. The Inservice Inspection (ISI) Program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the staff positions on schedule, methods and personnel, and sample expansion included in the Generic Letter. Details for implementation of these requirements are included as augmented inspection requirements in the ISI Program.

, or in accordance with alternate measures approved by the NRC staff.

## APPLICABILITY

### SURVEILLANCE REQUIREMENTS (Continued)

ASME Boiler and Pressure Vessel  
Code and applicable Addenda  
terminology for inservice  
inspection and testing activities

Required frequencies  
for performing inservice  
inspection and testing  
activities

Weekly	At least once per 7 days
Monthly	At least once per 31 days
Quarterly or every 3 months	At least once per 92 days
Semiannually or every 6 months	At least once per 184 days
Every 9 months	At least once per 276 days
Yearly or annually	At least once per 366 days
Biennially or every 2 years	At least once per 731 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.
- f. The Inservice Inspection (ISI) Program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the staff positions on schedule, methods and personnel, and sample expansion included in the Generic Letter. Details for implementation of these requirements are included as augmented inspection requirements in the ISI Program.

, or in accordance with alternate measures approved by the NRC staff.

APR 28 1998

### 3/4.0 APPLICABILITY

#### BASES

While up to 24 hours or the limit of the specified Surveillance time interval is provided to perform the missed Surveillance, it is expected that the missed Surveillance will be performed at the first reasonable opportunity. The determination of the first reasonable opportunity should include consideration of the impact on plant risk (from delaying the Surveillance as well as any plant configuration changes required or shutting the plant down to perform the Surveillance) and impact on any analysis assumptions, in addition to unit conditions, planning, availability of personnel, and the time required to perform the Surveillance. This risk impact should be managed through the program in place to implement 10 CFR 50.65(a)(4) and its implementation guidance, NRC Regulatory Guide 1.182, 'Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants.' This Regulatory Guide addresses consideration of temporary and aggregate risk impacts, determination of risk management action thresholds, and risk management action up to and including plant shutdown. The missed Surveillance should be treated as an emergent condition as discussed in the Regulatory Guide. The risk evaluation may use quantitative, qualitative, or blended methods. The degree of depth and rigor of the evaluation should be commensurate with the importance of the component. Missed Surveillances for important components should be analyzed quantitatively. If the results of the risk evaluation determine the risk increase is significant, this evaluation should be used to determine the safest course of action. All missed Surveillances will be placed in the Corrective Action Program.

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specified limits and the ACTION requirements for the applicable Limiting Condition for Operation begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period or the variable is outside the specified limits, then the equipment is inoperable and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the allowed times specified in the ACTION requirements, restores compliance with Specification 4.0.1.

Specification 4.0.4 establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL CONDITION or other condition of operation specified in the Applicability statement. The purpose of this specification is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into an OPERATIONAL CONDITION or other specified condition for which these systems and components ensure safe operation of the facility. This provision applies to changes in OPERATIONAL CONDITIONS or other specified conditions associated with plant shutdown as well as startup.

Under the provisions of this specification, the applicable Surveillance Requirements must be performed within the specified surveillance interval to ensure that the Limiting Conditions for Operation are met during initial plant startup or following a plant outage.

When a shutdown is required to comply with ACTION requirements, the provisions of Specification 4.0.4 do not apply because this would delay placing the facility in a lower CONDITION of operation.

Specification 4.0.5 establishes the requirement that inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. Additionally, the Inservice Inspection Program conforms to the NRC staff positions identified in NRC Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping," as approved in NRC Safety Evaluations dated March 6, 1990 and October 22, 1990.

LIMERICK - UNIT 1

B 3/4 0-5 Amendment No. 11. 49. 125. 162-

, or in accordance with alternate measures approved by the NRC staff.

## APPLICABILITY

### BASES

While up to 24 hours or the limit of the specified Surveillance time interval is provided to perform the missed Surveillance, it is expected that the missed Surveillance will be performed at the first reasonable opportunity. The determination of the first reasonable opportunity should include consideration of the impact on plant risk (from delaying the Surveillance as well as any plant configuration changes required or shutting the plant down to perform the Surveillance) and impact on any analysis assumptions, in addition to unit conditions, planning, availability of personnel, and the time required to perform the Surveillance. This risk impact should be managed through the program in place to implement 10 CFR 50.65(a)(4) and its implementation guidance, NRC Regulatory Guide 1.182, 'Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants.' This Regulatory Guide addresses consideration of temporary and aggregate risk impacts, determination of risk management action thresholds, and risk management action up to and including plant shutdown. The missed Surveillance should be treated as an emergent condition as discussed in the Regulatory Guide. The risk evaluation may use quantitative, qualitative, or blended methods. The degree of depth and rigor of the evaluation should be commensurate with the importance of the component. Missed Surveillances for important components should be analyzed quantitatively. If the results of the risk evaluation determine the risk increase is significant, this evaluation should be used to determine the safest course of action. All missed Surveillances will be placed in the Corrective Action Program.

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specified limits and the ACTION requirements for the applicable Limiting Condition for Operation begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period or the variable is outside the specified limits, then the equipment is inoperable and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the allowed times specified in the ACTION requirements, restores compliance with Specification 4.0.1.

Specification 4.0.4 establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL CONDITION or other condition of operation specified in the Applicability statement. The purpose of this specification is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into an OPERATIONAL CONDITION or other specified condition for which these systems and components ensure safe operation of the facility. This provision applies to changes in OPERATIONAL CONDITIONS or other specified conditions associated with plant shutdown as well as startup.

Under the provisions of this specification, the applicable Surveillance Requirements must be performed within the specified surveillance interval to ensure that the Limiting Conditions for Operation are met during initial plant startup or following a plant outage.

When a shutdown is required to comply with ACTION requirements, the provisions of Specification 4.0.4 do not apply because this would delay placing the facility in a lower CONDITION of operation.

Specification 4.0.5 establishes the requirement that inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. Additionally, the Inservice Inspection Program conforms to the NRC staff positions identified in NRC Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping," as approved in NRC Safety Evaluations dated March 6, 1990 and October 22, 1990.

LIMERICK - UNIT 2

B 3/4 0-5

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, or in accordance with alternate measures approved by the NRC staff.

## REACTOR COOLANT SYSTEM

### BASES

#### 3/4.4.7 MAIN STEAM LINE ISOLATION VALVES

Double isolation valves are provided on each of the main steam lines to minimize the potential leakage paths from the containment in case of a line break. Only one valve in each line is required to maintain the integrity of the containment, however, single failure considerations require that two valves be OPERABLE. The surveillance requirements are based on the operating history of this type valve. The maximum closure time has been selected to contain fission products and to ensure the core is not uncovered following line breaks. The minimum closure time is consistent with the assumptions in the safety analyses to prevent pressure surges.

#### 3/4.4.8 STRUCTURAL INTEGRITY

The inspection programs for ASME Code Class 1, 2, and 3 components ensure that the structural integrity of these components will be maintained at an acceptable level throughout the life of the plant.

Components of the reactor coolant system were designed to provide access to permit inservice inspections in accordance with Section XI of the ASME Boiler and Pressure Vessel Code 1971 Edition and Addenda through Winter 1972.

The inservice inspection program for ASME Code Class 1, 2, and 3 components will be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50.55a. Additionally, the Inservice Inspection Program conforms to the NRC staff positions identified in NRC Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping," as approved in NRC Safety Evaluations dated March 6, 1990 and October 22, 1990.

#### 3/4.4.9 RESIDUAL HEAT REMOVAL

The RHR system is required to remove decay heat and sensible heat in order to maintain the temperature of the reactor coolant. RHR shutdown cooling is comprised of four (4) subsystems which make two (2) loops. Each loop consists of two (2) motor driven pumps, a heat exchanger, and associated piping and valves. Both loops have a common suction from the same recirculation loop. Two (2) redundant, manually controlled shutdown cooling subsystems of the RHR System can provide the required decay heat removal capability. Each pump discharges the reactor coolant, after it has been cooled by circulation through the respective heat exchangers, to the reactor via the associated recirculation loop or to the reactor via the low pressure coolant injection pathway. The RHR heat exchangers transfer heat to the RHR Service Water System. The RHR shutdown cooling mode is manually controlled.

An OPERABLE RHR shutdown cooling subsystem consists of an RHR pump, a heat exchanger, valves, piping, instruments, and controls to ensure an OPERABLE flow path. In HOT SHUTDOWN condition, the requirement to maintain OPERABLE two (2) independent RHR shutdown cooling subsystems means that each subsystem considered OPERABLE must be associated with a different heat exchanger loop, i.e., the "A" RHR heat exchanger with the "A" RHR pump or the "C" RHR pump, and the "B" RHR heat exchanger with the "B" RHR pump or the "D" RHR pump are two (2) independent RHR shutdown cooling subsystems. Only one (1) of the two (2) RHR pumps associated with each RHR heat exchanger loop is

, or in accordance with alternate measures approved by the NRC staff.

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## REACTOR COOLANT SYSTEM

### BASES

#### 3/4.4.7 MAIN STEAM LINE ISOLATION VALVES

Double isolation valves are provided on each of the main steam lines to minimize the potential leakage paths from the containment in case of a line break. Only one valve in each line is required to maintain the integrity of the containment, however, single failure considerations require that two valves be OPERABLE. The surveillance requirements are based on the operating history of this type valve. The maximum closure time has been selected to contain fission products and to ensure the core is not uncovered following line breaks. The minimum closure time is consistent with the assumptions in the safety analyses to prevent pressure surges.

#### 3/4.4.8 STRUCTURAL INTEGRITY

The inspection programs for ASME Code Class 1, 2, and 3 components ensure that the structural integrity of these components will be maintained at an acceptable level throughout the life of the plant.

Components of the reactor coolant system were designed to provide access to permit inservice inspections in accordance with Section XI of the ASME Boiler and Pressure Vessel Code 1971 Edition and Addenda through Winter 1972.

The inservice inspection program for ASME Code Class 1, 2, and 3 components will be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable addenda as required by 10 CFR 50.55a. Additionally, the Inservice Inspection Program conforms to the NRC staff positions identified in NRC Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping," as approved in NRC Safety Evaluations dated March 6, 1990 and October 22, 1990.

#### 3/4.4.9 RESIDUAL HEAT REMOVAL

The RHR system is required to remove decay heat and sensible heat in order to maintain the temperature of the reactor coolant. RHR shutdown cooling is comprised of four (4) subsystems which make two (2) loops. Each loop consists of two (2) motor driven pumps, a heat exchanger, and associated piping and valves. Both loops have a common suction from the same recirculation loop. Two (2) redundant, manually controlled shutdown cooling subsystems of the RHR System can provide the required decay heat removal capability. Each pump discharges the reactor coolant, after it has been cooled by circulation through the respective heat exchangers, to the reactor via the associated recirculation loop or to the reactor via the low pressure coolant injection pathway. The RHR heat exchangers transfer heat to the RHR Service Water System. The RHR shutdown cooling mode is manually controlled.

An OPERABLE RHR shutdown cooling subsystem consists of an RHR pump, a heat exchanger, valves, piping, instruments, and controls to ensure an OPERABLE flow path. In HOT SHUTDOWN condition, the requirement to maintain OPERABLE two (2) independent RHR shutdown cooling subsystems means that each subsystem considered OPERABLE must be associated with a different heat exchanger loop, i.e., the "A" RHR heat exchanger with the "A" RHR pump or the "C" RHR pump, and the "B" RHR heat exchanger with the "B" RHR pump or the "D" RHR pump are two (2) independent RHR shutdown cooling subsystems. Only one (1) of the two (2) RHR pumps associated with each RHR heat exchanger loop is

, or in accordance with alternate measures approved by the NRC staff.

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**ATTACHMENT 3**

**Limerick Generating Station, Units 1 and 2**

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

**Revision to GL 88-01 Requirements Contained in Technical Specification (TS)  
4.0.5.f and Associated Bases, and Bases Section 3/4.4.8**

**Typed Pages for Proposed Technical Specification/Bases Page Changes**

**REVISED TS PAGES**

3/4 0-3 (Unit 1)

3/4 0-3 (Unit 2)

**REVISED TS BASES PAGES**

B 3/4 0-5 (Unit 1)

B 3/4 0-5 (Unit 2)

B 3/4 4-6 (Unit 1)

B 3/4 4-6 (Unit 2)

## APPLICABILITY

### SURVEILLANCE REQUIREMENTS (Continued)

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ASME Boiler and Pressure Vessel  
Code and applicable Addenda  
terminology for inservice  
inspection and testing activities

Required frequencies  
for performing inservice  
inspection and testing  
activities

Weekly  
Monthly  
Quarterly or every 3 months  
Semiannually or every 6 months  
Every 9 months  
Yearly or annually  
Biennially or every 2 years

At least once per 7 days  
At least once per 31 days  
At least once per 92 days  
At least once per 184 days  
At least once per 276 days  
At least once per 366 days  
At least once per 731 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.
- f. The Inservice Inspection (ISI) Program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the staff positions on schedule, methods and personnel, and sample expansion included in the Generic Letter, or in accordance with alternate measures approved by the NRC staff. Details for implementation of these requirements are included as augmented inspection requirements in the ISI Program.

## APPLICABILITY

### SURVEILLANCE REQUIREMENTS (Continued)

ASME Boiler and Pressure Vessel  
Code and applicable Addenda  
terminology for inservice  
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Required frequencies  
for performing inservice  
inspection and testing  
activities

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Yearly or annually  
Biennially or every 2 years

At least once per 7 days  
At least once per 31 days  
At least once per 92 days  
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At least once per 731 days

- c. The provisions of Specification 4.0.2 are applicable to the above required frequencies for performing inservice inspection and testing activities.
- d. Performance of the above inservice inspection and testing activities shall be in addition to other specified Surveillance Requirements.
- e. Nothing in the ASME Boiler and Pressure Vessel Code shall be construed to supersede the requirements of any Technical Specification.
- f. The Inservice Inspection (ISI) Program for piping identified in NRC Generic Letter 88-01 shall be performed in accordance with the staff positions on schedule, methods and personnel, and sample expansion included in the Generic Letter, or in accordance with alternate measures approved by the NRC staff. Details for implementation of these requirements are included as augmented inspection requirements in the ISI Program.

### 3/4.0 APPLICABILITY

#### BASES

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While up to 24 hours or the limit of the specified Surveillance time interval is provided to perform the missed Surveillance, it is expected that the missed Surveillance will be performed at the first reasonable opportunity. The determination of the first reasonable opportunity should include consideration of the impact on plant risk (from delaying the Surveillance as well as any plant configuration changes required or shutting the plant down to perform the Surveillance) and impact on any analysis assumptions, in addition to unit conditions, planning, availability of personnel, and the time required to perform the Surveillance. This risk impact should be managed through the program in place to implement 10 CFR 50.65(a)(4) and its implementation guidance, NRC Regulatory Guide 1.182, 'Assessing and Managing Risk Before Maintenance Activities at Nuclear Power Plants.' This Regulatory Guide addresses consideration of temporary and aggregate risk impacts, determination of risk management action thresholds, and risk management action up to and including plant shutdown. The missed Surveillance should be treated as an emergent condition as discussed in the Regulatory Guide. The risk evaluation may use quantitative, qualitative, or blended methods. The degree of depth and rigor of the evaluation should be commensurate with the importance of the component. Missed Surveillances for important components should be analyzed quantitatively. If the results of the risk evaluation determine the risk increase is significant, this evaluation should be used to determine the safest course of action. All missed Surveillances will be placed in the Corrective Action Program.

If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specified limits and the ACTION requirements for the applicable Limiting Condition for Operation begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period or the variable is outside the specified limits, then the equipment is inoperable and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

Completion of the Surveillance within the delay period allowed by this Specification, or within the allowed times specified in the ACTION requirements, restores compliance with Specification 4.0.1.

Specification 4.0.4 establishes the requirement that all applicable surveillances must be met before entry into an OPERATIONAL CONDITION or other condition of operation specified in the Applicability statement. The purpose of this specification is to ensure that system and component OPERABILITY requirements or parameter limits are met before entry into an OPERATIONAL CONDITION or other specified condition for which these systems and components ensure safe operation of the facility. This provision applies to changes in OPERATIONAL CONDITIONS or other specified conditions associated with plant shutdown as well as startup.

Under the provisions of this specification, the applicable Surveillance Requirements must be performed within the specified surveillance interval to ensure that the Limiting Conditions for Operation are met during initial plant startup or following a plant outage.

When a shutdown is required to comply with ACTION requirements, the provisions of Specification 4.0.4 do not apply because this would delay placing the facility in a lower CONDITION of operation.

Specification 4.0.5 establishes the requirement that inservice inspection of ASME Code Class 1, 2 and 3 components and inservice testing of ASME Code Class 1, 2 and 3 pumps and valves shall be performed in accordance with a periodically updated version of Section XI of the ASME Boiler and Pressure Vessel Code and Addenda as required by 10 CFR 50.55a. Additionally, the Inservice Inspection Program conforms to the NRC staff positions identified in NRC Generic Letter 88-01, "NRC Position on IGSCC in BWR Austenitic Stainless Steel Piping," as approved in NRC Safety Evaluations dated March 6, 1990 and October 22, 1990, or in accordance with alternate measures approved by the NRC staff.

## APPLICABILITY

### BASES

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If a Surveillance is not completed within the allowed delay period, then the equipment is considered inoperable or the variable is considered outside the specified limits and the ACTION requirements for the applicable Limiting Condition for Operation begin immediately upon expiration of the delay period. If a Surveillance is failed within the delay period or the variable is outside the specified limits, then the equipment is inoperable and the Completion Times of the Required Actions for the applicable LCO Conditions begin immediately upon the failure of the Surveillance.

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## REACTOR COOLANT SYSTEM

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#### 3/4.4.7 MAIN STEAM LINE ISOLATION VALVES

Double isolation valves are provided on each of the main steam lines to minimize the potential leakage paths from the containment in case of a line break. Only one valve in each line is required to maintain the integrity of the containment, however, single failure considerations require that two valves be OPERABLE. The surveillance requirements are based on the operating history of this type valve. The maximum closure time has been selected to contain fission products and to ensure the core is not uncovered following line breaks. The minimum closure time is consistent with the assumptions in the safety analyses to prevent pressure surges.

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#### 3/4.4.9 RESIDUAL HEAT REMOVAL

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An OPERABLE RHR shutdown cooling subsystem consists of an RHR pump, a heat exchanger, valves, piping, instruments, and controls to ensure an OPERABLE flow path. In HOT SHUTDOWN condition, the requirement to maintain OPERABLE two (2) independent RHR shutdown cooling subsystems means that each subsystem considered OPERABLE must be associated with a different heat exchanger loop, i.e., the "A" RHR heat exchanger with the "A" RHR pump or the "C" RHR pump, and the "B" RHR heat exchanger with the "B" RHR pump or the "D" RHR pump are two (2) independent RHR shutdown cooling subsystems. Only one (1) of the two (2) RHR pumps associated with each RHR heat exchanger loop is

## REACTOR COOLANT SYSTEM

### BASES

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#### 3/4.4.7 MAIN STEAM LINE ISOLATION VALVES

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