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10 CFR 50.90

February 25, 2009

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: License Amendment Request – Removal of Technical Specification 3/4.4.8 Concerning Structural Integrity Requirements

In accordance with 10 CFR 50.90, Exelon Generation Company, LLC (EGC) hereby requests a proposed change to remove the reactor coolant system structural integrity requirements contained in Technical Specification (TS) 3/4.4.8 and its associated Bases from the Limerick Generating Station (LGS), Units 1 and 2 TSs.

The proposed changes have been reviewed by the LGS, Units 1 and 2 Plant Operations Review Committee and approved by the Nuclear Safety Review Board in accordance with the requirements of the EGC Quality Assurance Program.

EGC requests approval of the proposed amendment by February 25, 2010. Once approved, the amendment shall be implemented within 180 days.

No additional regulatory commitments are contained in this request.

In accordance with 10 CFR 50.91, EGC is notifying the State of Pennsylvania of this application for changes to the TS and Operating Licenses by transmitting a copy of this letter and its attachments to the designated state official.

Should you have any questions concerning this letter, please contact Tom Loomis at (610) 765-5510.

I declare under penalty of perjury that the foregoing is true and correct. Executed on the 25th of February 2009.

Respectfully,

Pamela B. Cowan

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

Attachments: 1) Evaluation of Proposed Changes
2) Markup of Proposed Technical Specification and Bases Page Changes

cc: S. J. Collins, Regional Administrator, Region I, USNRC
E. M. DiPaolo, USNRC Senior Resident Inspector, LGS
P. J. Bamford, Project Manager [LGS] USNRC
R. R. Janati, Commonwealth of Pennsylvania

Attachment 1

Limerick Generating Station, Units 1 and 2

Facility Operating License Nos. NPF-39 and NPF-85

Removal of Structural Integrity Requirements

From the Technical Specifications

Evaluation of Proposed Changes

ATTACHMENT 1

CONTENTS

SUBJECT: Removal of Technical Specification 3/4.4.8 Concerning Structural Integrity Requirements

Attachment 1
Evaluation of Proposed Changes

1.0 SUMMARY DESCRIPTION

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

The proposed change removes the reactor coolant system structural integrity requirements contained in Technical Specification (TS) 3/4.4.8 and the associated Bases. The proposed change is consistent with NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," Revision 3.0, June 2004 (Reference 1).

Exelon Generation Company, LLC (EGC) requests approval of the proposed changes. Once approved, the amendment shall be implemented within 180 days.

2.0 DETAILED DESCRIPTION

The proposed changes to the Limerick Generating Station (LGS), Units 1 and 2 TSs will delete TS 3/4.4.8, "Structural Integrity," and the associated Bases from the LGS, Units 1 and 2 TSs and Bases. The associated Index will also be revised to delete reference to TS 3/4.4.8 and the associated Bases.

The Bases changes are provided for information only.

As discussed in the Reference 2 U. S. Nuclear Regulatory Commission Safety Evaluation Report, the purpose of TS 3/4.4.8, "Structural Integrity," is to specify the requirements for maintaining the structural integrity of the ASME Class 1, 2 and 3 components. This specification was originally intended to support assurance that structural integrity and operational readiness of these components are maintained at an acceptable level throughout the life of the facility. The specification is applicable in all operational modes. However, the specification does not provide actions for plant shutdown if its Limiting Condition for Operation (LCO) is not met. In addition, the specification contains no specific surveillance requirements. This is because the specification addresses the passive pressure boundary function of ASME Code Class 1, 2 and 3 components as established by compliance with the Inservice Inspection (ISI) Program. The ISI Program is required pursuant to 10 CFR 50.55a, "Codes and standards." Furthermore, the specification wording could be misconstrued to conflict with normal outage-related activities, including removal of the Reactor Vessel head in preparation for refueling, a time in which the Reactor Coolant System (RCS) pressure boundary would no longer be intact. This TS does not fulfill any of the criteria of 10 CFR 50.36(c)(2)(ii) for retention in the TSs.

As discussed in the Reference 3 License Amendment Request application, maintaining a program-type requirement within an LCO creates significant interpretation issues for Operations personnel. The RCS structural integrity TS was part of the original TSs and, therefore, no basis history is available regarding its intent. However, TS 3/4.4.8 appears to have been included to help ensure that plant heat up and startup would not occur until all required portions of the RCS were verified to meet ISI acceptance criteria following inspections performed during a plant outage (normally performed during refueling outages). Meeting this acceptance criteria helps ensure the integrity of the RCS pressure boundary during all modes of operation, including accident events. However, the RCS pressure boundary is purposely breached during Mode 5 operations to support plant outage activities and such openings are not historically considered a violation of TS 3/4.4.8. Furthermore, TS 3/4.4.8 contains no actions suggesting it was designed to accommodate integrity concerns once plant heat-up has commenced. RCS structural integrity ISI activities are performed primarily during plant outages when conditions exist that permit access to the RCS pressure boundary and are not monitored or controlled through application of the ISI Program during the operational cycle. Other TSs are designed to monitor the structural integrity of the RCS during operation and provide actions to shutdown the unit if compliance is not maintained. For example, RCS heat-up and cool-down rates protect against applying undue stresses as a result of pressure/temperature transients on RCS components and piping. RCS leakage TSs provide a means of protecting the RCS integrity by detecting and monitoring leakage. Therefore, it is not necessary to apply TS 3/4.4.8 when integrity issues become evident during plant operation above cold shutdown. Because TS 3/4.4.8 is redundant to other regulations, it is acceptable to remove the TS 3/4.4.8 requirements from the TSs.

Removal of this specification does not reduce the controls that are necessary to ensure compliance with the ASME Code or the need to maintain the RCS pressure boundaries. Structural integrity is maintained by compliance with 10 CFR 50.55a as implemented through the LGS, Units 1 and 2 ISI Program.

3.0 TECHNICAL EVALUATION

The purpose of TS 3/4.4.8, "Structural Integrity," is to specify the requirements of maintaining the structural integrity of the ASME Class 1, 2 and 3 components. However, this is redundant to (and does not contain the detail of) the requirements contained within 10 CFR 50.55a, "Codes and standards." 10 CFR 50.36(c)(2)(ii) states that a TS LCO of a nuclear reactor must be established for each item meeting one or more of the following criteria:

Criterion 1. *Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary.*

TS 3/4.4.8 is not applicable to installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the RCS. This TS does not meet Criterion 1.

Criterion 2. *A process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.*

TS 3/4.4.8 is not applicable to a process variable, design feature, or operating restriction that is an initial condition of a design basis accident or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier. Although this TS is related to the integrity of the RCS pressure boundary, compliance is maintained by meeting the requirements of 10 CFR 50.55a through implementation of the LGS, Units 1 and 2 ISI Program and is not specifically monitored or controlled during plant operation. This TS does not meet Criterion 2.

Criterion 3. *A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a design basis accident or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier.*

No specific TS-related structure, system, or component (SSC) is being revised or removed from the TSs. Each TS SSC must continue to meet the requirements of 10 CFR 50.55a as implemented through the LGS, Units 1 and 2 ISI Program. This RCS structural integrity TS does not meet Criterion 3.

Criterion 4 *A structure, system, or component which operating experience or probabilistic risk assessment has shown to be significant to public health and safety.*

As stated above, no specific TS-related SSC is being revised or removed from the TSs. Each TS SSC must continue to meet the requirements of 10 CFR 50.55a as implemented through the LGS, Units 1 and 2 ISI Program. This RCS structural integrity specification does not meet Criterion 4.

The scope of this TS has been evaluated against the criteria of 10 CFR 50.36(c)(2)(ii) and none of these criteria require that the RCS structural integrity controls are appropriate for retention in the LGS, Units 1 and 2 TSs. This conclusion is consistent with NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," Revision 3.0.

Based on the above discussion, removal of RCS structural integrity requirements contained in TS 3/4.4.8 from the TSs is acceptable.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

The proposed change has been evaluated to determine whether applicable regulations and requirements continue to be met. Exelon Generation Company, LLC (EGC) has determined that the proposed change does not require any exemptions or relief from regulatory requirements, other than the TSs.

Although the RCS structural integrity controls of LGS, Units 1 and 2 TS 3/4.4.8 are being removed from the TSs, LGS, Units 1 and 2 are still required to comply with the ASME Code requirements in accordance with 10 CFR 50.55a. Therefore, there is no impact on any regulatory requirement as a result of the proposed change.

4.2 Precedent

A similar license amendment was approved for Arkansas Nuclear One, Unit No. 2 as discussed in References 2 and 3.

4.3 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 50.92, "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?

   Response: No.

   The proposed change to remove the RCS structural integrity controls from the TSs does not impact any mitigation equipment or the ability of the RCS pressure boundary to fulfill any required safety function. Since no accident mitigation or initiators are impacted by this change, no design basis accidents are affected. Therefore, the proposed change does not involve a significant increase in the probability or consequences of any accident previously evaluated.

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

   Response: No.

   The proposed change will not alter the plant configuration or change the manner in which the plant is operated. No new failure modes are being introduced by the proposed change.

   Therefore, the proposed change 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?

   Response: No.

   Removal of TS 3/4.4.8 from the TSs does not reduce the controls that are required to maintain the RCS pressure boundary for ASME Code Class 1, 2, or 3 components.

   No equipment or RCS safety margins are impacted due to the proposed change. Therefore, the proposed change does not involve a significant reduction in the margin of safety.

Based on the above, EGC concludes that the proposed amendment does not involve a 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.

4.4 Conclusions

In conclusion, based on the considerations discussed above, (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the Commission's regulations, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 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.

6.0 REFERENCES

1. NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4," Revision 3.0, June 2004

2. Letter from F. Saba (U. S. Nuclear Regulatory Commission) to T. G. Mitchell (Entergy Operations, Inc.), "Arkansas Nuclear One, Unit No. 2 - Issuance of Amendment RE: Removal of Reactor Coolant System Structural Integrity Requirements (TAC. NO. MD0700)," dated March 1, 2007

3. Letter from T. G. Mitchell (Entergy Operations, Inc.) to U. S. Nuclear Regulatory Commission, "License Amendment Request Proposed Technical Specification to Remove Reactor Coolant System Structural Integrity Requirements Arkansas Nuclear One, Unit 2," dated March 20, 2006

Attachment 2

Limerick Generating Station, Units 1 and 2

Facility Operating License Nos. NPF-39 and NPF-85

Markup of Proposed Technical Specification and Bases Page Changes

(Units 1 and 2)

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LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

BASES

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3/4.4.8 STRUCTURAL INTEGRITY

(Deleted)

LIMITING CONDITION FOR OPERATION

3.4.8 The structural integrity of ASME Code Class 1, 2, and 3 components shall be maintained in accordance with Specification 4.4.8.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, and 5.

ACTION:

a. With the structural integrity of any ASME Code Class 1 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the reactor coolant system temperature more than 50°F above the minimum temperature required by NDT considerations.

b. With the structural integrity of any ASME Code Class 2 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the reactor coolant system temperature above 200°F.

c. With the structural integrity of any ASME Code Class 3 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) from service.

SURVEILLANCE REQUIREMENTS

4.4.8 No requirements other than Specification 4.0.5.

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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.

3/4.4.8 ~~STRUCTURAL INTEGRITY~~ (Deleted)

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

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 exhanger 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

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LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

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LIMITING CONDITION FOR OPERATION

~~3.4.8 The structural integrity of ASME Code Class 1, 2, and 3 components shall be maintained in accordance with Specification 4.4.8.~~

~~APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, 3, 4, and 5.~~

~~ACTION:~~

~~a. With the structural integrity of any ASME Code Class 1 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the reactor coolant system temperature more than 50°F above the minimum temperature required by NDT considerations.~~

~~b. With the structural integrity of any ASME Code Class 2 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) prior to increasing the reactor coolant system temperature above 200°F.~~

~~c. With the structural integrity of any ASME Code Class 3 component(s) not conforming to the above requirements, restore the structural integrity of the affected component(s) to within its limit or isolate the affected component(s) from service.~~

SURVEILLANCE REQUIREMENTS

~~4.4.8 No requirements other than Specification 4.0.5.~~

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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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