

10 CFR 50.90

December 21, 2005

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: License Amendment Request
Relocation of the Reactor Coolant System Pressure Isolation Valve Table from
Technical Specifications to the Technical Requirements Manual

Pursuant to 10 CFR 50.90, Exelon Generation Company, LLC (Exelon) hereby requests a change to the Technical Specifications (TS), Appendix A, of Facility Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station (LGS), Units 1 and 2, respectively.

The amendment revises the Appendix A TS relating to reactor coolant system leakage. Specifically, the amendment deletes Table 3.4.3.2-1, "Reactor Coolant System Pressure Isolation Valves" from the LGS TS, Units 1 and 2. The information contained in Table 3.4.3.2-1 is to be relocated to the Limerick Technical Requirements Manual (TRM). In addition, the references to Table 3.4.3.2-1 are being removed from TS Limiting Condition for Operation 3.4.3.2.e and TS ACTION 3.4.3.2.d, as well as from Surveillance Requirement 4.4.3.2.2 and 4.4.3.2.3.

The proposed change is consistent with Generic Letter 91-08, "Removal of Component Lists from Technical Specifications," which provides guidance to remove component lists from the Technical Specifications. This request meets all conditions outlined in the Generic Letter. Additionally, the revision does not alter the requirements for pressure isolation valve and alarm instrumentation operability currently in the Technical Specifications. The LCO and Surveillance Requirements will be retained in the revised Technical Specifications and the proposed change will not affect the meaning, application, and function of the current Technical Specification requirements for the Pressure Isolation Valves in Table 3.4.3.2-1.

The approach for this revision is consistent with the Improved Standard Technical Specifications (STS) described in NUREG-1433, "Standard Technical Specifications, General Electric Plants (BWR/4)," and changes previously approved by the NRC for other licensees, including Seabrook and River Bend stations.

Attachment 1 to this letter describes the proposed changes and provides justification for the changes. Attachments 2 and 3 to this letter provide the "marked-up" Technical Specifications and "marked-up" Technical Specifications Bases pages, respectively. Attachments 4 and 5 to this letter provide the typed Technical Specifications and Technical Specifications Bases pages, respectively.

Exelon has concluded that the proposed changes present no significant hazards consideration under the standards set forth in 10CFR 50.92.

Exelon requests approval of the proposed amendment by March 1, 2006 to support the upcoming Unit 1, 1R11 Refueling outage. Upon NRC approval, the amendment shall be implemented within 30 days of issuance.


These proposed changes have been reviewed by the Plant Operations Review Committee. We are notifying the State of Pennsylvania of this application for changes to the TS by transmitting a copy of this letter and its attachments to the designated State Official.

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,

12/21/05
Executed On


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

- Attachments:
- 1 Evaluation of the Proposed Change
 - 2 "Marked-Up" Technical Specifications Pages
 - 3 "Marked-Up" Technical Specifications Bases Pages
 - 4 Typed Technical Specifications Pages
 - 5 Typed Technical Specifications Bases Pages

cc: Regional Administrator - NRC Region I w/attachments
NRC Senior Resident Inspector - Limerick Generating Station "
NRC Project Manager, NRR - Limerick Generating Station "
Director, Bureau of Radiation Protection - Pennsylvania Department of Environmental Protection "

Attachment 1

License Amendment Request

Limerick Generating Station, Units 1 and 2

Docket Nos. 50-352 and 50-353

**Relocation of the Reactor Coolant System Pressure Isolation Valve Table from
Technical Specifications to the Technical Requirements Manual**

EVALUATION OF PROPOSED CHANGE

License Amendment Request
Docket Nos. 50-352, 353
ATTACHMENT 1
EVALUATION OF PROPOSED CHANGE

1.0 DESCRIPTION

In accordance with 10 CFR 50.90, "Application for amendment of license or construction permit," Exelon Generation Company, LLC (i.e., Exelon) requests changes to Technical Specifications (TS), Appendix A, of Facility Operating License Nos. NPF-39 and NPF-85 for Limerick Generating Station (LGS), Units 1 and 2, respectively.

The amendment revises the Appendix A, TS and the associated Bases relating to reactor coolant system leakage. Specifically, the amendment deletes Table 3.4.3.2-1, "Reactor Coolant System Pressure Isolation Valves" from the LGS Units 1 and 2 TS. In addition, the references to Table 3.4.3.2-1 are being removed from TS Limiting Condition for Operation 3.4.3.2.e and TS ACTION 3.4.3.2.d, as well as from Surveillance Requirement (SR) 4.4.3.2.2 and 4.4.3.2.3.

The information contained in Table 3.4.3.2-1 would be relocated to the Technical Requirements Manual (TRM). Relocating the Table from the TS will eliminate the burden of processing License Amendments when changes are made to the Pressure Isolation Valve (PIV) Table and will facilitate the more effective utilization of NRC and Exelon resources.

The proposed change is consistent with Generic Letter 91-08, "Removal of Component Lists from Technical Specifications", which provides guidance to remove component lists from the Technical Specifications. This request meets all conditions outlined in the Generic Letter. Additionally, the revision does not alter the requirements for pressure isolation valve and alarm instrumentation operability currently in the Technical Specifications. The LCO and Surveillance Requirements will be retained in the revised Technical Specifications and the proposed change will not affect the meaning, application, and function of the current Technical Specification requirements for the PIVs in Table 3.4.3.2-1.

The proposed change is consistent with the improved Standard Technical Specifications (STS) described in NUREG-1433, "Standard Technical Specifications, General Electric Plants (BWR/4)," and changes previously approved by the NRC for other licensees including River Bend and Seabrook stations.

2.0 PROPOSED CHANGE

LGS has separate TS for Unit 1 and Unit 2; however, the proposed change is identical for both units.

TS Section 3/4.4.3.2, "Reactor Coolant System, Operational Leakage" contains the Limiting Conditions for Operation (LCO), Actions, and Surveillance Requirements applicable to Reactor Coolant System (RCS) operational leakage and includes RCS PIV leakage requirements. Table 3.4.3.2-1, "Reactor Coolant System Pressure Isolation Valves" contains a list of PIVs, as well as Alarm Setpoints and Alarm Allowable Values. The following changes are proposed to support relocation of Table 3.4.3.2-1 to the Limerick TRM:

1. TS Index, page xi, will be revised to delete reference to Table 3.4.3.2-1
2. TS LCO 3.4.3.2.e will be revised to delete reference to Table 3.4.3.2-1.
3. TS Action 3.4.3.2.d will be revised to delete reference to Table 3.4.3.2-1.
4. TS SR 4.4.3.2.2 will be revised to delete reference to Table 3.4.3.2-1.
5. TS SR 4.4.3.2.3 will be revised to delete reference to Table 3.4.3.2-1.
6. TS Table 3.4.3.2-1 will be deleted and will be relocated in its entirety to the Limerick TRM.
7. TS Bases 3/4.4.3.2 will be revised to replace the reference to Table 3.4.3.2-1 with a reference to the TRM.

The current RCS PIV leakage specifications themselves, i.e., LCO 3.4.3.2.e, TS Action 3.4.3.2.d, and Surveillance Requirements 4.4.3.2.2 and 4.4.3.2.3, will remain unchanged except for deletion of the references to Table 3.4.3.2-1.

3.0 BACKGROUND

The function of RCS PIVs is to separate the high pressure RCS from an attached low pressure system. This protects the RCS pressure boundary described in 10 CFR 50.2, 10 CFR 50.55a(c), and GDC 55 of 10 CFR 50, Appendix A. PIVs are described in NUREG-1433 as any two normally closed valves in series within the reactor coolant pressure boundary (RCPB).

The RCS PIV LCO allows RCS high pressure operation when leakage through these valves exists in amounts that do not compromise safety. The PIV leakage limit applies to each individual valve. Leakage through these valves is not included in any allowable LEAKAGE specified in LCO 3.4.3.2.

Although this specification provides a limit on allowable PIV leakage rate, its main purpose is to prevent overpressure failure of the low pressure portions of connecting systems. The leakage limit provides indication that the PIVs between the RCS and the connecting systems are degraded or degrading. PIV leakage could lead to overpressure of the low pressure piping or components.

In May 1991, Generic Letter 91-08, "Removal of Component Lists from Technical Specifications", was issued to provide guidance to remove component lists from the Technical Specifications. The guidance stipulates that the TS requirements are stated in general terms that describe the types of components to which the requirements apply, and that the removal of component lists do not alter existing TS requirements or those components to which they apply. In addition, the removed lists must be included in a plant procedure that is subject to the change control provisions for plant procedures in the Administrative Controls section of TS.

Generic Letter 91-08 provides guidance for preparing a request for a license amendment to remove component lists from technical specifications (TS). The nuclear industry and the U.S. Nuclear Regulatory Commission (NRC) identified this line-item TS improvement during investigations of TS problems.

The removal of component lists from TS permits administrative control of changes to these lists without processing a license amendment. Any change to component lists contained in plant procedures is subject to the requirements specified in the Administrative Controls section of the TS on changes to plant procedures. Therefore, the change control provisions of the TS provide an adequate means to control changes to these component lists, when they have been incorporated into plant procedures, without including them in TS.

An Enclosure to the Generic Letter provided additional guidance for changing individual TS sections. At the time of issuance in 1991, the Enclosure to GL 91-08 specifically addressed the issue of PIVs stating:

“Guidance on removing from the TS the list of reactor coolant system pressure isolation valves is pending the NRC staff's resolution of generic concerns with existing lists for these valves. In the interim, licensees should not submit proposals to remove this list from the TS.”

The NRC has since resolved the Generic Safety Issue referenced in the GL Enclosure. On July 1, 1993, NUREG 1463, “Regulatory Analysis for the Resolution of Generic Safety Issue 105: Interfacing System Loss-of-Coolant Accident in Light-Water Reactors” was issued. The NUREG addressed the outstanding Generic Safety Issue (GSI) 105 regarding Interfacing Systems Loss-of-Coolant Accident (ISLOCA) and PIVs. Additionally, the NRC has since approved NUREG-1433, “Standard Technical Specifications General Electric Plants, BWR/4”, which does not include PIV Tables. In addition, the NRC has approved specific LARs for relocation of PIV Tables from TS.

4.0 TECHNICAL ANALYSIS

Exelon proposes to delete Table 3.4.3.2-1, “Reactor Coolant System Pressure Isolation Valves,” and any reference thereto from TS 3.4.3.2, and to relocate the PIV Table to the Limerick TRM. The TRM is an Exelon controlled document that has been developed to contain requirements relocated from the TS. Revisions to the TRM are reviewed pursuant to 10 CFR 50.59, and summaries of changes are provided to the NRC in the periodic 10 CFR 50.59 report. Relocating the table from the TS will eliminate the burden of processing license amendments when changes are made to the PIV Table and will facilitate the more effective utilization of NRC and Exelon resources.

On May 6, 1991, the Commission issued Generic Letter 91-08 (GL 91-08) relating to the issue of removing component lists from the TS. GL 91-08 stated in part:

This guidance includes the incorporation of lists into plant procedures that are subject to the change control provisions for plant procedures in the Administrative Controls section of the TS.

The removal of component lists from TS permits administrative control of changes to these lists without processing a license amendment, as is required to update TS component lists. Any change to component lists contained in plant procedures is subject to the requirements specified in the Administrative Controls section of the TS on changes to plant procedures. Therefore, the change control provisions of the TS provide an adequate means to control changes to these component lists, when they have been incorporated into plant procedures, without including them in TS.

Specific issues identified in Enclosure 1 to GL 91-08 to be addressed with a request to remove component lists from the TS include:

1. Each TS should include an appropriate description of the scope of the components to which the TS requirements apply. Components that are defined by regulatory requirements or guidance need not be clarified further. However, the Bases section of the TS should reference the applicable requirements or guidance.
2. If the removal of a component list results in the loss of notes that modify or provide an exception to the TS requirements, the specification should be revised to incorporate that modification or exception. The modification or exception should be stated in terms that identify any group of components by function rather than by plant identification number, if practical.
3. Licensees should confirm that the lists of components removed from the TS are located in appropriately controlled plant procedures. The list of components may be included in the next update of the FSAR. The Bases section of individual specifications also may reference the plant procedures or other documents that identify each component list.

With regard to item (1) above, PIVs are described in NUREG-1433 as any two normally closed valves in series within the reactor coolant pressure boundary. The TS requirements for LCO, Actions, and SR relating to PIVs remain applicable. Therefore, deletion of reference to Table 3.4.3.2-1 from LCO 3.4.3.2.e does not affect the scope of components to which the TS requirements apply. Per the proposed changes in Attachment 3, the TS Bases now describe PIVs, which is consistent with the NUREG-1433 "Standard Technical Specifications, General Electric Plants, BWR/4" Bases. The same argument applies to removal of the reference to Table 3.4.3.2-1 from TS Action 3.4.3.2.d, as well as surveillance requirements 4.4.3.2.2 and 4.4.3.2.3.

With regard to item (2) above, there are no notes, exceptions, or modifications listed directly in the PIV Table 3.4.3.2-1.

With regard to item (3), Exelon will confirm, prior to implementation of this LAR that the list of PIVs is located in the TRM, which is an appropriately controlled plant procedure.

Generic Letter 91-08 provided the guidance for changing individual TS sections. The guidance written in the Generic Letter was written prior to the resolution of GSI 105, which discusses Interfacing Systems Loss of Coolant Accidents. The enclosure to GL 91-08 specifically addresses the issue of PIVs and this GSI stating:

“Guidance on removing from the TS the list of reactor coolant system pressure isolation valves is pending the NRC staff's resolution of generic concerns with existing lists for these valves. In the interim, licensees should not submit proposals to remove this list from the TS.”

Explicit guidance on removal of lists of PIVs from the TS has not been issued by the NRC. However, in July 1993, the NRC issued NUREG-1463, “Regulatory Analysis for the Resolution of Generic Safety Issue 105: Interfacing System Loss-of-Coolant Accident (LOCA) in Light-Water Reactors.”

NUREG-1463 concluded “the most viable course of action to resolve Generic Issue 105 is licensee participation in individual plant examinations (IPEs)”. Limerick Individual Plant Examination (IPE) was completed in response to GL 88-20, which was accepted by the NRC (ref. NRC Review of LGS IPE Submittal, Letter dated December 19, 1994, from NRC to G. A. Hunger).

Additionally, NUREG-1443, “Standard Technical Specifications, General Electric Plants, BWR/4,” does not contain a list of PIVs. The list of PIVs is not included in STS section 3.4.5, “RCS Pressure Isolation Valve (PIV) Leakage”, and STS Basis section 3.4.5 indicates that PIVs are listed in the FSAR.

Exelon concludes that the proposed change to TS 3.4.3.2 is administrative in that it merely relocates the PIV Table from the TS to the TRM and maintains the requirements for PIV testing and the acceptance criteria for the testing in the Limiting Condition for Operation 3.4.3.2.e. Equipment test methods, frequencies, and acceptance criteria are not affected by this proposed change.

Exelon determined that the relocation of Table 3.4.3.2-1 does not eliminate the requirements for the licensee to ensure that the RCS pressure isolation valves are capable of performing their safety function. Although Table 3.4.3.2-1 is relocated from the TSs to the TRM, the information being relocated will be controlled and further revisions to the TRM Table will be subject to evaluation pursuant to 10 CFR 50.59.

5.0 REGULATORY ANALYSIS

5.1 No Significant Hazards Consideration

Exelon has evaluated whether or not a significant hazards consideration is involved with the proposed amendments by focusing on the three standards set forth in 10 CFR 50.92, “Issuance of amendment,” as discussed below:

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

Response: No.

The proposed relocation of Technical Specification Table 3.4.3.2-1 does not alter the requirements for pressure isolation valve operability or surveillance currently in the Technical Specifications. The proposed change to remove the pressure isolation valve

table from TS and relocate the information to an administratively controlled document, and to revise the wording in TS to reflect this change, will have no impact on any safety related structures, systems or components. The probability of occurrence of a previously evaluated accident is not increased because this change does not introduce any new potential accident initiating conditions. The consequences of accidents previously evaluated in the UFSAR are not affected because the ability of the PIVs to limit leakage through these valves in amounts that do not compromise safety is not affected. Therefore, the proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

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

Response: No.

The proposed changes are administrative in nature and do not result in physical alterations or changes in the method by which any safety related system performs its intended function(s). The proposed changes do not impact any safety analysis assumptions. The proposed changes do not create any new accident initiators or involve an activity that could be an initiator of an accident of a different type.

All PIVs and alarm instrumentation will continue to be tested to the same rigorous requirements as defined in the Technical Specification Surveillance Requirements. The proposed revision does not make changes in any method of testing or how any safety related system performs its safety functions. Therefore, the possibility of an accident of a different type than any previously evaluated in the UFSAR is not created.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No.

The administrative change to relocate Technical Specification Table 3.4.3.2-1 to the Technical Requirements Manual does not alter the basic regulatory requirement for Reactor Coolant System pressure isolation and will not affect the isolation capability for credible accident scenarios. Future revisions to the Technical Requirements Manual Table will be subject to evaluation pursuant to 10CFR50.59.

Additionally, the proposed relocation does not alter the requirements for pressure isolation valve and alarm instrumentation operability currently in the Technical Specifications. The LCO and Surveillance Requirements will be retained in the revised Technical Specifications. The proposed change will not affect the meaning, application, and function of the current Technical Specification requirements for the valves in Table 3.4.3.2-1. Therefore, the proposed changes do not result in a significant reduction in the margin of safety.

Based on the above, Exelon concludes that the proposed changes present 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

General Design Criterion (GDC) 30, "Quality of Reactor Coolant Pressure Boundary," of Appendix A to 10 CFR Part 50, "General Design Criteria for Nuclear Power Plants," requires that means be provided for detecting and, to the extent practical, identifying the location of the source of reactor coolant leakage. As previously noted, the proposed change involves relocating Technical Specification Table 3.4.3.2-1 to the Technical Requirements Manual. The proposed change does not involve a change in the design or operation of the RCS leakage detection system which will continue to meet the requirements of GDC 30.

The RCS operational leakage limits and PIV leakage limits protect the Reactor Coolant Pressure Boundary (RCPB) described in 10 CFR 50.2, 10 CFR 50.55a(c), and GDC 55 of 10 CFR 50, Appendix A. The current RCS operational leakage LCOs, Applicability, Actions, and Surveillance Requirements for RCPB leakage, unidentified leakage and total leakage will remain unaltered in TS Section 3/4.4.3.2. The current LCO, Applicability, Actions, and Surveillance Requirements for RCS PIV Leakage will also remain unaltered in TS Section 3/4.4.3.2.

The administrative change to relocate Technical Specification Table 3.4.3.2-1 to the Technical Requirements Manual was generically approved by the NRC in NUREG-1433, "Standard Technical Specifications, General Electric Plants (BWR/4)," which is consistent with the NRC Final Policy Statement and the revised 10 CFR 50.36 rule. The proposed change is consistent with TS changes previously approved by the NRC for other stations including Seabrook and River Bend stations.

Generic Letter 91-08, "Removal of Component Lists from Technical Specifications", provides guidance to remove component lists from the Technical Specifications.

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.

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 10CFR20, 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 the 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. 10 CFR 50.36, "Technical Specifications"
2. NUREG-1433, "Standard Technical Specifications General Electric Plants, BWR/4" Rev. 3.
3. Generic Letter 91-08, "Removal of Component Lists from Technical Specifications"
4. NUREG-1463, "Regulatory Analysis for the Resolution of Generic Safety Issue 105: Interfacing System Loss-of-Coolant Accident (LOCA) in Light-Water Reactors"
5. General Design Criterion (GDC) 30, "Quality of Reactor Coolant Pressure Boundary,"
6. 10 CFR 50.2, Definitions
7. 10 CFR 50.55a, Codes and standards
8. General Design Criterion (GDC) of 10 CFR 50, Appendix A, General Design Criteria for Nuclear Power Plants
9. NRC Safety Evaluation Related to Amendment No. 44 (Reactor Coolant System Pressure Isolation Valves – Delete Table 3.4-1), Seabrook Station, dated November 28, 1995
10. NRC Safety Evaluation Related to Amendment No. 76, River Bend Station, dated March 8, 1995

Attachment 2

License Amendment Request

Limerick Generating Station, Units 1 and 2

Docket Nos. 50-352 and 50-353

Relocation of the Reactor Coolant System Pressure Isolation Valve Table from
Technical Specifications to the Technical Requirements Manual

“Marked-up” Technical Specification Pages

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REACTOR COOLANT SYSTEM

OPERATIONAL LEAKAGE

LIMITING CONDITION FOR OPERATION

3.4.3.2 Reactor coolant system leakage shall be limited to:

- a. No PRESSURE BOUNDARY LEAKAGE.
- b. 5 gpm UNIDENTIFIED LEAKAGE.
- c. 30 gpm total leakage.
- d. 25 gpm total leakage averaged over any 24-hour period.
- e. 1 gpm leakage at a reactor coolant system pressure of 950 ± 10 psig from any reactor coolant system pressure isolation valve specified in Table 3.4.3.2 ~~†~~.**
- f. 2 gpm increase in UNIDENTIFIED LEAKAGE over a 24-hour period.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. With any reactor coolant system leakage greater than the limits in b, c and/or d above, reduce the leakage rate to within the limits within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With any reactor coolant system pressure isolation valve leakage greater than the above limit, isolate the high pressure portion of the affected system from the low pressure portion within 4 hours by use of at least one other closed manual, deactivated automatic, or check* valves, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- d. With one or more of the high/low pressure interface valve leakage pressure monitors shown in Table 3.4.3.2 inoperable, restore the inoperable monitor(s) to OPERABLE status within 7 days or verify the pressure to be less than the alarm setpoint at least once per 12 hours; restore the inoperable monitor(s) to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- e. With any reactor coolant system leakage greater than the limit in f above, identify the source of leakage within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

* Which have been verified not to exceed the allowable leakage limit at the last refueling outage or after the last time the valve was disturbed, whichever is more recent.

** Pressure isolation valve leakage is not included in any other allowable operational leakage specified in Section 3.4.3.2.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS

4.4.3.2.1 The reactor coolant system leakage shall be demonstrated to be within each of the above limits by:

- a. Monitoring the primary containment atmospheric gaseous radioactivity at least once per 12 hours (not a means of quantifying leakage),
- b. Monitoring the drywell floor drain sump and drywell equipment drain tank flow rate at least once per eight (8) hours,
- c. Monitoring the drywell unit coolers condensate flow rate at least once per 12 hours,
- d. Monitoring the primary containment pressure at least once per 12 hours (not a means of quantifying leakage),
- e. Monitoring the reactor vessel head flange leak detection system at least once per 24 hours, and
- f. Monitoring the primary containment temperature at least once per 24 hours (not a means of quantifying leakage).

4.4.3.2.2 Each reactor coolant system pressure isolation valve ~~specified in Table 3.4.3.2.1~~ shall be demonstrated OPERABLE by leak testing pursuant to Specification 4.0.5 and verifying the leakage of each valve to be within the specified limit:

- a. At least once per 24 months, and
- b. Prior to returning the valve to service following maintenance, repair or replacement work on the valve which could affect its leakage rate.

The provisions of Specification 4.0.4 are not applicable for entry into OPERATIONAL CONDITION 3.

4.4.3.2.3 The high/low pressure interface valve leakage pressure monitors shall be demonstrated OPERABLE with alarm setpoints set less than the allowable values ~~in Table 3.4.3.2.1~~ by performance of a:

- a. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
- b. CHANNEL CALIBRATION at least once per 24 months.

Specified

TABLE 3.4.3.2-1

REACTOR COOLANT SYSTEM PRESSURE ISOLATION VALVES

| <u>1ST ISOLATION VALVE(S) NUMBER(S)</u> | <u>2ND ISOLATION VALVE(S) NUMBER(S)</u> | <u>ALARM SETPOINT (psig)</u> | <u>ALARM ALLOWABLE VALUE (psig)</u> | <u>SERVICE</u> |
|---|---|------------------------------|-------------------------------------|--|
| HV-52-1F006A HV-52-1F039A | HV-52-1F005 | ≤ 475 | ≤ 495 | 'A' Core Spray Injection |
| HV-52-1F006B HV-52-1F039B | HV-52-108 | ≤ 475 | ≤ 495 | 'B' Core Spray/HPCI Injection |
| HV-51-1F041A HV-51-142A | HV-51-1F017A | ≤ 400 | ≤ 420 | 'A' LPCI Injection |
| HV-51-1F041B HV-51-142B | HV-51-1F017B | ≤ 400 | ≤ 420 | 'B' LPCI Injection |
| HV-51-1F041C HV-51-142C | HV-51-1F017C | ≤ 400 | ≤ 420 | 'C' LPCI Injection |
| HV-51-1F041D HV-51-142D | HV-51-1F017D | ≤ 400 | ≤ 420 | 'D' LPCI Injection |
| HV-51-1F050A HV-51-151A | HV-51-1F015A | ≤ 400 | ≤ 420 | 'A' Shutdown Cooling Return to 'A' Recirc Loop |
| HV-51-1F050B HV-51-151B | HV-51-1F015B | ≤ 400 | ≤ 420 | 'B' Shutdown Cooling Return to 'B' Recirc Loop |
| HV-51-1F009 | HV-51-1F008 | ≤ 125 | ≤ 145 | Shutdown Cooling Supply From 'B' Recirc Loop |

Table 3.4.3.2-1 (Deleted)

The information from this Technical Specification section has been relocated to the Technical Requirements Manual (TRM).

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MAR 12 1989

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REACTOR COOLANT SYSTEM

OPERATIONAL LEAKAGE

LIMITING CONDITION FOR OPERATION

3.4.3.2 Reactor coolant system leakage shall be limited to:

- a. No PRESSURE BOUNDARY LEAKAGE.
- b. 5 gpm UNIDENTIFIED LEAKAGE.
- c. 30 gpm total leakage.
- d. 25 gpm total leakage averaged over any 24-hour period.
- e. 1 gpm leakage at a reactor coolant system pressure of 950 ± 10 psig from any reactor coolant system pressure isolation valve specified in table 3.4.3.2 ¹**
- f. 2 gpm increase in UNIDENTIFIED LEAKAGE over a 24-hour period.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. With any reactor coolant system leakage greater than the limits in b, c and/or d above, reduce the leakage rate to within the limits within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With any reactor coolant system pressure isolation valve leakage greater than the above limit, isolate the high pressure portion of the affected system from the low pressure portion within 4 hours by use of at least one other closed manual, deactivated automatic, or check* valves, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- d. With one or more of the high/low pressure interface valve leakage pressure monitors shown in table 3.4.3.2 inoperable, restore the inoperable monitor(s) to OPERABLE status within 7 days or verify the pressure to be less than the alarm setpoint at least once per 12 hours; restore the inoperable monitor(s) to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- e. With any reactor coolant system leakage greater than the limit in f above, identify the source of leakage within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

* Which have been verified not to exceed the allowable leakage limit at the last refueling outage or after the last time the valve was disturbed, whichever is more recent.

** Pressure isolation valve leakage is not included in any other allowable operational leakage specified in Section 3.4.3.2.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS

4.4.3.2.1 The reactor coolant system leakage shall be demonstrated to be within each of the above limits by:

- a. Monitoring the primary containment atmospheric gaseous radioactivity at least once per 12 hours (not a means of quantifying leakage),
- b. Monitoring the drywell floor drain sump and drywell equipment drain tank flow rate at least once per eight (8) hours,
- c. ~~Monitoring the drywell unit coolers condensate flow rate at least once per 12 hours,~~
- d. Monitoring the primary containment pressure at least once per 12 hours (not a means of quantifying leakage),
- e. Monitoring the reactor vessel head flange leak detection system at least once per 24 hours, and
- f. Monitoring the primary containment temperature at least once per 24 hours (not a means of quantifying leakage).

4.4.3.2.2 Each reactor coolant system pressure isolation valve specified in table 3.4.3.2.1 shall be demonstrated OPERABLE by leak testing pursuant to Specification 4.0.5 and verifying the leakage of each valve to be within the specified limit:

- a. At least once per 24 months, and
- b. Prior to returning the valve to service following maintenance, repair or replacement work on the valve which could affect its leakage rate.

The provisions of Specification 4.0.4 are not applicable for entry into OPERATIONAL CONDITION 3.

4.4.3.2.3 The high/low pressure interface valve leakage pressure monitors shall be demonstrated OPERABLE with alarm setpoints set less than the allowable values in table 3.4.3.2.1 by performance of a:

- a. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
- b. CHANNEL CALIBRATION at least once per 24 months.

Specified

TABLE 3.4.3.2-1REACTOR COOLANT SYSTEM PRESSURE ISOLATION VALVES

| <u>1ST ISOLATION VALVE(S) NUMBER(S)</u> | <u>2ND ISOLATION VALVE(S) NUMBER(S)</u> | <u>ALARM SETPOINT (psig)</u> | <u>ALARM ALLOWABLE VALUE (psig)</u> | <u>SERVICE</u> |
|---|---|------------------------------|-------------------------------------|--|
| HV-52-2F006A HV-52-2F039A | HV-52-2F005 | ≤ 475 | ≤ 495 | 'A' Core Spray Injection |
| HV-52-2F006B HV-52-2F039B | HV-52-208 | ≤ 475 | ≤ 495 | 'B' Core Spray/HPCI Injection |
| HV-51-2F041A HV-51-242A | HV-51-2F017A | ≤ 400 | ≤ 420 | 'A' LPCI Injection |
| HV-51-2F041B HV-51-242B | HV-51-2F017B | ≤ 400 | ≤ 420 | 'B' LPCI Injection |
| HV-51-2F041C HV-51-242C | HV-51-2F017C | ≤ 400 | ≤ 420 | 'C' LPCI Injection |
| HV-51-2F041D HV-51-242D | HV-51-2F017D | ≤ 400 | ≤ 420 | 'D' LPCI Injection |
| HV-51-2F050A HV-51-251A | HV-51-2F015A | ≤ 400 | ≤ 420 | 'A' Shutdown Cooling Return to 'A' Recirc Loop |
| HV-51-2F050B HV-51-251B | HV-51-2F015B | ≤ 400 | ≤ 420 | 'B' Shutdown Cooling Return to 'B' Recirc Loop |
| HV-51-2F009 | HV-51-2F008 | ≤ 125 | ≤ 145 | Shutdown Cooling Supply From 'B' Recirc Loop |

The information from this Technical Specification section has been relocated to the Technical Requirements Manual (TRM).

Table 3.4.3.2-1 (Deleted)

Attachment 3

License Amendment Request

Limerick Generating Station, Units 1 and 2

Docket Nos. 50-352 and 50-353

Relocation of the Reactor Coolant System Pressure Isolation Valve Table from
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BASES

3/4.4.3.2 OPERATIONAL LEAKAGE (Continued)

the Technical Requirements Manual

→ The ACTION requirements for pressure isolation valves (PIVs) are used in conjunction with the system specifications for which PIVs are listed in ~~Table 3.4.3.2.1~~ and with primary containment isolation valve requirements to ensure that plant operation is appropriately limited.

The Surveillance Requirements for the RCS pressure isolation valves provide added assurance of valve integrity thereby reducing the probability of gross valve failure and consequent intersystem LOCA. Leakage from the RCS pressure isolation valves is not included in any other allowable operational leakage specified in Section 3.4.3.2.

3/4.4.4 (Deleted) INFORMATION FROM THIS SECTION RELOCATED TO THE TRM

The function of Reactor Coolant System Pressure Isolation Valves (PIVs) is to separate the high pressure Reactor Coolant System from an attached low pressure system.

REACTOR COOLANT SYSTEM

BASES

3/4.4.3.2 OPERATIONAL LEAKAGE (Continued)

the Technical Requirements Manual

→ The ACTION requirements for pressure isolation valves (PIVs) are used in conjunction with the system specifications for which PIVs are listed in ~~Table 3.4.3.2-1~~ and with primary containment isolation valve requirements to ensure that plant operation is appropriately limited.

The Surveillance Requirements for the RCS pressure isolation valves provide added assurance of valve integrity thereby reducing the probability of gross valve failure and consequent intersystem LOCA. Leakage from the RCS pressure isolation valves is not included in any other allowable operational leakage specified in Section 3.4.3.2.

3/4.4.4 (Deleted) INFORMATION FROM THIS SECTION RELOCATED TO THE TRM

The function of Reactor Coolant System Pressure Isolation Values (PIVs) is to separate the high pressure Reactor Coolant System from an attached low pressure system.

Attachment 4

License Amendment Request

Limerick Generating Station, Units 1 and 2

Docket Nos. 50-352 and 50-353

Relocation of the Reactor Coolant System Pressure Isolation Valve Table from
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REACTOR COOLANT SYSTEM

OPERATIONAL LEAKAGE

LIMITING CONDITION FOR OPERATION

3.4.3.2 Reactor coolant system leakage shall be limited to:

- a. No PRESSURE BOUNDARY LEAKAGE.
- b. 5 gpm UNIDENTIFIED LEAKAGE.
- c. 30 gpm total leakage.
- d. 25 gpm total leakage averaged over any 24-hour period.
- e. 1 gpm leakage at a reactor coolant system pressure of 950 ± 10 psig from any reactor coolant system pressure isolation valve.**
- f. 2 gpm increase in UNIDENTIFIED LEAKAGE over a 24-hour period.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. With any reactor coolant system leakage greater than the limits in b, c and/or d above, reduce the leakage rate to within the limits within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With any reactor coolant system pressure isolation valve leakage greater than the above limit, isolate the high pressure portion of the affected system from the low pressure portion within 4 hours by use of at least one other closed manual, deactivated automatic, or check* valves, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- d. With one or more of the high/low pressure interface valve leakage pressure monitors inoperable, restore the inoperable monitor(s) to OPERABLE status within 7 days or verify the pressure to be less than the alarm setpoint at least once per 12 hours; restore the inoperable monitor(s) to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- e. With any reactor coolant system leakage greater than the limit in f above, identify the source of leakage within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

* Which have been verified not to exceed the allowable leakage limit at the last refueling outage or after the last time the valve was disturbed, whichever is more recent.

** Pressure isolation valve leakage is not included in any other allowable operational leakage specified in Section 3.4.3.2.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS

4.4.3.2.1 The reactor coolant system leakage shall be demonstrated to be within each of the above limits by:

- a. Monitoring the primary containment atmospheric gaseous radioactivity at least once per 12 hours (not a means of quantifying leakage),
- b. Monitoring the drywell floor drain sump and drywell equipment drain tank flow rate at least once per eight (8) hours,
- c. Monitoring the drywell unit coolers condensate flow rate at least once per 12 hours,
- d. Monitoring the primary containment pressure at least once per 12 hours (not a means of quantifying leakage),
- e. Monitoring the reactor vessel head flange leak detection system at least once per 24 hours, and
- f. Monitoring the primary containment temperature at least once per 24 hours (not a means of quantifying leakage).

4.4.3.2.2 Each reactor coolant system pressure isolation valve shall be demonstrated OPERABLE by leak testing pursuant to Specification 4.0.5 and verifying the leakage of each valve to be within the specified limit:

- a. At least once per 24 months, and
- b. Prior to returning the valve to service following maintenance, repair or replacement work on the valve which could affect its leakage rate.

The provisions of Specification 4.0.4 are not applicable for entry into OPERATIONAL CONDITION 3.

4.4.3.2.3 The high/low pressure interface valve leakage pressure monitors shall be demonstrated OPERABLE with alarm setpoints set less than the specified allowable values by performance of a:

- a. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
- b. CHANNEL CALIBRATION at least once per 24 months.

TABLE 3.4.3.2-1 (Deleted)

THE INFORMATION FROM THIS TECHNICAL SPECIFICATION SECTION HAS
BEEN RELOCATED TO THE TECHNICAL REQUIREMENTS MANUAL (TRM)

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REACTOR COOLANT SYSTEM

OPERATIONAL LEAKAGE

LIMITING CONDITION FOR OPERATION

3.4.3.2 Reactor coolant system leakage shall be limited to:

- a. No PRESSURE BOUNDARY LEAKAGE.
- b. 5 gpm UNIDENTIFIED LEAKAGE.
- c. 30 gpm total leakage.
- d. 25 gpm total leakage averaged over any 24-hour period.
- e. 1 gpm leakage at a reactor coolant system pressure of 950 ± 10 psig from any reactor coolant system pressure isolation valve.**
- f. 2 gpm increase in UNIDENTIFIED LEAKAGE over a 24-hour period.

APPLICABILITY: OPERATIONAL CONDITIONS 1, 2, and 3.

ACTION:

- a. With any PRESSURE BOUNDARY LEAKAGE, be in at least HOT SHUTDOWN within 12 hours and in COLD SHUTDOWN within the next 24 hours.
- b. With any reactor coolant system leakage greater than the limits in b, c and/or d above, reduce the leakage rate to within the limits within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- c. With any reactor coolant system pressure isolation valve leakage greater than the above limit, isolate the high pressure portion of the affected system from the low pressure portion within 4 hours by use of at least one other closed manual, deactivated automatic, or check* valves, or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- d. With one or more of the high/low pressure interface valve leakage pressure monitors inoperable, restore the inoperable monitor(s) to OPERABLE status within 7 days or verify the pressure to be less than the alarm setpoint at least once per 12 hours; restore the inoperable monitor(s) to OPERABLE status within 30 days or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.
- e. With any reactor coolant system leakage greater than the limit in f above, identify the source of leakage within 4 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours.

* Which have been verified not to exceed the allowable leakage limit at the last refueling outage or after the last time the valve was disturbed, whichever is more recent.

** Pressure isolation valve leakage is not included in any other allowable operational leakage specified in Section 3.4.3.2.

REACTOR COOLANT SYSTEM

SURVEILLANCE REQUIREMENTS

4.4.3.2.1 The reactor coolant system leakage shall be demonstrated to be within each of the above limits by:

- a. Monitoring the primary containment atmospheric gaseous radioactivity at least once per 12 hours (not a means of quantifying leakage),
- b. Monitoring the drywell floor drain sump and drywell equipment drain tank flow rate at least once per eight (8) hours,
- c. Monitoring the drywell unit coolers condensate flow rate at least once per 12 hours,
- d. Monitoring the primary containment pressure at least once per 12 hours (not a means of quantifying leakage),
- e. Monitoring the reactor vessel head flange leak detection system at least once per 24 hours, and
- f. Monitoring the primary containment temperature at least once per 24 hours (not a means of quantifying leakage).

4.4.3.2.2 Each reactor coolant system pressure isolation valve shall be demonstrated OPERABLE by leak testing pursuant to Specification 4.0.5 and verifying the leakage of each valve to be within the specified limit:

- a. At least once per 24 months, and
- b. Prior to returning the valve to service following maintenance, repair or replacement work on the valve which could affect its leakage rate.

The provisions of Specification 4.0.4 are not applicable for entry into OPERATIONAL CONDITION 3.

4.4.3.2.3 The high/low pressure interface valve leakage pressure monitors shall be demonstrated OPERABLE with alarm setpoints set less than the specified allowable values by performance of a:

- a. CHANNEL FUNCTIONAL TEST at least once per 31 days, and
- b. CHANNEL CALIBRATION at least once per 24 months.

TABLE 3.4.3.2-1 (Deleted)

THE INFORMATION FROM THIS TECHNICAL SPECIFICATION SECTION HAS
BEEN RELOCATED TO THE TECHNICAL REQUIREMENTS MANUAL (TRM).

Attachment 5

License Amendment Request

Limerick Generating Station, Units 1 and 2

Docket Nos. 50-352 and 50-353

Relocation of the Reactor Coolant System Pressure Isolation Valve Table from
Technical Specifications to the Technical Requirements Manual

Typed Technical Specification Bases Pages

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REACTOR COOLANT SYSTEM

BASES

3/4.4.3.2 OPERATIONAL LEAKAGE (Continued)

The function of Reactor Coolant System Pressure Isolation Valves (PIVs) is to separate the high pressure Reactor Coolant System from an attached low pressure system. The ACTION requirements for pressure isolation valves are used in conjunction with the system specifications for which PIVs are listed in the Technical Requirements Manual and with primary containment isolation valve requirements to ensure that plant operation is appropriately limited.

The Surveillance Requirements for the RCS pressure isolation valves provide added assurance of valve integrity thereby reducing the probability of gross valve failure and consequent intersystem LOCA. Leakage from the RCS pressure isolation valves is not included in any other allowable operational leakage specified in Section 3.4.3.2.

3/4.4.4 (Deleted) INFORMATION FROM THIS SECTION RELOCATED TO THE TRM

REACTOR COOLANT SYSTEM

BASES

3/4.4.3.2 OPERATIONAL LEAKAGE (Continued)

The function of Reactor Coolant System Pressure Isolation Valves (PIVs) is to separate the high pressure Reactor Coolant System from an attached low pressure system. The ACTION requirements for pressure isolation valves are used in conjunction with the system specifications for which PIVs are listed in The Technical Requirements Manual and with primary containment isolation valve requirements to ensure that plant operation is appropriately limited.

The Surveillance Requirements for the RCS pressure isolation valves provide added assurance of valve integrity thereby reducing the probability of gross valve failure and consequent intersystem LOCA. Leakage from the RCS pressure isolation valves is not included in any other allowable operational leakage specified in Section 3.4.3.2.

3/4.4.4 (Deleted) INFORMATION FROM THIS SECTION RELOCATED TO THE TRM