



**CENTER FOR
ENERGY**

PERRY NUCLEAR POWER PLANT

10 CENTER ROAD
PERRY, OHIO 44081
(216) 259-3737

Mail Address:
PO. BOX 97
PERRY, OHIO 44081

Robert A. Stratman
VICE PRESIDENT - NUCLEAR

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U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Perry Nuclear Power Plant
Docket No. 50-440
License Amendment Request: Revisions
to Clarify and Enhance the Primary
Containment Leakage Specification

Gentlemen:

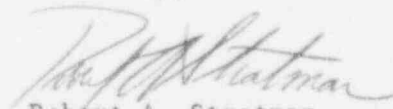
Enclosed is a request for amendment to the Perry Nuclear Power Plant (PNPP) Unit 1 Facility Operating License NPF-58. This License Amendment request proposes changes to the PNPP Technical Specifications to clarify the Applicability and the Action statement for Specification 3.6.1.2, "Primary Containment Leakage", and to revise the "as-found" value of the overall integrated primary containment leakage rate which is utilized when determining the test schedule for future Type A tests within Surveillance Requirement 4.6.1.2.b.

In conjunction with this proposed Technical Specification change, a parallel request for exemption from the requirements of 10 CFR 50 Appendix J, "Primary Reactor Containment Leakage Testing for Water-Cooled Power Reactors" is also being submitted (see letter PY-CEI/NRR-1577L, dated March 1, 1993).

Attachment 1 provides the Summary, Safety Assessment, Description of the Proposed Changes, and the Significant Hazards and Environmental Considerations. Attachment 2 provides a copy of the marked-up Technical Specification and Bases pages.

If you have any questions, please feel free to call.

Sincerely,



Robert A. Stratman

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RAS:RAL:ss

Attachments

cc: NRC Project Manager
NRC Resident Inspector Office
NRC Region III
State of Ohio

Operating Companies
Cleveland Electric Illuminating
Toledo Edison

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Summary

This License Amendment request consists primarily of two changes to Technical Specification 3.6.1.2, "Primary Containment Leakage," in addition to several editorial changes. The first change involves revisions within Limiting Condition for Operation (LCO) 3.6.1.2.a, Action 3.6.1.2.a, and Surveillance Requirements 4.6.1.2, 4.6.1.2.a, and 4.6.1.2.b, to specify that 0.75 L will be used as the acceptance criterion for the "as-left" Type A (containment Integrated Leak Rate Test (ILRT)) test results, and that L (the "allowable leakage rate" as defined in the Updated Safety Analysis Report) will be used as the value against which the "as-found" Type A results will be compared when determining the test schedule for future Type A tests.

The second change involves revising the existing Action Statement to eliminate confusion by adding a shutdown requirement which will be imposed for Operational Conditions 1, 2 and 3, with the reactor coolant system (RCS) temperature greater than 200°F (a change to the Applicability portion of the Specification has also been proposed to conform to the above specified conditions). Also, several changes are being made to clarify the application of Appendix J requirements.

In conjunction with this Technical Specification change request, an exemption to 10 CFR 50 Appendix J is being requested (see letter PY-CEI/NRR-1577L, dated March 1, 1993). The exemption involves 10 CFR 50 Appendix J, Section III.A.5(b), which states that for a peak pressure Type A test, that the measured leakage rate, L, be less than 75 percent of the maximum allowable leakage rate L_m measured at the peak calculated containment internal pressure, P. This exemption would clarify that the 75 percent of L limit is applied only as the "as-left" Type A leakage test acceptance criterion.

Safety Assessment

Part A - Revision and Clarification to the Type A Testing Criteria

The objective of 10 CFR 50 Appendix J Type A testing is to verify the primary containment is capable of maintaining its leak-tight integrity during normal and post-accident conditions. Leakage rate acceptance criteria are based on 10 CFR 100 calculations. Consistent with 10 CFR 50 Appendix J, the containment ILRT is either conducted in the containments' "as-found" condition or the containment ILRT leak rate testing results are adjusted following any necessary repairs in order to provide an "as-found" leakage rate. The "as-found" condition of the containment is determined in order to obtain an indication of the ability of the containment to remain within the leakage rate assumed in the accident analyses throughout the period between tests, and for the purpose of determining subsequent testing frequency.

L is the actual leakage rate used in the plant safety analyses to determine the offsite radiological consequences of an accident. As discussed in the Bases for Specification 3.6.1.2, the "as-left" Type A test limit of 0.75 L was specified in order to provide a margin of 0.25 L for possible degradation of the containment leak-tightness between Type A tests. Since L is the actual leakage (design value) assumed in the offsite dose analyses, and the "as-found" test measures the leakage rate at the end of the period between Type A tests, so that margin for degradation is no longer needed, it is

technically acceptable to use L as the value against which the "as-found" Type A test results will be compared when determining the test schedule for future Type A tests. Within LCO 3.6.1.2.a and Action 3.6.1.2.a the "as-left" acceptance criterion would remain at the present value of less than or equal to 0.75 L. This is the value which must be met prior to exceeding 200°F in Operational Conditions 1, 2 and 3 during a plant startup in which a Type A test was performed. This continues to provide the 25 percent margin for degradation over the operating cycle(s) between Type A tests.

This Technical Specification change request proposes that the specified "as-found" criterion for the overall integrated primary containment leakage rate be less than or equal to 1.0 L. This would involve specifying L as the value within Surveillance Requirement 4.6.1.2.b (the "as-left" acceptance criterion would remain as 0.75 L within the LCO and the Action). Comparing the "as-found" leakage against this proposed value verifies that the containment leakage was acceptable throughout the previous operating cycle(s) back to the performance of the last Type A test.

This change is consistent with the proposed 10 CFR 50 Appendix J rule changes that have been published in the Federal Register. Also, several plants have received Appendix J exemptions or amendments to their Technical Specifications to utilize 1.0 L as their "as-found" limit.

The Technical Specification and Bases changes necessary to implement this clarification of the "as-found" and "as-left" values are marked-up in Attachment 2 and are described in the "Description of the Proposed Changes" section of this letter.

Part B - Expanded Action Statement Direction

It is proposed to replace the current Action Statement within Specification 3.6.1.2 to provide more specific direction to the Operator on what action to take when an LCO(s) for any particular leakage rate requirement is not being met. The existing Action Statement does not provide direction if a leakage rate limit is not being met during the vast majority of the time the plant is operating (the existing Action states that the various leakage rates must be restored to within the limit(s) prior to increasing the RCS temperature above 200°F, but the current Applicability of Specification 3.6.1.2 is Operational Conditions 1, 2 and 3). No action is provided for cases when the plant is operating at greater than 200°F and a leakage rate limit (e.g. Type B and C limit) is known to have been exceeded. Normally an Action with specified timeframes for restoration of Operability would be entered, and if the equipment could not be restored within the specified timeframes a plant shutdown would occur. The inappropriateness of the existing Specification 3.6.1.2 Action, in part, contributed to a recent Licensee Event Report - LER 92-022.

Confusion as to the applicability of Specification 3.6.1.2 to that particular situation arose since current Action 3.6.1.2 cannot be performed during the vast majority of the time the plant is in the applicable Operational Conditions. For this particular situation a Local Leak Rate Test (LLRT) for the Containment Vessel and Drywell Purge (M14) System had indicated substantial leakage through the penetration, resulting in the Operators entering the Actions of Specification 3.6.1.8, "Drywell and Containment Purge

System". The Action of Specification 3.6.1.2 did not seem to apply, therefore only the conditions of Specification 3.6.1.8 Action d were applied - which allowed 24 hours for restoration to Operable status prior to beginning a plant shutdown. However, since there was no other Action specified within Specification 3.6.1.2, the wording of Specification 3.0.3 would also require entry into 3.0.3 in such a situation.

In order to prevent confusion in the future, a shutdown requirement is proposed to be added to the existing Action within the Primary Containment Leakage Specification [modeled after the Action in the Primary Containment Integrity Specification (LCO 3.6.1.1)]. This revision to the existing Action within Specification 3.6.1.2 was modeled after the Primary Containment Integrity Specification Action since the definition of Primary Containment Integrity includes a provision that the containment leakage rates be in compliance with the requirements of Specification 3.6.1.2.

The current Action requirement is for the leakage rate(s) not to exceed their respective limits prior to increasing RCS temperature above 200°F. This requirement is implicitly retained within Specification 3.6.1.2 through the proposed revision to the Applicability of the Specification. The discrepancy between the current Applicability and the Action statement has made compliance with Specification 3.0.4 confusing in the past. Technical Specification 3.0.4 states, "Entry into an OPERATIONAL CONDITION or other specified condition shall not be made when the conditions for the LCO are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval." The revision of the Applicability of the LCO to be "Operational Conditions 1, 2 or 3, with the reactor coolant system temperature greater than 200°F," along with the proposed Action that includes a shutdown requirement, will resolve this discrepancy and the associated confusion. The provisions of Specification 3.0.4 will also ensure that the new Applicability of the Specification cannot be entered after an outage in which a Type A test has been performed until the "as-left" leakage is below 0.75 L, since the currently specified value of 0.75 La is retained in the LCO. This ensures that the same margin as currently exists today is maintained for possible degradation between performance of the periodic Type A tests.

The mark-up of this proposed Action is provided in Attachment 2 and is described below in the "Description of the Proposed Changes" section of this letter.

Several other changes to the proposed Action Statements were considered, similar to those proposed by the BWR Owner's Group Containment Leakage Testing Committee and in the Technical Specification Improvement Program. These changes would provide an Action to permit isolation of leakage paths in order to reduce the leakage rates back to within the values specified, and would provide an allowable out-of-service time similar to the provision within the containment isolation valve specification (Specification 3.6.4 for PNPP). However, since the proposals of that committee are under review by the NRC and resolution of comments is still ongoing, and the proposed rulemaking changes to Appendix J have not been re-issued as of yet, it was decided not to pursue more extensive changes to this Specification at this time. However, a firm technical basis clearly exists for utilizing penetration flow path isolation to reduce the combined leakage rates to within limits. If faced with an unnecessary plant shutdown due to leakage that could be isolated, the

Cleveland Electric Illuminating Company would likely pursue Technical Specification relief, if flow paths could be isolated by closing valves that have current leak rate test results (until repairs to the leaking valves could be completed).

Description of the Proposed Changes

Refer to Attachment 2 for a marked-up copy of the subject Technical Specification and Bases pages.

LCO 3.6.1.2.a (page 3/4 6-3)

Clarify that the overall integrated primary containment leakage rate value of 0.75 L is the "as-left" value. Also, clarify that it is L, not 0.75 L, that is equal to 0.20 percent by weight of the primary containment air per 24 hours at P_a .

LCO 3.6.1.2.e (page 3/4 6-3)

Clarify that the hydrostatically tested lines are tested at a test pressure "greater than or equal to" $1.10 P_a$.

Applicability 3.6.1.2 (page 3/4 6-3)

Revise the Operational Conditions specified to indicate that this Specification is only applicable when the RCS temperature is greater than 200°F. Also, remove the "*" on Operational Condition 2 (and the corresponding footnote) since the reference to Special Test Exception 3.10.1 is no longer applicable now that the Applicability for Specification 3.6.1.2 has been clarified to be only when the reactor coolant system temperature is greater than 200°F, and the two LCOs therefore no longer overlap.

Action 3.6.1.2.a (page 3/4 6-3)

Clarify that the overall integrated primary containment leakage rate value of 0.75 L is the "as-left" value.

Action 3.6.1.2 "restore" (page 3/4 6-4)

Replace the existing "restore" portion of the Action with a new Action requirement which incorporates a shutdown provision if the leakage can not be restored to the required limit(s) within 1 hour.

Surveillance Requirement 4.6.1.2 (page 3/4 6-4)

Revise Surveillance Requirement 4.6.1.2 to clarify that both the "overall as-left and as-found integrated" primary containment leakage rates shall be determined in accordance with Appendix J, as modified by approved Appendix J exemptions.

Surveillance Requirement 4.6.1.2.a (page 3/4 6-4)

Add a sentence to Surveillance Requirement 4.6.1.2.a to specify that, "The overall as-left integrated primary containment leakage rate shall be less than or equal to 0.75 L." This is the value which must be met prior to placing the containment into service following an outage in which a Type A test is performed.

Surveillance Requirement 4.6.1.2.b (page 3/4 6-4)

Revise Surveillance Requirement 4.6.1.2.b to specify that 1.0 L will be the value against which the "as-found" Type A test results will be compared when determining the test schedule for future Type A tests.

LCO 3.10.1 (page 3/4 10-1)

Delete the reference to Specification 3.6.1.2 within LCO 3.10.1. This reference is no longer applicable now that the Applicability of Specification 3.6.1.2 has been revised.

Bases: Section 3/4.6.1.2 Containment Leakage (Page B 3/4 6-1 and 6-2)

Associated changes to the Bases are proposed to clarify the appropriate "as-left" and "as-found" Type A leakage rate values and to identify the associated Appendix J exemption requests.

Significant Hazards Consideration

The standards used to arrive at a determination that a request for amendment involves no significant hazards considerations are included in the Commission's Regulations, 10 CFR 50.92, which state that the operation of the facility in accordance with the proposed amendment would not (1) involve a significant increase in the probability or consequences of an accident previously evaluated, (2) create the possibility of a new or different kind of accident from any previously evaluated, or (3) involve a significant reduction in a margin of safety.

The proposed amendment has been reviewed with respect to these three factors and it has been determined that the proposed changes do not involve a significant hazard because:

1. The proposed changes do not involve a significant increase in the probability or consequences of an accident previously evaluated.

These proposed changes clarify Technical Specification 3.6.1.2 by providing a more definitive action to take if the leakage rate limit(s) specified in the LCO are not being met. The current Action is not clear on what actions are necessary if the leakage rate limits (e.g. Type B and C limits) are known to be exceeded while the reactor coolant system (RCS) temperature is above 200°F, which has caused compliance difficulties. The revised Action is modeled after the one in the Primary Containment

Integrity Specification, which (through the definition of Primary Containment Integrity) includes a provision that the containment leakage rates be in compliance with the requirements of Specification 3.6.1.2.

Surveillance Requirement 4.6.1.2.b has been revised to reflect the actual plant design basis leakage rate of L as the value against which the "as-found" Type A test results are compared when determining the test schedule for future Type A tests. The probability of exceeding the maximum allowable leakage rate, L , is not significantly increased since the "as-left" leakage rate requirement of $0.75 L$ (which must be met during startup from any outage in which a Type A test has been performed) is still imposed through LCO 3.6.1.2.a, Action 3.6.1.2.a and Surveillance Requirement 4.6.1.2.a. The Applicability of Specification 3.6.1.2 has been modified to resolve an existing conflict with the current Action, which requires that a reactor coolant system temperature of 200°F not be exceeded with a leakage rate greater than $0.75 L$ (during startups from outages in which a Type A ILRT has been performed). With the modified Applicability and the retained LCO requirement for the "as-left" leakage rate to be less than or equal to $0.75 L$, the requirement of the current Action (not to exceed to 200°F) is implicitly maintained, due to the provisions contained within Specification 3.0.4. This maintains the same margin for degradation between performances of the periodic Type A tests as is provided in the current specification. Since the analysis leakage limit of L has not changed, the offsite radiological consequences of an accident assumed in the safety analyses have not been affected.

The deletion of the current link between Specifications 3.6.1.2 and 3.10.1 is an administrative change only, made because the two Specifications no longer overlap and the link is therefore unnecessary.

In summary, there is no change in the probability or consequences of any accident since the clarifications of the existing LCO, Applicability, Actions, Surveillance Requirements and the revised "as-found" acceptance criterion do not change the design of the plant, nor the operational characteristics of any plant system, nor the procedures by which the Operators run the plant.

2. The proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

The proposed Action to address situations when the leakage rate limit(s) cannot be met in Operational Conditions 1, 2 and 3, with the reactor coolant system temperature greater than 200°F , does not create the possibility of a new or different kind of event - it only provides the measures to be taken following determination of increased containment leakage. The clarification to the existing Applicability simply resolves an existing conflict between the Applicability and the Action, and ensures that the same requirements that were contained within the former Action are maintained following implementation of the change, by preventing plant startup above a RCS temperature of 200°F (following an outage in which a Type A test has been performed), unless the leakage rate is below the $0.75 L$ test acceptance criterion. Additional changes are being made to clarify the application of Appendix J requirements.

Revising the "as-found" value of L does not create the possibility of a new or different kind of event - since the analysis limit value, L, has not been increased and no new mode of operation has been introduced.

In summary, the proposed changes do not create the possibility of a new or different kind of accident, since no design changes are being made that would create a new type of accident or malfunction, and the method and manner of plant operation remains unchanged.

3. The proposed changes do not involve a significant reduction in a margin of safety.

The proposed Action simply imposes a more definitive action to take when a leakage rate limit(s) is exceeded, consistent with the Primary Containment Integrity Specification. The changes to the Surveillance Requirements to reflect the "as-found" value of L are consistent with the intent of the requirements specified in Appendix J, and similar requirements have been provided for other plants. The current requirement for "as-left" leakage rates to be less than or equal to 0.75 L before increasing the reactor coolant system temperature above 200°F from outages in which a Type A ILRT has been performed has been retained since the proposed Action now includes a shutdown requirement, and in accordance with Technical Specification 3.0.4, "Entry into an OPERATIONAL CONDITION or other specified condition shall not be made when the conditions for the LCO are not met and the associated ACTION requires a shutdown if they are not met within a specified time interval." Since the new Action includes a shutdown provision and the LCO retains the current limit of 0.75 L, the change into the new Applicability of Specification 3.6.1.2 can occur if 0.75 L is exceeded. This ensures that the same margin as currently exists today is maintained for possible degradation between performance of the periodic Type A tests. The other changes are clarifications and are administrative in nature. Therefore, the proposed changes do not involve a significant reduction in the margin of safety.

Environmental Consideration

The proposed Technical Specification change request was evaluated against the criteria of 10 CFR 51.22 for environmental considerations. As shown above, the proposed change does not involve a significant hazards consideration, nor does it increase the types and amounts of effluents that may be released offsite, nor does it significantly increase individual or cumulative occupational radiation exposures. Based on the foregoing, it has been concluded that the proposed Technical Specification change meets the criteria given in 10 CFR 51.22(c)(9) for a categorical exclusion from the requirement for an Environmental Impact Statement.