



July 12, 2007

NRC 2007-0034
10 CFR 50.90

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

Point Beach Nuclear Plant, Units 1 and 2
Docket 50-266
Renewed License Nos. DPR-24 and DPR-27

License Amendment Request 249
Technical Specification 3.6.3, Containment Isolation Valves

Pursuant to 10 CFR 50.90, Nuclear Management Company, LLC (NMC), hereby submits a proposed amendment to the Technical Specifications (TS) for Point Beach Nuclear Plant (PBNP), Units 1 and 2.

The proposed amendment would revise TS 3.6.3, "Containment Isolation Valves." The revision would delete Surveillance Requirement (SR) 3.6.3.1, which is no longer required because the containment purge supply and exhaust valve isolation function is replaced with blind flanges equipped with double O-ring seal configurations. The proposed amendment would also support a change to the PBNP Final Safety Analysis Report (FSAR) to revise the requirement to leak check the purge supply and exhaust valves.

Enclosure 1 provides a description and analysis of the proposed change. Enclosure 2 provides the TS pages marked up to show the proposed change.

NMC requests approval of the proposed license amendment by March 14, 2008, with a 30-day implementation period following approval.

This letter contains no new commitments or revisions to existing commitments.

In accordance with 10 CFR 50.91, a copy of this application, with enclosures, is being provided to the designated Wisconsin Official.

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

Executed on July 12, 2007.

A handwritten signature in black ink, appearing to read "Dennis L. Koehl". The signature is fluid and cursive, with the first name "Dennis" and last name "Koehl" clearly distinguishable.

Dennis L. Koehl
Site Vice-President, Point Beach Nuclear Plant
Nuclear Management Company, LLC

Enclosures (2)

cc: Regional Administrator, Region III, USNRC
Project Manager, Point Beach Nuclear Plant, USNRC
Resident Inspector, Point Beach Nuclear Plant, USNRC

ENCLOSURE 1

LICENSE AMENDMENT REQUEST 249 DELETION OF SURVEILLANCE REQUIREMENT 3.6.3.1 PURGE SUPPLY AND EXHAUST CONTAINMENT ISOLATION VALVES

1. SUMMARY DESCRIPTION
2. DETAILED DESCRIPTION
 - 2.1 Containment Purge System
3. TECHNICAL EVALUATION
4. REGULATORY EVALUATION
 - 4.1 Applicable Regulatory Requirements/Criteria
 - 4.2 Precedents
 - 4.3 Significant Hazards Consideration
 - 4.4 Conclusions
5. ENVIRONMENTAL CONSIDERATION
6. COMMITMENTS

1. SUMMARY DESCRIPTION

This License Amendment Request (LAR) is made pursuant to 10 CFR 50.90 to revise Technical Specification (TS) 3.6.3, "Containment Isolation Valves." The revision would delete Surveillance Requirement (SR) 3.6.3.1, which is no longer required because the containment purge supply and exhaust valve isolation function is replaced with blind flanges. The blind flanges replacing the purge supply and exhaust valves become subject to SR 3.6.1.1. The proposed amendment would also support a change to the Point Beach Nuclear Plant (PBNP) Final Safety Analysis Report (FSAR) changing the present penetration classification of "Class 5" to "Special," with the subsequent requirement to leak check the outside-containment purge supply and exhaust valves.

The proposed amendment would revise leakage testing requirements for the containment purge supply and exhaust isolation function. Leakage of the double O-ring seals of the blind flanges is addressed by SR 3.6.1.1. The purge supply and exhaust valve system no longer contains the inside-containment isolation valves.

The proposed amendment would also delete SR 3.6.3.1.

TS SR 3.6.3 is proposed for modification as follows:

SURVEILLANCE		FREQUENCY
SR 3.6.3.1	Verify each purge supply and exhaust valve is closed with the control switch locked, except for one purge valve in a penetration flow path to perform leakage rate corrective maintenance.	31 days

Technical Specification 3.9.3, Containment Penetrations, (Refueling Operations) addresses containment purge and exhaust valve penetrations for containment closure purposes. Technical Specification 5.5.15 specifies the Containment Leakage Rate Testing program. Technical Specification Bases changes are also being made to reflect the proposed Technical Specifications and licensing basis changes.

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2. DETAILED DESCRIPTION

The containment isolation valves form part of the containment pressure boundary and provide a means for penetrations to be provided with two isolation barriers. These isolation barriers are either passive or active. Manual valves, de-activated automatic valves secured in their closed position (including check valves with flow through the valve secured), blind flanges, and closed systems are considered passive barriers. Valves designed to close either automatically or manually (including check valves with flow through the valve not secured), are considered active barriers. Two barriers in series are provided for each penetration so that no single credible failure or malfunction of an active barrier can result in a loss of isolation or leakage that exceeds limits assumed in the safety analyses. These barriers make up the containment isolation system.

An automatic containment isolation signal is produced upon receipt of a safety injection signal. The containment isolation signal isolates process lines in order to minimize leakage of fission product radioactivity. The containment isolation valves and passive barriers help ensure that the containment atmosphere will be isolated from the environment in the event of a release of fission product radioactivity to the containment atmosphere as a result of a design basis loss-of-coolant accident (LOCA).

The OPERABILITY requirements for containment isolation barriers help ensure that containment is intact, and maintained intact, in accordance with the safety analyses. Therefore, the OPERABILITY requirements provide assurance that the containment function assumed in the safety analyses will be maintained.

2.1 Containment Purge System (Purge Supply and Exhaust Valves)

The Containment Purge System can be operated to supply outside air into the containment for ventilation and cooling or heating and may also be used to reduce the concentration of noble gases within containment whenever the unit is not in MODES 1, 2, 3, or 4. The purge supply and exhaust lines each contain one outside containment valve. Blind flanges equipped with double O-ring seals replace the inboard purge supply and exhaust valves to provide containment isolation during MODES 1, 2, 3, and 4.

Because of their large size, the containment purge supply and exhaust valves were not qualified for automatic closure from their open position under design basis accident (DBA) conditions. Therefore, the purge supply and exhaust valves were normally maintained closed with their control switches locked in the closed position in MODES 1, 2, 3, and 4.

3. TECHNICAL EVALUATION

The installation of a double O-ring, testable blind flange in place of the inboard supply valve and inboard exhaust valve has no adverse effect on the containment system and the containment purge system or its function. The use of two concentric O-rings provides two passive barriers in series so that no single credible failure or malfunction results in a loss of isolation or leakage that exceeds limits assumed in the safety analyses.

TS 3.6.3 currently states that the containment purge supply and exhaust flow paths shall be operable (valves closed with the control switch locked) in MODES 1, 2, 3, and 4. Installation of blind flanges in the supply and exhaust lines do not alter the design basis. TS 3.6.3 Action A and Action B currently permit, without time limit, the installation of a blind flange in place of inoperable containment valve(s) in MODE 1, 2, 3, and 4. In MODES 5 and 6, the blind flanges can be removed and the purge path re-established for containment purging, maintaining containment closure capability.

The proposed changes will have no impact on the FSAR accident analyses because the containment isolation assumed in the analyses will continue to be provided by the blind flanges instead of the valves. Since each blind flange uses two separate concentric O-rings to provide two passive barriers in series, no single credible failure or malfunction can result in a loss of isolation or leakage that exceeds limits assumed in the safety analyses.

The penetrations with blind flanges become Appendix J Type B boundaries (containment penetrations whose design incorporates resilient seals, gaskets or sealant compounds) instead of Type C boundaries with two isolation valves. Type B penetrations are required to be tested under Option B of 10 CFR 50 Appendix J at least once every 30 months. The blind flanges will be subject to the requirements of TS 3.6.1 for containment operability.

The blind flanges will also be subject to the requirements of TS SR 3.6.1.1 for containment leak rate testing, which states:

"Perform required visual examinations and leakage rate testing except for containment air lock testing, in accordance with the Containment Leakage Rate Testing Program."

Because the blind flanges meet the containment boundary requirement, the outboard valves no longer fulfill any operational containment barrier or isolation function in MODES 1, 2, 3, and 4. These valves will be used for normal system operation (containment purging) during shutdown conditions. Consequently, the outboard valves do not require Appendix J type testing. The outboard supply and exhaust valves will continue to meet the requirements of TS 3.9.3.c.

Based on the above justification, implementation of the proposed TS change is acceptable and demonstrates that leak tightness of the containment boundary remains assured. All applicable limits of the safety analysis will continue to be maintained.

4. REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

TS 3.6.3 Actions A and B currently allow a blind flange to be used to isolate a purge valve flow path when one or both of the purge valves in that flow path is not within leakage limits. This proposed change will allow a blind flange to be used for containment isolation in each of the two purge valve flow paths (supply and exhaust) without relying on the outside-containment valves or remaining in the TS Action. The blind flanges provide the containment accident mitigation function instead of the valves. The reconfigured penetrations will meet the following requirements:

PBNP was licensed prior to the 1971 publication of 10 CFR 50 Appendix A, "General Design Criteria for Nuclear Power Plants," (GDC). As such, PBNP is not licensed to the Appendix A GDCs. FSAR, Section 1.3, lists the plant-specific GDC to which the plant was licensed. The PBNP GDCs are similar in content to the draft GDC proposed for public comment in 1967.

Regulatory Requirements

- **Criterion 10, Reactor Containment** - The containment structure shall be designed (a) to sustain, without undue risk to the health and safety of the public, the initial effects of gross equipment failures, such as a large reactor coolant pipe break, without loss of required integrity, and (b) together with other engineered safety features as may be necessary, to retain for as long as the situation requires, the functional capability of the containment to the extent necessary to avoid undue risk to the health and safety of the public.

The installed flange will be leak tested to ensure functional capability is maintained.

- **Criterion 49, Reactor Containment Design Basis** - The reactor containment structure, including openings and penetrations, and any necessary containment heat removal systems, shall be designed so that the leakage of radioactive materials from the containment structure under conditions of pressure and temperature resulting from the largest credible energy release following a loss-of-coolant accident, including the calculated energy from metal-water or other chemical reactions that could occur as a consequence of failure of any single active component in the emergency core cooling system, will not result in undue risk to the health and safety of the public.

The design of the reactor containment structure has been maintained such that leakage of radioactive materials following a loss-of-coolant accident will not result in undue risk to the health and safety of the public.

- Criterion 56, Provisions for Testing of Penetrations - Provisions shall be made to the extent practical for periodically testing penetrations which have resilient seals or expansion bellows to permit leak tightness to be demonstrated at the peak pressure calculated to result from occurrence of the design basis accident.

Provisions have been maintained to permit leak tightness to be demonstrated.

- Criterion 50, Non-Destructive Testing Requirement for Containment - The selection and use of containment materials shall be in accordance with applicable engineering codes.

The selection and use of applicable materials has been maintained.

- Reactor Vessel Head Drop Analysis - Capabilities to establish containment closure during reactor vessel head lift have been maintained.
- Generic Letter 88-17, Loss of Decay Heat Removal, and Licensee Response dated December 30, 1988 - The ability to respond to a loss of decay heat removal capability has been maintained.
- 10 CFR 50 Appendix J (Option 2) - The system flow path blind flanges will be Type B tested in accordance with 10 CFR 50 Appendix J, Option B.

4.2. Precedents

Arizona Public Service Company submittal for Palo Verde Generating Station, Units 1, 2 and 3, Docket Nos. STN 50-528, 50-529 and 50-530 dated February 14, 2006, Request for Amendment to Technical Specification 3.6.3, "Containment Isolation Valves" with subsequent Commission issuance of Amendment No. 166 to Facility Operating License Numbers NPF-41, NPF-51 and NPF-74, TAC Nos. MD0044, MD0045 and MD0046, dated February 22, 2007.

PSEG Nuclear, LLC (PSEG) submittal for Salem Generating Station Units 1 and 2, Dockets Nos. 50-272 and 50-311, Facility Operating License Nos. DPR-70 and DPR-75 dated August 4, 2006, Request for Change to Technical Specifications Containment Ventilation Systems and Containment Isolation Valves.

4.3 Significant Hazards Consideration

In accordance with the requirements of 10 CFR 50.90, Nuclear Management Company (licensee) hereby requests amendments to Facility Operating Licenses DPR-24 and DPR-27, for PBNP, Unit 1 and Unit 2. The proposed amendment would revise

TS 3.6.3, "Containment Isolation Valves." The revision would delete Surveillance Requirement (SR) 3.6.3.1, which is no longer required due to the containment purge supply and exhaust valve isolation function being replaced with blind flanges. The proposed amendment would also support a change to the FSAR to revise the requirement to leak check the purge supply and exhaust valves.

Nuclear Management Company (NMC) has evaluated the proposed amendment in accordance with 10 CFR 50.91 against the standards in 10 CFR 50.92 and has determined that the operation of the PBNP in accordance with the proposed amendment presents no significant hazards. The NMC evaluation against each of the criteria in 10 CFR 50.92 follows.

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

Response: No

The proposed change to the containment purge supply penetration and the containment exhaust penetration presents no change in the probability or the consequence of an accident. The penetrations continue to conform to the TS requirements for containment and will be appropriately tested as required by 10 CFR 50 Appendix J. The blind flanges are passive devices not susceptible to an active failure or malfunction that could result in a loss of isolation or leakage that exceeds the limits assumed in the safety analyses. The blind flanges are leak rate tested in accordance with the containment leakage rate testing program. Containment isolation is not lessened by this change.

The change to the containment purge system does not affect the design basis limit for any fission product barrier.

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 change to the containment purge supply penetration and the containment exhaust penetration does not change the function of the system and does not alter containment isolation. The penetrations continue to conform to the TS requirements for containment isolation and will be appropriately tested as required by 10 CFR 50 Appendix J. No new accident scenarios, failure mechanisms, or limiting single failures are introduced as a result of the proposed changes.

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

Response: No

The proposed change will not alter any assumptions, initial conditions or results specified in any accident analysis. The containment purge supply and exhaust penetrations will continue to conform to the TS requirements for containment and will be appropriately tested as required by 10 CFR 50 Appendix J. The blind flanges are passive devices not susceptible to an active failure or malfunction that could result in a loss of isolation or leakage that exceeds limits assumed in the safety analysis. The blind flanges are leak rate tested in accordance with the containment leakage rate testing program. Containment isolation is not lessened by this change. Therefore, there is no reduction in the margin of safety.

Based on the above, the proposed change presents no significant hazards under the standards set forth in 10 CFR 50.72(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) issuance of the amendment will not be inimical to the common defense and security or the health and safety of the public.

5. ENVIRONMENTAL CONSIDERATION

The proposed change to the containment purge supply and exhaust penetrations presents no change in the probability or the consequences of an accident since the penetrations continue to conform to TS requirements for containment and will be appropriately tested as required by 10 CFR 50 Appendix J. Containment operability is not lessened by this change.

These changes have no adverse impact to offsite radiological dose; the function of the containment purge supply and exhaust system is not changed, and there is no change to containment isolation.

NMC has determined the proposed amendment relates to changes in a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or relates or changes in an inspection or surveillance requirement. 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 effluents that may be released offsite, or (iii) a significant increase in the individual or cumulative occupational exposure. Accordingly, the proposed amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9).

Therefore, pursuant to 10 CFR 51.22(b), an environmental impact or environmental assessment of the proposed change is not required.

6. COMMITMENTS

There are no commitments in this document. Statements in this submittal represent intended or planned actions, are provided for information purposes, and are not considered to be regulatory commitments.

ENCLOSURE 2

PROPOSED (MARKED-UP) TECHNICAL SPECIFICATION CHANGES

**LICENSE AMENDMENT REQUEST 249
TECHNICAL SPECIFICATION 3.6.3
CONTAINMENT ISOLATION VALVES**

POINT BEACH NUCLEAR PLANT, UNITS 1 AND 2

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
D. Required Action and associated Completion Time not met.	D.1 Be in MODE 3.	6 hours
	<u>AND</u> D.2 Be in MODE 5.	36 hours

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
SR 3.6.3.1 Verify each purge supply and exhaust valve is closed with the control switch locked, except for one purge valve in a penetration flow path to perform leakage rate corrective maintenance.	31 days
SR 3.6.3.2 -----NOTE----- Valves and blind flanges in high radiation areas may be verified by use of administrative controls. ----- Verify each containment isolation manual valve and blind flange that is located outside containment and not locked, sealed, or otherwise secured and required to be closed during accident conditions is closed, except for containment isolation valves that are open under administrative controls.	31 days

(continued)