Public Service
Electric and Gas
Company

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United States Nuclear Regulatory Commission
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Washington, DC 20555

REQUEST FOR CHANGE TO TECHNICAL SPECIFICATIONS
ADOPTION OF 10CFR50, APPENDIX J, OPTION B
HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NPF-57
DOCKET NO. 50-354

Gentlemen:

In accordance with 10CFR50.90, Public Service Electric & Gas (PSE&G) Company hereby requests a revision to the Technical Specifications (TS) for the Hope Creek Generating Station (HCGS). In accordance with 10CFR50.91(b)(1), a copy of this submittal has been sent to the State of New Jersey.

The proposed changes contained herein represent changes to Specifications 4.6.1.1, "Primary Containment Integrity," 3/4.6.1.2, "Primary Containment Leakage," 3/4.6.1.3, "Primary Containment Air Locks," 4.6.1.5.1, "Primary Containment Structural Integrity," 4.6.1.8.2, "Drywell and Suppression Chamber Purge System," Bases for 3/4.6.1.2, "Primary Containment Leakage," Bases for 3/4.6.1.3, "Primary Containment Air Locks," and Bases for 3.4.6.1.5, "Primary Containment Structural Integrity," Section 6, "Administrative Controls," and License Condition 2.D. These changes modify the TSs to adopt Option B of 10CFR50, Appendix J. Approval of these changes is requested by July 1997 to support the next refueling outage in September 1997.

The proposed changes were approved for the Peach Bottom Atomic Power Station on June 18, 1996 and for the Susquehanna Steam Electric Station on July 2, 1996 and have been evaluated for Hope Creek in accordance with 10CFR50.91(a)(1), using the criteria in 10CFR50.92(c). A determination has been made that this request involves no significant hazards considerations. The basis for the requested change is provided in Attachment 1 to this letter.

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The 10CFR50.92 evaluation, with a determination of no significant hazards consideration, is provided in Attachment 2. The marked up Technical Specification pages affected by the proposed changes are provided in Attachment 3.

Upon NRC approval of this proposed change, PSE&G requests that the amendment be made effective on the date of issuance.

Should you have any questions regarding this request, we will be pleased to discuss them with you.

Sincerely,

Affidavit
Attachments (3)

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Manager - System Engineering - Hope Creek (H18)
Manager - Nuclear Safety Review (N38)
Manager - Licensing & Regulation (X09)
Supervisor - Hope Creek Licensing (X09)
Senior Safety Review Engineer - Hope Creek (H11)
Station Licensing Engineer - Hope Creek (X09)
J. Keenan, Esq. (X09)
Perry Robinson, Esq.
Records Management (N21)
Microfilm Copy
Files Nos. 1.2.1 (Hope Creek), 2.3 (LCR H97-08)

REF: LR-N970183
LCR H97-08

STATE OF NEW JERSEY)
) SS.
COUNTY OF SALEM)

L. F. Storz, being duly sworn according to law deposes and says:

I am Senior Vice President - Nuclear Operations of Public Service Electric and Gas Company, and as such, I find the matters set forth in the above referenced letter, concerning Hope Creek Generating Station, Unit 1, are true to the best of my knowledge, information and belief.

Louis F. Storz

Subscribed and Sworn to before me
this 1st day of April, 1997

Kimberly Jo Brown
Notary Public of New Jersey

KIMBERLY JO BROWN
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires April 21, 1998

My Commission expires on _____

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BASIS FOR REQUESTED CHANGE

The basis for the proposed changes are described in this attachment. The content includes a discussion of the requested changes and their purpose, relevant background information, the justification for the proposed changes, and a conclusion.

REQUESTED CHANGE AND PURPOSE:

The proposed changes would implement the 10CFR50 Appendix J Option B performance based containment leak rate requirements for the Hope Creek Generating Station (HCGS). Specific changes proposed include the following:

1. Replacing the prescriptive Appendix J requirements (Option A) with performance based Appendix J requirements (Option B) in the following Specifications:

   Specification 4.6.1.1, "Primary Containment Integrity," 3/4.6.1.2, "Primary Containment Leakage," 3/4.6.1.3, "Primary Containment Air Locks," 4.6.1.5.1, "Primary Containment Structural Integrity," 4.6.1.8.2, "Drywell and Suppression Chamber Purge System," Bases for 3/4.6.1.2, "Primary Containment Leakage", Bases for 3/4.6.1.3, "Primary Containment Air Locks," and Bases for 3.4.6.1.5, "Primary Containment Structural Integrity."

2. Creating a new section (6.8.4.e) to require a primary containment leakage rate testing program.

3. Deleting reference to specific sections of 10CFR50 Appendix J in Section 2.D of the license.

BACKGROUND:

Primary containment leakage rate testing is required by 10CFR50 Appendix J and includes the performance of Type A integrated leak rate testing and Type B and C local leak rate testing. The limitations on primary containment leakage rates are intended to ensure that the total containment leakage volume will not exceed the value assumed in the accident analysis at the assumed peak accident pressure.

NUREG-1493, "Performance Based Containment Leak-Test Program," was published in September 1995 and provided the technical bases for rulemaking to revise the leakage testing requirements contained in Appendix J to 10CFR50. The report contained the following findings:

1. Previous observations of insensitivity of population risks from severe reactor accidents to containment leakage rates at low levels were confirmed. The allowable leakage rate could be increased by two orders of magnitude without significantly impacting the estimates of population dose risk in the event of an accident.

2. A reduction in the frequency of Type A tests from the current three per ten years to one per ten years leads to an imperceptible increase in risk.

3. A reduction in the frequency of testing of electrical penetrations should be possible with no adverse impact on risk. Performance based alternatives to current local leak rate testing requirements are feasible without significant risk impacts.

Appendix J to 10CFR Part 50 was revised to allow licensees the choice of complying with either new performance based containment leakage requirements (Option B) or the previously existing prescriptive requirements (Option A). Regulatory Guide (RG) 1.163, "Performance-Based Containment Leak-Test Program," was issued to provide guidance on the implementation of Option B. This regulatory guide references Nuclear Energy Institute (NEI) Guideline Document NEI 94-01, Revision 0, "Industry Guideline for Implementing Performance-Based Option of 10 CFR 50, Appendix J."

10CFR50, Appendix J, Option B specifies that a licensee must submit an implementation plan and a request for revision to the TSs to adopt Option B. Option B also requires that the implementation document used to develop the performance-based leakage-testing program be included, by general reference in the plant TSs. PSE&G would like to implement Option B at the HCGS during the next refueling outage. The implementation document, RG 1.163, is incorporated by general reference in the proposed HCGS TSs (Section 6.8.4.e). The HCGS intends to comply with the guidance of NEI 94-01 as modified by RG 1.163 and no deviations are being taken.

The NRC has provided guidance on the preparation of requests for adopting Option B of Appendix J in a letter from C. Grimes to

D. Modeen dated November 2, 1995. The guidance of that letter has been used to prepare this HCGS license amendment application.

JUSTIFICATION OF REQUESTED CHANGES:

The regulatory safety objective of the reactor containment design is stated in 10CFR50, Appendix A, Criterion 16, "Containment Design." The Option B performance based leakage testing approach allows test intervals to be based on component testing performance, thereby providing greater flexibility and cost benefit in implementing the safety objectives of the regulation. The Option B requirements are supported by the risk studies documented in NUREG-1493.

10CFR50 Appendix J, Option B requires that a submittal for TS revisions must contain justification, including supporting analyses, if the licensee chooses to deviate from methods approved by the Commission and endorsed by the regulatory guide. As indicated previously, HCGS intends to comply with NEI 94-01 as modified by Regulatory Guide 1.163.

CONCLUSIONS:

PSE&G concludes that these proposed changes are adequately justified and result in No Significant Hazards Consideration as described in Attachment 2 of this letter.

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10CFR50.92 EVALUATION

Public Service Electric & Gas (PSE&G) has concluded that the proposed changes to the Hope Creek Generating Station (HCGS) Technical Specifications (TSs) do not involve a significant hazards consideration. In support of this determination, an evaluation of each of the three standards set forth in 10CFR50.92 is provided below.

REQUESTED CHANGE

The proposed changes would implement the 10CFR50 Appendix J performance based containment leak rate requirements (Option B) for the HCGS. This option allows utilities to extend the frequencies of the Type A containment integrated leak rate test (ILRT) and the Type B and C local leak rate tests (LLRTs) based on performance and design of the containment and components. Specific changes proposed include the following:

1. Replacing the prescriptive Appendix J requirements (Option A) with performance based Appendix J requirements (Option B) in the following Specifications:

   Specification 4.6.1.1, "Primary Containment Integrity," 3/4.6.1.2, "Primary Containment Leakage," 3/4.6.1.3, "Primary Containment Air Locks," 4.6.1.5.1, "Primary Containment Structural Integrity," 4.6.1.8.2, "Drywell and Suppression Chamber Purge System," Bases for 3/4.6.1.2, "Primary Containment Leakage", Bases for 3/4.6.1.3, "Primary Containment Air Locks," and Bases for 3.4.6.1.5, "Primary Containment Structural Integrity."

2. Creating a new section (6.8.4.e) to require a primary containment leakage rate testing program.

3. Deleting reference to specific sections of 10CFR50 Appendix J in Section 2.D of the license.

BASIS

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

Containment leak rate testing is not an initiator of any accident. The proposed changes do not make any physical changes to the containment and do not affect reactor operations or the accident analyses. Therefore, the proposed changes do not involve a significant increase in the probability of any previously evaluated accident.

Since the allowable leakage rate is not being changed and since the analysis documented in NUREG-1493, "Performance-Based Containment Leak-Test Program" concludes that the impact on public health and safety due to extended intervals is negligible, the proposed changes will not involve a significant increase in the consequences of any previously evaluated accident.

Therefore, adoption of a performance-based leakage testing requirements will provide an equivalent level of safety and does not involve a significant increase in the probability or consequences of an accident previously evaluated.

2. *The proposed change does not create the possibility of a new or different kind of accident from any accident previously evaluated.*

No physical changes are being made to the plant, nor are there any changes being made to the operation of the plant as a result of the proposed changes. In addition, no new failure modes of plant equipment previously evaluated are being introduced.

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

3. *The proposed change does not involve a significant reduction in a margin of safety.*

The proposed changes are based on NRC-accepted provisions and maintain adequate levels of reliability of containment integrity. The performance-based approach to leakage rate testing recognizes that historically good results of containment testing provide appropriate assurance of future containment integrity. This supports the conclusion that the impact on the health and safety of the public as a result of extended test intervals is

negligible. Since the analysis documented in NUREG-1493 confirms that the performance based schedule continues to maintain a minimal impact on public risk, it can be concluded that the margin of safety is not significantly affected by the proposed changes.

Therefore, the proposed amendment will not involve a significant reduction in a margin of safety.

CONCLUSION

Based on the above, PSE&G has determined that the proposed changes do not involve a significant hazards consideration.

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TECHNICAL SPECIFICATION PAGES WITH PROPOSED CHANGES

The following Technical Specifications for Facility Operating License No. NPF-57 are affected by this change request:

Technical Specification	Page
License Condition 2.D	Page 6 of License
4.6.1.1	3/4 6-1
3/4.6.1.2	3/4 6-2 3/4 6-3 3/4 6-4
3/4.6.1.3	3/4 6-5 3/4 6-6
4.6.1.5.1	3/4 6-8
4.6.1.8.2	3/4 6-11
Section 6.8.4.e	6-16a
Bases for 3/4.6.1.2	B 3/4 6-1
Bases for 3/4.6.1.3	B 3/4 6-1
Bases for 3.4.6.1.5	B 3/4 6-2

(13) Safety Parameter Display System (Section 18.2, SSER No. 5)

Prior to the earlier of 90 days after restart from the first refueling outage or July 12, 1988, PSE&G shall add the following parameters to the SPDS and have them operational:

a. Primary containment radiation
b. Primary containment isolation status
c. Combustible gas concentration in primary containment
d. Source range neutron flux

D. The facility requires exemptions from certain requirements of 10 CFR Part 50 and 10 CFR Part 70. An exemption from the criticality alarm requirements of 10 CFR 70.24 was granted in Special Nuclear Material License No. 1953, dated August 21, 1985. This exemption is described in Section 9.1 of Supplement No. 5 to the SER. This previously granted exemption is continued in this operating license. An exemption from certain requirements of Appendix A to 10 CFR Part 50, is described in Supplement No. 5 to the SER. This exemption is a schedular exemption to the requirements of General Design Criterion 64, permitting delaying functionality of the Turbine Building Circulating Water System-Radiation Monitoring System until 5 percent power for local indication, and until 120 days after fuel load for control room indication (Appendix R of SSER 5). Exemptions from certain requirements of Appendix J to 10 CFR Part 50, are described in Supplement No. 5 to the SER. These include (a) an exemption from the requirement of ~~Paragraph III.D.2(b)(ii) of~~ Appendix J, exempting overall containment air lock leakage testing unless maintenance has been performed on the air lock that could affect air lock sealing capability (Section 6.2.6 of SSER 5); (b) an exemption from the requirement of ~~Paragraph III.C.2(b) of~~ Appendix J, exempting main steam isolation valve leak-rate testing at 1.10 Pa (Section 6.2.6 of SSER 5); (c) an exemption from ~~Paragraph III.D.3 of~~ Appendix J, exempting Type C testing on traversing incore probe system shear valves (Section 6.2.6 of SSER 5); (d) an exemption from ~~Paragraph III.D.2(a) of~~ Appendix J, exempting Type C testing for instrument lines and lines containing excess flow check valves (Section 6.2.6 of SSER 5); and (e) an exemption from ~~Paragraph III.C.2(a) of~~ Appendix J, exempting Type C testing of thermal relief valves (Section 6.2.6 of SSER 5). These exemptions are authorized by law, will not present an undue risk to the public health and safety, and are consistent with the common defense and security. These exemptions are hereby granted. The special circumstances regarding each exemption are identified in the referenced section of the safety evaluation report and the supplements thereto. These exemptions are granted pursuant to 10 CFR 50.12. With these exemptions, the facility will operate, to the extent authorized herein, in conformity with the application, as amended, the provisions of the Act, and the rules and regulations of the Commission.