Public Service
Electric and Gas
Company

Louis F. Storz
Senior Vice President - Nuclear Operations

Public Service Electric and Gas Company P.O. Box 236, Hancocks Bridge, NJ 08038 609-339-5700

FEB 05 1996

LR-N96009
LCR H96-03

United States Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Gentlemen:

EXIGENT LICENSE AMENDMENT APPLICATION
SUPPRESSION POOL COOLING & SPRAY SURVEILLANCES
HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NPF-57
DOCKET NO. 50-354

Public Service Electric and Gas Company (PSE&G) hereby submits an application for exigent amendment to Appendix A of Facility Operating License NPF-57 for the Hope Creek Generating Station, and is being filed in accordance with 10CFR50.90. Pursuant to the requirements of 10CFR50.91(b)(1), a copy of this request for amendment has been sent to the State of New Jersey.

Surveillance Requirements (SR) for Suppression Pool Cooling (SPC) and Suppression Pool Spray (SPS) require that during Residual Heat Removal (RHR) pump testing, 10,000 and 500 gpm pass through the RHR heat exchanger, respectively. The Hope Creek design has a bypass line around the RHR heat exchanger that contains a valve which is not designed for tight shut-off. Therefore, there is flow through the bypass line during the surveillance testing. The flow measurement locations used during the performance of the two SRs do not permit distinguishing flow through the bypass line from flow through the heat exchanger.

To quantify flow through the RHR heat exchanger, Hope Creek has reviewed prior testing and determined that 10,000 gpm passes through the combined (i.e., heat exchanger and bypass line) flow path, but less than 10,000 gpm passes through the heat exchanger. This results in the system not being in compliance with the SR for the SPC mode of operation. Hope Creek is therefore not in compliance with the Technical Specification for the SPC mode of RHR operation.

090027

A001

With the SPC mode of RHR inoperable, Hope Creek cannot enter the applicability of the Suppression Pool Cooling Technical Specification (i.e., Operational Condition 1, 2 and 3). Since the current Hope Creek restart schedule, (Operational Condition 3 on 2/27/96) does not provide the NRC with its normal review and noticing cycle of 30 days, it is requested that the proposed amendment be processed as an exigent change in accordance with 10CFR50.91(a)(6).

The proposed exigent amendment request revises SR 4.6.2.2.b and 4.6.2.3.b to include flow through the RHR heat exchanger bypass line (in addition to the RHR heat exchanger) in the Suppression Pool Cooling and Suppression Pool Spray flow path used during RHR pump testing. The proposed change to the SRs, and the associated Bases, is consistent with the basis of the current surveillance requirement.

A similar change was submitted for the Limerick units which have a similar design of the suppression pool cooling flow path, including a similar type of valve in the bypass line. The change was approved on November 5, 1992 as amendments 57 and 23 to the Limerick Technical Specifications.

Attachment 1 includes a description, justification, and no significant hazards consideration evaluation for the proposed change. Attachment 2 contains the Technical Specification and Bases pages revised with pen and ink, and typed changes.

Based upon the justification provided, PSE&G has concluded that the proposed changes do not involve a significant hazard consideration pursuant to 10CFR50.92.

PSE&G is requesting a 3 day implementation period after amendment approval.

Should there be any questions with regard to this submittal, please do not hesitate to contact us.

Sincerely,

Affidavit
Attachments (2)

C Mr. T. T. Martin, Administrator - Region I
U. S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. D. Jaffe, Licensing Project Manager - Hope Creek
U. S. Nuclear Regulatory Commission
One White Flint North
11555 Rockville Pike
Mail Stop 14E21
Rockville, MD 20852

Mr. R. Summers (X24)
USNRC Senior Resident Inspector

Mr. K. Tosch, Manager, IV
Bureau of Nuclear Engineering
33 Arctic Parkway
CN 415
Trenton, NJ 08625

Ref: LR-N96009

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 the Hope Creek Generating Station, are true to the best of my knowledge, information and belief.

L. F. Storz

Subscribed and Sworn to before me
this 5th day of February, 1996

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 _____

ATTACHMENT 1
PROPOSED CHANGES TO THE TECHNICAL SPECIFICATIONS

EXIGENT LICENSE AMENDMENT APPLICATION **LR-N96009**
SUPPRESSION POOL COOLING & SPRAY SURVEILLANCES **LCR H96-03**
HOPE CREEK GENERATING STATION
FACILITY OPERATING LICENSE NPF-57
DOCKET NO. 50-354

I. DESCRIPTION OF THE PROPOSED CHANGES

The proposed amendment changes Surveillance Requirement (SR) 4.6.2.3.b of Technical Specification (TS) 3.6.2.3, Suppression Pool Cooling and SR 4.6.2.2.b of TS 3.6.2.2, Suppression Pool Spray, to reflect the intent of the specific SRs to confirm Residual Heat Removal (RHR) pump performance during Suppression Pool Cooling (SPC) and Suppression Pool Spray (SPS) operation. The proposed changes revise the SRs to include the RHR heat exchanger bypass line, with the bypass valve closed, and the heat exchanger in the SPS and SPC flow path used during performance of the surveillances.

The proposed change also includes a revision to the Bases of TS 4.6.2 which adds the applicable portions of the corresponding Bases section of NUREG-1433, Revision 1, "Standard Technical Specifications, General Electric Plants, BWR/4".

II. REASON AND JUSTIFICATION FOR THE PROPOSED CHANGES

Currently the two SRs state that RHR pump flow for SPC and SPS testing be through the RHR heat exchanger. The design of the Hope Creek system, unlike some older Boiling Water Reactors, includes a RHR heat exchanger bypass line containing a bypass valve. The bypass valve is used for adjusting flow through the RHR heat exchanger and is not designed for tight shut-off. As a result of the valve design, even with the bypass valve closed, a portion of the total RHR pump flow travels through the bypass line.

The purpose of SR 4.6.2.2.b and SR 4.6.2.3.b, based on the SR's reference to 4.0.5, is to confirm RHR pump performance. This conclusion is further supported by the Bases for the corresponding SRs in NUREG-1433, Revision 1. The NUREG Bases state that periodically demonstrating the required flow while operating in the SPC or SPS mode with flow through the heat exchanger ensures that pump performance has not degraded during the current cycle. It goes on to state that flow measurement is a normal test of centrifugal pump performance as required by Section XI of the ASME Code and that such a test confirms one point on the pump design curve, thereby indicative of overall pump performance. When testing for a specific flow value for pump performance, it is not imperative that flow be through the heat exchanger, but rather that a total flow measurement be performed.

The current SRs are not intended to confirm the heat transfer performance of the RHR heat exchanger since there is no corresponding Safety Auxiliaries Cooling System (SACS) flowrate SR in TS Section 4.7.1. Verifying a specific flowrate through the shell-side of the RHR heat exchanger does not demonstrate heat removal capability in the absence of a corresponding requirement to verify SACS flow through the tube-side of the heat exchanger.

However, operability of the system is not only predicated on an acceptable pump surveillance, but also on the system being able to perform its safety function (i.e., heat removal capability). The safety function of the SPC and SPS modes is to maintain containment integrity following a LOCA by preventing excessive containment temperatures and pressures, respectively. In order to ensure that the SPC safety function is maintained, testing is to be performed prior to Operational Condition 3 to ensure that the bypass line flow does not adversely impact the required heat removal capability of the system. PSE&G has determined, through analysis at design conditions, that a flowrate of 8985 gpm through the heat exchanger is necessary to achieve the desired SPC heat removal capability. Periodic testing will be conducted to ensure that the required flow rate through the RHR heat exchanger can be achieved during the SPC mode of operation.

Heat removal is not part of the SPS safety function, however, confirmation of heat transfer for suppression pool spray is bounded by the verification of the heat transfer capability for suppression pool cooling. In the SPS mode, RHR flow is directed through a RHR heat exchanger which has the same heat load as when in the SPC mode. Since the suppression pool supply temperature is identical for both modes of operation, the system heat load is identical.

III. NO SIGNIFICANT HAZARDS EVALUATION

In accordance with 10CFR50.92, Public Service Electric & Gas (PSE&G) has reviewed the proposed changes and concluded the proposed changes do not involve a significant hazards consideration because the changes:

1. **Will not involve a significant increase in the probability or consequences of an accident previously analyzed.**

   The proposed amendment request changes Surveillance Requirement (SR) 4.6.2.3.b of Technical Specification (TS) 3.6.2.3, Suppression Pool Cooling, and SR 4.6.2.2.b of TS 3.6.2.2, Suppression Pool Spray, to clarify that the intent of these specific SRs is to confirm Residual Heat Removal (RHR) pump performance during Suppression Pool Cooling (SPC) and Suppression Pool Spray (SPS) operation. The proposed change revises the SRs to include the RHR heat exchanger bypass line, with the bypass valve closed, and the RHR heat exchanger in the SPC and SPS flow path used during performance of the surveillances.

   The RHR system is an accident mitigation system. The proposed changes do not change the operation or capabilities of the RHR system in either mode of operation. The proposed changes do not involve any physical changes to the RHR system. The proposed changes merely modify the acceptable flow path for the surveillance tests; the purpose of which is to verify pump performance in these modes of operation. Therefore, the proposed change to the SRs for the SPC and SPS mode of operation of the RHR system will not increase the probability of an accident previously evaluated.

   Furthermore, the performance of the RHR system in any of its operational modes will be unchanged by the proposed change. The changes affect only the pump performance SRs for the SPC and SPS modes of RHR system operation. The surveillances being changed only modify the acceptable flow path used during the performance of the pump performance surveillances. The surveillances still verify that pump performance has not degraded to a point where the accident mitigation function of the system has been compromised. Therefore, the proposed change will not involve an increase in the consequences of an accident previously evaluated.

2. Will not create the possibility of a new or different kind of accident from any previously evaluated.

The proposed change, a clarification of the SPC and SPS mode flow paths for pump performance testing, does not result in a modification of the RHR system, change the method of SPC or SPS operation, or alter the system's effectiveness. Suppression Pool Cooling and Containment Spray Cooling, of which Suppression Pool Spray is a part, are manually initiated actions. Existing procedures for the initiation of these two modes of operation are unchanged, including the requirement that the Low Pressure Coolant Injection valve is closed before the containment spray valves can be opened. There are no new failure modes created by the proposed changes and no new accident initiating events are created. Therefore, the proposed changes will not create the possibility of a new or different kind of accident from any previously evaluated.

3. Will not involve a significant reduction in a margin of safety.

The proposed changes do not change the operation of the RHR system in any of its modes of operation. The changes only clarify the fact that the purpose of the SRs is to confirm RHR pump performance through the most restrictive conditions of the flow path while operating in either the SPC or SPS modes. The changed surveillances still verify that pump performance has not degraded to a point where the original design basis can not be met. In order to assure the system meets its original design basis, adequate flow through the heat exchanger during surveillance testing will be maintained. Since the function of all of the operational modes of the RHR system are unaffected by the revised surveillance test flow path, the proposed changes will maintain the existing margin of safety.

IV. CONCLUSIONS

Based on the information presented above, PSE&G has concluded that there is no significant hazards consideration associated with the proposed changes.