November 8, 2001

Mr. Harold W. Keiser
Chief Nuclear Officer & President
PSEG Nuclear LLC - X04
Post Office Box 236
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION, CORRECTION TO TECHNICAL SPECIFICATION BASES PAGES FOR AMENDMENT NO. 133, (TAC NO. MB3292)

Dear Mr. Keiser:

On October 3, 2001, the U.S. Nuclear Regulatory Commission (NRC) issued Amendment No. 133 to Facility Operating License No. NPF-57 for the Hope Creek Generating Station. The amendment revised the Technical Specifications (TSs) and TS Bases associated with the drywell vacuum breakers and the suppression pool vacuum breakers.

As noted in your letter dated October 26, 2001, the TS Bases pages included in Amendment No. 133 did not reflect changes that were implemented as part of Amendment No. 132, which was issued on August 28, 2001. Amendment No. 132 revised the TSs and TS Bases associated with the excess flow check valves (EFCVs).

The NRC's original schedule called for issuance of the vacuum breaker amendment prior to issuance of the amendment for the EFCVs. However, due to schedule changes, the originally intended order of issuance was reversed. As a result, the NRC inadvertently issued Amendment No. 133 without including the changes to TS Bases page B 3/4 6-5 that were shown in Amendment No. 132.

A copy of the corrected TS Bases pages B 3/4 6-5, B 3/4 6-6, and B 3/4 6-7 for Amendment No. 133 are enclosed. Changes to pages B 3/4 6-6, and B 3/4 6-7 are included due to the repagination that was necessary after inserting the Amendment No. 132 changes into Section 3/4.6.3 on page B 3/4 6-5.

We apologize for any inconvenience this error may have caused you.

Sincerely,

/RA/

Richard B. Ennis, Project Manager, Section 2
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

Docket No. 50-354

Enclosures: TS Bases pages B 3/4 6-5,
B 3/4 6-6, and B 3/4 6-7

cc w/encls: See next page

We apologize for any inconvenience this error may have caused you.

Sincerely,

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Enclosures: TS Bases pages B 3/4 6-5,
B 3/4 6-6, and B 3/4 6-7

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3/4.6.3 PRIMARY CONTAINMENT ISOLATION VALVES

The OPERABILITY of the primary containment isolation valves ensures that the containment atmosphere will be isolated from the outside environment in the event of a release of radioactive material to the containment atmosphere or pressurization of the containment and is consistent with the requirements of GDC 54 through 57 of Appendix A of 10 CFR 50. Containment isolation within the time limits specified for those isolation valves designed to close automatically ensures that the release of radioactive material to the environment will be consistent with the assumptions used in the analyses for a LOCA.

Surveillance 4.6.3.4 requires demonstration that a representative sample of reactor instrumentation line excess flow check valves are tested to demonstrate that the valve actuates to check flow on a simulated instrument line break. This surveillance requirement provides assurance that the instrument line EFCV's will perform so that the predicted radiological consequences will not be exceeded during a postulated instrument line break event as evaluated in the UFSAR. The 18-month frequency is based on the need to perform this surveillance under the conditions that apply immediately prior to and during the plant outage and the potential for an unplanned transient if the surveillance were performed with the reactor at power. The representative sample consists of an approximately equal number of EFCV's, such that each EFCV is tested at least once every ten years (nominal). In addition, the EFCV's in the sample are representative of the various plant configurations, models, sizes and operating environments. This ensures that any potentially common problem with a specific type or application of EFCV is detected at the earliest possible time. The nominal 10 year interval is based on performance testing as discussed in NEDO 32977-A, "Excess Check Valve Testing Relaxation." Furthermore, any EFCV failures will be evaluated to determine if additional testing in that test interval is warranted to ensure overall reliability is maintained. Operating experience has demonstrated that these components are highly reliable and that failures to isolate are very infrequent. Therefore, testing of a representative sample was concluded to be acceptable from a reliability standpoint.

3/4.6.4 VACUUM RELIEF

Suppression Chamber-to-Drywell Vacuum Breakers

BACKGROUND: The function of the suppression-chamber-to-drywell vacuum breakers is to relieve vacuum in the drywell. There are eight internal vacuum breakers located on the vent header of the vent system between the drywell and the suppression chamber that allow air and steam flow from the suppression chamber to the drywell when the drywell is at a negative pressure with respect to the suppression chamber. Therefore, suppression chamber-to-drywell vacuum breakers prevent an excessive negative differential pressure across the wetwell-drywell boundary. Each vacuum breaker is a self-actuating valve, similar to a check valve, which can be remotely operated for testing purposes.

A negative differential pressure across the drywell wall is caused by rapid depressurization of the drywell. Events that cause this rapid depressurization are cooling cycles, inadvertent drywell spray actuation, and steam condensation from sprays or subcooled water reflood of a break in the event of a primary system rupture. Cooling cycles result in minor pressure transients in the drywell that occur slowly and are normally controlled by heating and ventilation equipment. Spray actuation or spill of subcooled water out of a break results in more significant pressure transients and becomes important in sizing the internal vacuum breakers.

In the event of a primary system rupture, steam condensation within the drywell results in the most severe pressure transient. Following a primary system rupture, air in the drywell is purged into the suppression chamber free airspace, leaving the drywell full of steam. Subsequent condensation of the steam can be caused by Emergency Core Cooling Systems flow from a recirculation line or main steam line break, or drywell spray actuation following a loss of coolant accident (LOCA).

In addition, the waterleg in the Mark I Vent System downcomer is controlled by the drywell-to-suppression chamber differential pressure. If the drywell pressure is less than the suppression chamber pressure, there will be an increase in the vent waterleg. This will result in an increase in the water clearing inertia in the event of a postulated LOCA, resulting in an increase in the peak drywell pressure. This in turn will result in an increase in the pool swell dynamic loads. The internal vacuum breakers limit the height of the waterleg in the vent system during normal operation.

APPLICABLE SAFETY ANALYSES: Analytical methods and assumptions involving the suppression chamber-to-drywell vacuum breakers are presented in Section 6.2 and Appendix 6A of the Hope Creek UFSAR as part of the accident response of the primary containment systems. Internal (suppression chamber-to-drywell) and external (reactor building- to-suppression chamber) vacuum breakers are provided as part of the primary containment to limit the negative differential pressure across the drywell and suppression chamber walls that form part of the primary containment boundary.

The safety analyses assume that the internal vacuum breakers are closed initially and are fully open at a differential pressure of 0.20 psid. Additionally, one of the eight internal vacuum breakers is assumed to fail in a closed position. The results of the analyses show that the design pressure limits are not exceeded even under the worst case accident scenario. The vacuum breaker opening differential pressure setpoint and the requirement that all eight vacuum breakers be OPERABLE are a result of the requirement placed on the vacuum breakers to limit the vent system waterleg height. The vacuum relief capacity between the drywell and suppression chamber should be 1/16 of the total main vent cross sectional area, with the valves set to operate at 0.20 psid differential pressure. Design Basis Accident (DBA) analyses require the vacuum breakers to be closed initially and to remain closed and leak tight.

The suppression chamber-to-drywell vacuum breakers satisfy Criterion 3 of the NRC Policy Statement.

LCO: All eight vacuum breakers must be OPERABLE for opening and closed (except during testing or when the vacuum breakers are performing their intended design function). The vacuum breaker OPERABILITY requirement provides assurance that the drywell-to-suppression chamber negative differential pressure remains below the design value. The requirement that the vacuum breakers be closed ensures that there is no excessive bypass leakage should a LOCA occur.

APPLICABILITY: In OPERATIONAL CONDITIONS 1, 2, and 3, the Suppression Pool Spray System is required to be OPERABLE to mitigate the effects of a DBA. Excessive negative pressure inside the drywell could occur due to inadvertent actuation of this system. The vacuum breakers, therefore, are required to be OPERABLE in OPERATIONAL CONDITIONS 1, 2, and 3, when the Suppression Pool Spray System is required to be OPERABLE, to mitigate the effects of inadvertent actuation of the Suppression Pool Spray System.

Also, in OPERATIONAL CONDITIONS 1, 2, and 3, a DBA could result in excessive negative differential pressure across the drywell wall, caused by the rapid depressurization of the drywell. The event that results in the limiting rapid depressurization of the drywell is the primary system rupture that purges the drywell of air and fills the drywell free airspace with steam. Subsequent condensation of the steam would result in depressurization of the drywell. The limiting pressure and temperature of the primary system prior to a DBA occur in OPERATIONAL CONDITIONS 1, 2, and 3.

In OPERATIONAL CONDITIONS 4 and 5, the probability and consequences of these events are reduced by the pressure and temperature limitations in these OPERATIONAL CONDITIONS; therefore, maintaining suppression chamber-to-drywell vacuum breakers OPERABLE is not required in OPERATIONAL CONDITION 4 or 5.

ACTIONS: With one of the required vacuum breakers inoperable for opening (e.g., the vacuum breaker is not open and may be stuck closed or not within its opening setpoint limit, so that it would not function as designed during an event that depressurized the drywell), the remaining seven OPERABLE vacuum breakers are capable of providing the vacuum relief function. However, overall system reliability is reduced because a single failure in one of the remaining vacuum breakers could result in an excessive suppression chamber-to-drywell differential pressure during a DBA. Therefore, with one of the eight required vacuum breakers inoperable, 72 hours is allowed to restore at least one of the inoperable vacuum breakers to OPERABLE status so that plant conditions are consistent with those assumed for the design basis analysis. The 72 hour Completion Time is considered acceptable due to the low probability of an event and the adequacy of the remaining vacuum breaker capability.