

October 3, 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 - ISSUANCE OF AMENDMENT  
RE: VACUUM BREAKER TECHNICAL SPECIFICATION CHANGES  
(TAC NO. MB0323)

Dear Mr. Keiser:

The Commission has issued the enclosed Amendment No. 133 to Facility Operating License No. NPF-57 for the Hope Creek Generating Station (HCGS). This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 12, 2000, as supplemented on April 9, 2001.

This amendment changes the TSs and Bases associated with the drywell vacuum breakers and the suppression pool vacuum breakers to provide consistency between the HCGS TSs and the improved standard TSs (NUREG-1433).

The application and supplement both contained inappropriate categorizations (as more or less restrictive, or simply administrative changes) based on inaccurate interpretations of the HCGS TSs regarding limiting conditions of operation. However, this miscategorization did not affect the staff's conclusions and is addressed in the enclosed safety evaluation. Notice of Issuance will be included in the Commission's biweekly Federal Register notice.

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: 1. Amendment No. 133 to  
License No. NPF-57  
2. Safety Evaluation

cc w/encls: See next page

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Hope Creek Generating Station

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PSEG NUCLEAR LLC  
ATLANTIC CITY ELECTRIC COMPANY  
DOCKET NO. 50-354  
HOPE CREEK GENERATING STATION  
AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 133  
License No. NPF-57

1. The Nuclear Regulatory Commission (the Commission) has found that:
  - A. The application for amendment filed by PSEG Nuclear LLC dated October 12, 2000, as supplemented on April 9, 2001, complies with the standards and requirements of the Atomic Energy Act of 1954, as amended (the Act), and the Commission's rules and regulations set forth in 10 CFR Chapter I;
  - B. The facility will operate in conformity with the application, the provisions of the Act, and the rules and regulations of the Commission;
  - C. There is reasonable assurance: (i) that the activities authorized by this amendment can be conducted without endangering the health and safety of the public, and (ii) that such activities will be conducted in compliance with the Commission's regulations set forth in 10 CFR Chapter I;
  - D. The issuance of this amendment will not be inimical to the common defense and security or to the health and safety of the public; and
  - E. The issuance of this amendment is in accordance with 10 CFR Part 51 of the Commission's regulations and all applicable requirements have been satisfied.
2. Accordingly, the license is amended by changes to the Technical Specifications as indicated in the attachment to this license amendment, and paragraph 2.C.(2) of Facility Operating License No. NPF-57 is hereby amended to read as follows:

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, as revised through Amendment No. 133, and the Environmental Protection Plan contained in Appendix B, are hereby incorporated into the license. PSEG Nuclear LLC shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

3. The license amendment is effective as of its date of issuance and shall be implemented within 60 days.

FOR THE NUCLEAR REGULATORY COMMISSION

**/RA/**

James W. Clifford, Chief, Section 2  
Project Directorate I  
Division of Licensing Project Management  
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical  
Specifications

Date of Issuance: October 3, 2001

ATTACHMENT TO LICENSE AMENDMENT NO. 133

FACILITY OPERATING LICENSE NO. NPF-57

DOCKET NO. 50-354

Replace the following pages of the Appendix A Technical Specifications with the attached revised pages. The revised pages are identified by amendment number and contain marginal lines indicating the areas of change.

Remove

xix  
3/4 6-13  
3/4 6-14  
3/4 6-43  
3/4 6-44  
3/4 6-45  
3/4 6-46  
B 3/4 6-5  
B 3/4 6-6

Insert

xix  
3/4 6-13  
3/4 6-14  
3/4 6-43  
3/4 6-44  
3/4 6-45  
3/4 6-46  
B 3/4 6-5  
B 3/4 6-5 through B 3/4 6-14

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION  
RELATED TO AMENDMENT NO. 133 TO FACILITY OPERATING LICENSE NO. NPF-57  
PSEG NUCLEAR, LLC  
ATLANTIC CITY ELECTRIC COMPANY  
HOPE CREEK GENERATING STATION  
DOCKET NO. 50-354

## 1.0 INTRODUCTION

By letter dated October 12, 2000, PSEG Nuclear LLC (the licensee) submitted a request for changes to the Hope Creek Generating Station (HCGS) Technical Specifications (TSs). The proposed changes would revise the HCGS TSs and Bases associated with the drywell vacuum breakers and the suppression pool vacuum breakers. The proposed changes would revise TSs 3.6.4.1, 4.6.4.1, 3.6.4.2, 4.6.4.2, and Bases 3/4.6.4 to provide consistency between the HCGS TSs and NUREG-1433, Standard Technical Specifications (STS), General Electric Plants, BWR/4. In addition, a change to TS 4.6.2.1 was proposed to correct the hierarchical format of this section.

By letter dated April 9, 2001, the licensee submitted a supplement to the October 12, 2000, application. The supplement included a revision to the TS Bases, corrected an omission, and provided clarifying information. The scope of the original Federal Register notice and the staff's no significant hazards consideration were not changed by the April 9, 2001, supplement.

## 2.0 BACKGROUND

NUREG-1433, Revision 1, states that, "Licensees are encouraged to upgrade their technical specifications consistent with those criteria [in the Final Commission Policy Statement on Technical Specifications Improvements for Nuclear Power Reactors, dated July 22, 1993 (58 FR 39132)] and conforming, to the extent practical and consistent with the licensing basis for the facility, to Revision 1 to the improved STS." The policy statement further states that "...there is considerable merit in allowing licensees to improve portions of their Technical Specifications that could result in a safety benefit." In addition, "Implementation of the policy statement through implementation of the improved STS is expected to produce an improvement in the safety of nuclear power plants through the use of more operator-oriented Technical Specifications, improved Technical Specification Bases, reduced action statement induced plant transients, and more efficient use of NRC and industry resources."

The primary purpose of this amendment request is to upgrade those portions of the HCGS TSs associated with the suppression-chamber-to-drywell vacuum breakers and the reactor building-to-suppression chamber vacuum breakers in conformance with the STS and consistent with the HCGS licensing basis.

The suppression-chamber-to-drywell vacuum breakers relieve vacuum in the drywell by allowing 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. Similarly, the reactor building-to-suppression chamber vacuum breakers relieve vacuum when the primary containment depressurizes below the reactor building pressure. If the drywell depressurizes below reactor building pressure, the negative differential pressure is mitigated by flow through the reactor building-to-suppression chamber vacuum breakers and through the suppression-chamber-to-drywell vacuum breakers.

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. Steam condensing in the drywell as a result of a primary system rupture results in the most severe pressure transient.

### 3.0 EVALUATION

#### 3.1 Licensee's Description of Proposed Changes

The licensee's description of each of the proposed changes to TS 3.6.4.1, "Suppression Chamber - Drywell Vacuum Breakers" is provided below which corresponds to STS section TS 3.6.1.8, "Suppression Chamber-to-Drywell Vacuum Breakers." The description of each change was taken directly from the licensee's October 12, 2000, application. Each change was categorized by the licensee as either administrative (A), more restrictive (M), less restrictive (L), or as a relocation (R). The staff's evaluation of these changes is provided in sections 3.2 through 3.5.

1. Change A1: "The phrase 'and closed' is removed from the Limiting Condition for Operation (LCO). The requirement in the LCO that the vacuum breakers be operable is sufficient to convey the requirements for opening and for being closed. The details of vacuum breaker operability do not need to be included in the LCO and are adequately covered by the definition of operability. In addition, the requirement that the vacuum breakers be closed is required by the surveillance requirements. This change maintains consistency with the STS and is considered to be administrative in nature."
2. Change R1: "The phrase 'but known to be closed' is relocated from Action a to the Bases for Action a, since Action b serves as the compensatory measure for open vacuum breakers. In accordance with HCGS TS 3.0.1, if, at any time, a vacuum breaker is found or known to be open, Action b would be entered upon discovery. Action b provides adequate actions for vacuum breakers that are not closed. The phrase 'but known to be closed' implies that verification that the inoperable vacuum breakers are closed is necessary. This level of detail is unnecessary in the action statement and may be relocated to the Bases. The relocated requirement is contained in the parenthetical phrase '(the vacuum breaker is not open and...)'. The change is, therefore, considered to be a relocation."
3. Change A2: "The word 'inoperable' is considered to be unnecessary and is deleted from Action a. If the vacuum breaker is being restored, the vacuum breaker is clearly

inoperable. This change maintains consistency with the STS and is considered to be an editorial/administrative change."

4. Change M1: "The phrase 'or more' is removed from Action b. This change is considered to be more restrictive than the current TS since only one vacuum breaker will be allowed to be open during the 2-hour completion time for closure. This change maintains consistency with the STS and is considered to be a more restrictive change."
5. Change A3: "The word 'open' is changed to the phrase 'not closed' for consistency with the STS. This change maintains consistency with the STS and is considered to be an editorial/administrative change."
6. Change L1: "Action c regarding the vacuum breaker position indicators, and the associated surveillance requirements (SRs) 4.6.4.1.b.2 and 4.6.4.1.b.3.b are deleted. Position indication does not necessarily relate directly to the respective system operability. NUREG-1433 does not specify indication only equipment to be operable to support operability of a system or component. Position indication instrumentation availability and compensatory activities for inoperable position indication are controlled by plant procedures and policies. Vacuum breaker position must be known to be able to satisfy proposed SRs 4.6.4.1.a, 4.6.4.1.b.1, and 4.6.4.1.b.2. If position indication is not available and vacuum breaker position cannot be determined, the SR cannot be satisfied and actions must be taken for inoperable vacuum breakers in accordance with the applicable action statements. As a result, the requirements for vacuum breaker position indication are adequately addressed by the requirements of Specification 3/4.6.4.1. This change maintains consistency with the STS and is considered to be a less restrictive change."
7. Change L2: "The frequency of verifying that each vacuum breaker is closed is changed from once per 7 days to once per 14 days. For position verification of most other safety-related valves, including those that affect primary containment, the frequency is 31 days. Based on the longer interval for similar verification of similar components and the fact that the valves are normally found in the correct position, the 14-day interval is considered to be adequate. This change maintains consistency with the STS and is considered to be a less restrictive change."
8. Change A4: "A footnote is added to SR 4.6.4.1.a to indicate that this surveillance requirement does not have to be met for vacuum breakers that are open during surveillances or that are performing their intended function. This change allows the vacuum breakers to be considered operable during surveillances or when performing their intended function and, therefore, prevents unnecessary entry into the action statements. Since the vacuum breakers are clearly operable (capable of performing their intended function) during these conditions, this change is considered to be administrative in nature. This change establishes consistency with the STS."
9. Change L3: "The time requirement to perform functional testing after any discharge of steam to the suppression chamber from the safety relief valves (SRVs) is changed from 2 hours to 12 hours. The operability of a vacuum breaker is not affected by an SRV lift. Increased humidity in the suppression chamber air space is the condition that is

postulated to impact the operability of the vacuum breakers. Quenchers in the suppression pool ensure that steam is condensed, limiting the increase in humidity in the suppression chamber air space. In addition, this change is endorsed by Generic Letter 93-05, 'Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation,' Item 8.4. Based on the above information, the extension in performance of the functional test following an SRV discharge is judged to be not safety significant. This change maintains consistency with the STS and is considered to be a less restrictive change."

10. Change A5: "The phrase 'cycling each vacuum breaker through at least one complete cycle of full travel' in SR 4.6.4.1.b.1 is replaced by the phrase 'performing a functional test of each vacuum breaker.' Both phrases are considered to require the same testing. This change is intended only for the purpose of making the TS wording consistent with the STS wording. As a result, the change is considered to be an administrative change."
11. Change A6: "Surveillance Requirement 4.6.4.1.b.3.a is modified from 'Verifying the opening setpoint, from the closed position, to be less than or equal to 0.20 psid' to 'Verifying the opening setpoint of each vacuum breaker to be less than or equal to 0.20 psid.' Both phrases are considered to require the same testing. This change is intended only for the purpose of making the TS wording consistent with the STS wording. As a result, the change is considered to be an administrative change."
12. Change to Bases: "The Bases have been expanded to be consistent with the STS Bases."

The licensee's description of each of the proposed changes to TS 3.6.4.2, "Reactor Building - Suppression Chamber Vacuum Breakers" is provided below which corresponds to STS section TS 3.6.1.7, "Reactor Building-to-Suppression Chamber Vacuum Breakers." The description of each change was taken directly from the licensee's October 12, 2000, application and, where indicated, was modified by the licensee's April 9, 2001, supplement. Note, Table 1 is provided at the end of Section 3.1 of this Safety Evaluation as a visual aid in describing the required operator actions associated with TS 3.6.4.2.

1. Change A7: "The word 'both' is changed to 'each' in the LCO and in SR 4.6.4.2. This change is intended only for the purpose of making the TS wording consistent with the STS wording and is editorial in nature."
2. Change A8: "The phrase 'and closed' is removed from the LCO. The requirement that the vacuum breaker assemblies be operable is sufficient to convey the requirements for opening and for being closed. The details of vacuum breaker assembly operability do not need to be included in the LCO and are adequately covered by the definition of operability. In addition, the requirement that the vacuum breaker assembly valves be closed is required by the surveillance requirements and need not be repeated in the LCO. This change is considered to be administrative in nature."
3. Change R2: "The phrase 'consisting of a vacuum breaker valve and butterfly isolation valve' is deleted from the LCO statement. As a result, the LCO statement simply requires that each vacuum breaker be operable. Details concerning vacuum breaker design are

included in the Bases. This change is considered to be a relocation of information to the Bases."

4. Change L4: "Action a is modified to include the condition in which both valves in one vacuum breaker assembly are inoperable for opening. The existing action includes only the condition in which one valve in an assembly is inoperable for opening. The change recognizes that there are two valves in series in each of two vacuum breaker assemblies between the reactor building and suppression chamber. If one vacuum breaker assembly valve will not open, the vacuum breaker assembly is inoperable to perform its relief function, thus the consequences of the second inoperable vacuum breaker assembly valve in the same assembly have no more effect than the first inoperable vacuum breaker valve (i.e., the vacuum breaker will not perform its relief function). If two vacuum breaker valves in one vacuum breaker assembly are inoperable but closed, containment integrity and venting capability are still maintained and 72 hours is provided to restore the redundant vacuum breaker assembly. This change is consistent with the STS and is considered to be a less restrictive change."
5. Change R3: "The phrase 'but known to be closed' is relocated from Action a to the Bases for Action a. The proposed Actions c and d serve as the compensatory measures for open vacuum breakers. In accordance with TS 3.0.1, if, at any time, one or two valves in one or two vacuum breaker assemblies is found or known to be open, the appropriate action (Action c or d) would be entered upon discovery. The proposed Actions c and d provide adequate actions for vacuum breaker valves that are not closed. The phrase 'but known to be closed' implies that verification that the inoperable vacuum breakers are closed is necessary. This level of detail is unnecessary in the action statement and may be relocated to the Bases. The relocated requirement is contained in the phrase 'the leak tight containment boundary is intact.' The change is, therefore, considered to be a relocation."
6. Change A9: "The word 'inoperable' is considered to be unnecessary and is deleted from Action a. If the vacuum breaker is being restored, the vacuum breaker is clearly inoperable. This is considered to be an editorial/administrative change."
7. Change A10 (from supplement): "A new Action b is added to cover the condition in which two vacuum breaker assemblies have one or two valves that are inoperable for opening. Unlike change L4, which discussed a single assembly, this change describes a condition with two assemblies unable to provide the pressure relief function necessary to protect the containment. This condition would appear to be undefined in the current TS; however, with these conditions, primary containment integrity requirements would not be met and HCGS would currently default to the action of TS 3.6.1.1 that allows 1 hour for restoration. This is the same completion time as for the proposed Action b. There is, therefore, no change in intent and this change is considered to be administrative."
8. Change A11: "The existing Action b is re-lettered as Action c. This is considered to be an editorial/administrative change."
9. Change A12 (from supplement): "The re-lettered Action c is modified to clarify that the action covers the condition in which one valve in each of the two vacuum breaker

assemblies is not closed. This revision is consistent with the STS and describes a condition in which redundancy is lost but functionality is maintained. This change can be viewed as being less restrictive than current requirements because of the need to enter TS 3.0.3 for a condition not defined by the specifications."

10. Change A13 (from supplement): "The phrase 'verify the other vacuum breaker assembly valve in the line to be closed within 2 hours' is deleted from the re-lettered Action c. In accordance with TS 3.0.1, if, at any time, the other vacuum breaker assembly valve is found or known to be open, SR 4.6.4.2.a is not met and the new Action d would be entered upon discovery. The proposed Action d provides a more conservative action time (1 hour) than the action time in the deleted phrase (2 hours). As a result, the 'verification' in the re-lettered Action c is implicitly included in the new Action d. The change is considered to be a more restrictive change because the new Action d only provides 1 hour to correct the condition. The deletion of the explicit requirement to check the other valve can be interpreted as being less restrictive; however, the proposed reduction in the completion time to 1 hour for restoring the assembly is more restrictive than the existing specification and provides for a more restrictive specification overall."
11. Change A14: "The phrase 'restore the open vacuum breaker assembly valve(s) to the closed position' in re-lettered Action c is changed to the phrase 'close the open vacuum breaker assembly valve(s).' Both phrases are considered to require the same action. This change is intended only for the purpose of making the TS wording consistent with the STS wording. As a result, the change is considered to be an administrative change."
12. Change L6: "The existing old Action c regarding the vacuum breaker position indicators, and the associated surveillance requirements (SR 4.6.4.2.b.1.b and SR 4.6.4.2.b.2.c) are deleted. Position indication does not necessarily relate directly to the respective system operability. NUREG-1433 does not specify indication only equipment to be operable to support operability of a system or component. Position indication instrumentation availability and compensatory activities for inoperable position indication are controlled by plant procedures and policies. Vacuum breaker position must be known to be able to satisfy proposed SR 4.6.4.2.a, SR 4.6.4.2.b.1, and SR 4.6.4.2.b.2. If position indication is not available and vacuum breaker position cannot be determined, the SRs cannot be satisfied and actions must be taken for inoperable vacuum breakers in accordance with the applicable action statements. As a result, the requirements for vacuum breaker position indication are adequately addressed by the requirements of TS 3/4.6.4.2. This change maintains consistency with the STS and is considered to be a less restrictive change."
13. Change M2 (from supplement): "A new Action d is added to cover the condition in which both valves in one or both assemblies are open. As noted above, when a vacuum breaker assembly valve is open, the current TS requires that the other assembly valve be verified closed within 2 hours. If both valves are then (within 2 hours) determined to be open, TS 3.6.1.1 would apply and action would be taken to restore a valve within 1 hour or the plant would be placed in HOT SHUTDOWN within the next 12 hours. It should be noted that both valves open may also be viewed as requiring entrance into TS 3.0.3, which has similar Actions. The action time specified in new Action d decreases this time to 1 hour to be consistent with the time provided in TS 3.6.1.1 for primary containment

integrity not maintained. This is also consistent with the requirements of TS 3.0.3. This results in a more restrictive specification."

14. Change L7: "The frequency of verifying that each vacuum breaker is closed is changed from once per 7 days to once per 14 days. For position verification of most other safety-related valves, including those that affect primary containment, the frequency is 31 days. Based on the longer interval for similar verification of similar components and the fact that the valves are normally found in the correct position, the 14-day interval is considered to be adequate. This change maintains consistency with the STS and is considered to be a less restrictive change."
15. Change A15: "A footnote is added to SR 4.6.4.2.a to indicate that this surveillance requirement does not have to be met for vacuum breakers that are open during surveillances or that are performing their intended function. This change allows the vacuum breakers to be considered operable during surveillances or when performing their intended function and prevents unnecessary entry into the actions statements. Since the vacuum breakers are clearly operable (capable of performing their intended function) during these conditions, this change is considered to be administrative in nature."
16. Change A16: "The phrase 'Cycling each vacuum breaker through at least one complete cycle of full travel' in SR 4.6.4.2.b.1.a is replaced by the phrase 'Performing a functional test of each vacuum breaker assembly valve.' Both phrases are considered to require the same testing. This change is intended only for the purpose of making the TS wording consistent with the STS wording. As a result, the change is considered to be an administrative change."
17. Change A17: "Surveillance Requirement 4.6.4.2.b.2.a is modified from 'Demonstrating the force required to open each vacuum breaker valve does not exceed the equivalent of 0.25 psid' to 'Verifying the opening setpoint of each vacuum breaker assembly valve to be less than or equal to 0.25 psid.' Both phrases are considered to require the same testing. This change is intended only for the purpose of making the TS wording consistent with the STS wording. As a result, the change is considered to be an administrative change."
18. Change L8: "Surveillance Requirement 4.6.4.2.b.2.b regarding visual inspection of the vacuum breaker assemblies is deleted. Details of visual inspections of the vacuum breaker assemblies are contained in plant procedures. These details are not necessary to ensure the operability of the vacuum breaker assemblies. The vacuum breaker assembly valves are still required to be cycled and their setpoint verified in accordance with SRs 4.6.4.2.b.1.a and 4.6.4.2.b.2.a, respectively to ensure their operability. The requirements for the vacuum breaker visual inspection are adequately addressed by the requirements of TS 3.6.4.2 and the associated SRs, and the visual inspections are, therefore, deleted from the TS. This change maintains consistency with the STS and is considered to be a less restrictive change."
19. Change L9: "Surveillance Requirement 4.6.4.2.b.2.d regarding verification of the instrument actuation system for the inboard isolation valve auto open control system operability by channel calibration is deleted. The requirement of SR 4.6.4.2.b.2.a to

ensure that the vacuum breakers are full open at 0.25 psid is sufficient to demonstrate operability. Vacuum breaker actuation instrumentation is required to be operable to satisfy the setpoint verification surveillance requirement for the vacuum breakers. If the vacuum breaker actuation instrumentation is inoperable, the surveillance requirement cannot be satisfied and actions must be taken for inoperable vacuum breakers in accordance with the applicable action statements. As a result, the requirements for the vacuum actuation instrumentation are adequately addressed by the requirements of TS 3/4.6.4.2. This change maintains consistency with the STS and is considered to be a less restrictive change."

20. Change to Bases: "The Bases have been expanded to be consistent with the STS Bases."

In addition, the licensee proposed a change to TS 3.6.2.1. The following description was included in the licensee's October 12, 2000, application:

Change A18: "Surveillance Requirement 4.6.2.1.b.2.c is being renumbered as SR 4.6.2.1.c. Suppression chamber/heat sink operability is contingent on volume and temperature. As long as the temperature is below 95 °F and no testing [that] adds heat to the pool is in progress, the monitoring frequency is once per 24 hours. Above 95 °F, the monitoring frequency is increased in Operational Conditions 1 and 2 as well as in Operational Condition 3. As currently written, the surveillance requirement for Operational Condition 3 is embedded in the requirements for Operational Conditions 1 and 2. This change corrects the indentation of the Operational Condition 3 surveillance requirement and re-letters the subsequent items and is considered to be administrative in nature."

The licensee also provided the following descriptions of the significant differences between their proposed changes and the STS for TSs 3.6.4.1 and 3.6.4.2:

"The surveillance frequency for SR 4.6.4.1.a includes only the fixed frequency of 14 days. The other NUREG-1433 frequencies that require the vacuum breakers to be verified closed after the vacuum breakers may have been opened (i.e., within 2 hours of any discharge of steam to the suppression chamber from the SRVs or any operation that causes the drywell-to-suppression chamber differential pressure to be reduced by a specified amount) are not included. These other surveillance frequencies are not part of the current HCGS TSs (i.e., current licensing basis). Surveillances must be continually met (TS 3.0.1), therefore, if the vacuum breakers are open and the surveillance frequency is not yet due, the SR would be considered not met (except for conditions defined in the proposed note for SR 4.6.4.1.a and SR 4.6.4.2.a) and appropriate actions would be required to be taken. There are instances where other valves are required to be closed and verified closed on a periodic basis. If these other valves are cycled (e.g., ECCS valves), existing plant administrative controls ensure that the valves are left in the correct position; a 'special surveillance frequency' is not required. In addition, these vacuum breakers have position indication in the control room and are continuously monitored by control room operators. If conditions exist for the vacuum breakers to be potentially opened, control room operators would be alert to the possibility and ensure that the

vacuum breakers were closed at the completion of the evolution. As a result, existing control room indication of valve position should alert operators if a valve is incorrectly in an open position. Therefore, in accordance with SR 3.0.1, the proper LCO actions would be taken."

"The surveillance frequency for SR 4.6.4.1.b.1 includes only the fixed frequency of 31 days and the event-driven frequency of within 12 hours after any discharge of steam to the suppression chamber from the SRVs. The other NUREG-1433 frequency that requires the vacuum breakers to be verified closed within 12 hours following an operation that causes any of the vacuum breakers to open is not included. This other surveillance frequency is not part of the current HCGS TSs (i.e., current licensing basis). Since the vacuum breakers are designed to operate and assumed to function after a LOCA blowdown, operation of the vacuum breakers following a minor steam release from the SRVs should not raise any questions regarding immediate operability. Steam discharged to the suppression chamber, resulting in increased pressure and vacuum breaker opening, could pose a long-term equipment degradation issue, but not an immediate operability concern. The 12-hour frequency to perform a functional test following an operation that causes any of the vacuum breakers to open is meaningless for detecting long-term degradation. The issue of long-term degradation is adequately and more appropriately addressed by the 31-day SR."

"The HCGS TS completion time convention for shutdown actions statements (i.e., be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours) is retained. Adopting the STS completion time convention (i.e., be in MODE 3 in 12 hours and in MODE 4 in 36 hours) would create inconsistencies with the other HCGS TS and could create confusion."

"The HCGS TSs are retaining the terminology 'vacuum breaker assembly' in the proposed changes. At HCGS, there are two vacuum breaker assemblies with each vacuum breaker assembly containing two vacuum breaker valves (an air-operated butterfly valve and a check valve)."

**TABLE 1**  
**Required Actions Associated With HCGS TS 3.6.4.2**  
**Reactor Building - Suppression Chamber Vacuum Breakers**

C o n f i g	Discovered Valve Configuration				Required Action Before TS Change (Old 3.6.4.2.b)	Required Action After TS Change (New 3.6.4.2.c and 3.6.4.2.d)
	1a	1b	2a	2b		
1	●	●	●	●	Okay as is (both valves closed)	Okay as is (both valves closed)
2	○	●	●	●	Verify 1b closed within 2 hrs (it is) close 1a in 72 hrs or be in HS within next 12 hrs...	3.6.4.2.c Close 1a in 72 hrs or be in HS within next 12 hrs...
3	○	○	●	●	Verify 1b closed within 2 hrs (its not) invoke 3.0.3 (initiate shutdown within 1 hour, close 1a or 1b to exit 3.0.3)	3.6.4.2.d Close 1a <u>or</u> 1b within 1hr or be in HS within next 12 hrs... <i>then</i> 3.6.4.2.c Close remaining open valve within 72 hrs of discovery or be in HS within next 12 hrs...
4	○	●	○	●	Invoke 3.0.3 (initiate shutdown within 1 hour, close 1a or 2a to exit 3.0.3)	3.6.4.2.c Close 1a <u>and</u> 2a within 72 hrs or be in HS within next 12 hrs...
5	○	○	○	●	Invoke 3.0.3 (initiate shutdown within 1 hour, close 2 of 3 open valves to exit 3.0.3)	3.6.4.2.d Close 1a <u>or</u> 1b within 1hr or be in HS within next 12 hrs... <i>then</i> 3.6.4.2.c Close remaining open valves within 72 hrs of discovery or be in HS within next 12 hrs...
6	○	○	○	○	Invoke 3.0.3 (initiate shutdown within 1 hour, close 3 of 4 open valves to exit 3.0.3)	3.6.4.2.d Close 1a or 1b and close 2a or 2b within 1hr or be in HS within next 12 hrs... <i>then</i> 3.6.4.2.c Close remaining open valves within 72 hrs of discovery or be in HS within next 12 hrs...

● Valve Closed ○ Valve Opened

Old 3.6.4.2.b states that, "With one valve of a reactor building - suppression chamber vacuum breaker assembly open, verify the other vacuum breaker assembly valve in the line to be closed within 2 hours; restore the open vacuum breaker assembly valve to the closed position within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours."

New 3.6.4.2.c states that, "With one or two reactor building - suppression chamber vacuum breaker assemblies with one valve not closed, close the open vacuum breaker assembly valve(s) within 72 hours or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours."

New 3.6.4.2.d states that, "With two valves in one or two reactor building - suppression chamber vacuum breaker assemblies not closed, close one open vacuum breaker assembly valve in each affected assembly within 1 hour or be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours."

### 3.2 Evaluation of Changes Designated by the Licensee as Administrative

The NRC staff reviewed all of the licensee's proposed administrative changes and has found that Changes A4, A10, A12, A13, and A15 involve technical changes that are either more or less restrictive. In addition, Changes A1 and A8 involve requirements relocated to the bases.

With the exception of the changes identified in the preceding paragraph, the administrative changes proposed by the licensee do not involve any technical changes or relocated requirements. More specifically, the administrative changes eliminate, replace, or add words or phrases that would provide increased clarity or would achieve better consistency with the terminology used in the STS. The staff finds these changes acceptable because they are strictly administrative, they appropriately achieve the objective of increased clarity and consistency, and they do not affect the configuration or operation of the facility.

Proposed Changes A1, A4, A8, A10, A12, A13, and A15 are not considered administrative changes and are specifically addressed as follows:

For Changes A1 and A8, the licensee proposes to eliminate the phrase "and closed" from the LCO but adds this clarification to the bases. Therefore, the staff considers this change as a relocation. The staff finds this change acceptable because no actual operating requirements are changing and it provides increased conciseness of the LCO by eliminating unnecessary detail. This change is also consistent with the STS.

For Changes A4 and A15, the licensee proposes to add a footnote, consistent with the STS, to SR 4.6.4.1.a and SR 4.6.4.2.a, respectively, that indicates that the surveillance requirement does not have to be met for vacuum breakers that are open during surveillances or that are performing their intended function. However, the licensee also states that this change "...prevents unnecessary entry into the action statements." Therefore, the staff considers this change as less restrictive.

The staff finds this change acceptable because it is not reasonable to enter an action statement because of a vacuum breaker that opens to perform its intended function during the performance of a surveillance test of other vacuum breakers. In addition, this change is consistent with the policy statement to reduce unnecessary action statement-induced plant transients.

For Change A10, the licensee stated in their April 9, 2001, supplement, "A new Action b is added to cover the condition in which two vacuum breaker assemblies have one or two valves that are inoperable for opening. Unlike change L4, which discussed a single assembly, this change describes a condition with two assemblies unable to provide the pressure relief function necessary to protect the containment. This condition would appear to be undefined in the current TS; however, with these conditions, primary containment integrity requirements would not be met and Hope Creek would currently default to the action of TS 3.6.1.1 that allows 1 hour for restoration. This is the same completion time as for the proposed Action b. There is therefore no change in intent and this change is considered to be administrative."

Contrary to the licensee's justification, the staff finds that this change is not administrative. The licensee considers this change administrative because the current action in TS 3.6.1.1 for the

condition of two valves inoperable for opening is the same as the action proposed to be added to TS 3.6.4.2. However, the licensee failed to recognize that the current action in TS 3.0.3, that would also be required if two valves were inoperable for opening, is more operationally restrictive than the current action in TS 3.6.1.1.

More specifically, under the current TS, if two valves are discovered to be inoperable for opening, TS 3.0.3 would be entered for not meeting the limiting condition for operation and TS 3.6.1.1 would be entered for not maintaining primary containment integrity. In this case, however, TS 3.0.3 would dictate because it is more restrictive. TS 3.0.3 allows 1 hour to initiate shutdown, 6 additional hours to be in startup, 6 additional hours to be in hot shutdown, and 24 additional hours to be in cold shutdown. TS 3.6.1.1 allows 1 hour to perform restoration activities, 12 additional hours to be in hot shutdown, and 24 additional hours to be in cold shutdown.

Notwithstanding, the licensee is proposing to add an action to TS 3.6.4.2 that is the same as the action in TS 3.6.1.1 which would obviate the need to enter either TS 3.0.3 or TS 3.6.1.1 in the event that two valves are discovered inoperable for opening.

The staff finds that TS 3.0.3 and the proposed change both essentially allow 1 hour for corrective actions and both would require the unit to be placed in hot shutdown within the next 12 hours which is consistent with the STS. In addition, by defining a new limiting condition for operation consistent with the STS, TS 3.0.3 would not be entered as frequently thereby potentially reducing action statement induced plant transients. Therefore, since both the current TS and the proposed TS would achieve hot shutdown within the same amount of time if corrective measures were not successful, and the proposed change is in accordance the Final Commission Policy Statement described in Section 2.0 of this safety evaluation, the staff finds this change acceptable.

For Change A12, the licensee stated in their April 9, 2001, supplement, "The re-lettered Action c is modified to clarify that the action covers the condition in which one valve in each of the two vacuum breaker assemblies is not closed. This revision is consistent with the STS and describes a condition in which redundancy is lost but functionality is maintained. This change can be viewed as being less restrictive than current requirements because of the need to enter TS 3.0.3 for a condition not defined by the specifications."

The current Action b (proposed to be re-lettered to c and modified), applies only to the condition when one valve in one vacuum breaker assembly is open. Therefore, if both assemblies are discovered to each have an open valve, the limiting condition for operation is not met, and the licensee's actions would immediately be subject to the requirements of TS 3.0.3. TS 3.0.3 would require shutdown initiation within 1 hour, thereby providing 1 hour to take corrective action. The proposed change would allow 72 hours to take corrective action and an additional 12 hours to be in hot shutdown.

However, when both vacuum breaker assemblies each have one open and one closed valve, containment integrity is maintained and venting can also still be accomplished. In addition, when containment integrity is not being compromised, 72 hours to perform corrective actions is consistent with the STS and the other changes proposed by the licensee. Furthermore, by

defining a new limiting condition for operation consistent with the STS, TS 3.0.3 would not be entered as frequently, thereby potentially reducing action statement induced plant transients. Therefore, the staff finds this change acceptable.

For Change A13, the licensee stated in their April 9, 2001, supplement, "The phrase 'verify the other vacuum breaker assembly valve in the line to be closed within 2 hours' is deleted from the re-lettered Action c. In accordance with TS 3.0.1, if, at any time, the other vacuum breaker assembly valve is found or known to be open, SR 4.6.4.2.a is not met and the new Action d would be entered for the upon [sic] discovery. The proposed Action d provides a more conservative action time (1 hour) than the action time in the deleted phrase (2 hours). As a result, the "verification" in the re-lettered Action c is implicitly included in the new Action d. The change is considered to be a more restrictive change because the new Action d only provides one hour to correct the condition. The deletion of the explicit requirement to check the other valve can be interpreted as being less restrictive; however, the proposed reduction in the completion time to one hour for restoring the assembly is more restrictive than the existing specification and provides for a more restrictive specification overall."

The result of this proposed change is that the licensee has slightly less time available to place the unit in an operational condition to which the specification does not apply if corrective action is necessary and is not successful within the required time. Consequently, this change is slightly more restrictive. However, the proposed amount of time for these actions is consistent with the STS, is consistent with the other changes requested by the licensee, and is still a reasonable amount of time to perform the required operations. Therefore, the staff finds this change acceptable.

### 3.3 Evaluation of Changes Designated by the Licensee as Relocated Information

The proposed changes include relocating information from action statements and limiting conditions for operation to the Bases. This information is, however, either logically redundant or provides an unnecessary level of detail. No actual conditions or requirements are being removed from the action statements or surveillance requirements. The staff finds these changes acceptable because they appropriately provide increased clarity and conciseness and they do not affect the configuration or operation of the facility.

### 3.4 Evaluation of Changes Designated by the Licensee as More Restrictive

The following are safety significant changes because they affect safety system requirements while adding operational flexibility. Therefore, each proposed change categorized as more restrictive is addressed individually.

For Change M1, the licensee states, "The phrase "or more" is removed from Action b. This change is considered to be more restrictive than the current TS since only one vacuum breaker will be allowed to be open during the two-hour completion time for closure. This change maintains consistency with the STS and is considered to be a more restrictive change."

As a result of the proposed change, upon the discovery of more than one open vacuum breaker, TS 3.0.3 would be invoked. The significance of an open vacuum breaker is that it

provides a large leakage path from the drywell to the suppression chamber during a loss-of-coolant accident which could overpressurize the suppression chamber and, therefore, requires prompt corrective action. This change is consistent with the STS and the staff finds this change acceptable because if more than one vacuum breaker is discovered to be open, it is reasonable to invoke TS 3.0.3 which would further restrict operation when more than one leakage path is present.

For Change M2, the licensee stated in their April 9, 2001, supplement, "A new Action d is added to cover the condition in which both valves in one or both assemblies are open. As noted above, when a vacuum breaker assembly valve is open, the current TS requires that the other assembly valve be verified closed within 2 hours. If both valves are then (within two hours) determined to be open 3.6.1.1 would apply and action would be taken to restore a valve within one hour or the plant would placed in HOT SHUTDOWN within the next 12 hours. It should be noted that both valves open may also be viewed as requiring entrance into TS 3.0.3, which has similar Actions. The action time specified in new Action d decreases this time to 1 hour to be consistent with the time provided in TS 3.6.1.1 for primary containment integrity not maintained. This is also consistent with the requirements of TS 3.0.3. This results in a more restrictive specification."

Contrary to the licensee's justification, the staff finds this change is not more restrictive. The licensee considers this change more restrictive because the proposed change is more restrictive than the current action in TS 3.6.1.1 for the condition of both valves in one or both assemblies discovered to be open. However, as described earlier, TS 3.0.3 is operationally more restrictive than TS 3.6.1.1 and would, therefore, dictate operator actions. Therefore, the licensee should be comparing their proposed change to TS 3.0.3, not TS 3.6.1.1.

More specifically, under the current TS, if both valves in one or both assemblies are discovered to be open, TS 3.0.3 would be entered for not meeting the limiting condition for operation and TS 3.6.1.1 would be entered for not maintaining primary containment integrity. In this case, however, TS 3.0.3 would dictate because it is more restrictive. In this case, TS 3.6.1.1 would also be invoked, but entering TS 3.6.1.1 does not relieve the licensee of the more restrictive requirements of TS 3.0.3. TS 3.0.3 allows 1 hour to initiate shutdown, 6 additional hours to be in startup, 6 additional hours to be in hot shutdown, and 24 additional hours to be in cold shutdown. TS 3.6.1.1. allows 1 hour to perform restoration activities, 12 additional hours to be in hot shutdown, and 24 additional hours to be in cold shutdown.

Notwithstanding, the licensee is proposing to add an action to TS 3.6.4.2 that is the same as the action in TS 3.6.1.1 which would obviate the need to enter either TS 3.0.3 or TS 3.6.1.1 in the event that two valves in one or two assemblies are discovered to be open.

The staff finds that TS 3.0.3 and the proposed change both essentially allow 1 hour for corrective actions and both would require the unit to be placed in hot shutdown within the next 12 hours which is consistent with the STS. In addition, by defining a new limiting condition for operation consistent with the STS, TS 3.0.3 would not be entered as frequently thereby potentially reducing action statement induced plant transients. Therefore, since both the current TS and the proposed TS would achieve hot shutdown within the same amount of time if corrective measures were not successful, and the proposed change is in accordance the Final

Commission Policy Statement described in Section 2.0 of this safety evaluation, the staff finds this change acceptable.

However, both TS 3.0.3 and the proposed change allow 1 hour for corrective action and both would require the unit to be placed in hot shutdown within the next 12 hours which is consistent with the STS. In addition, by defining a new limiting condition for operation consistent with the STS, TS 3.0.3 would not be entered as frequently, thereby potentially reducing action statement induced plant transients. Therefore, the staff finds this change acceptable.

### 3.5 Evaluation of Changes Designated by the Licensee as Less Restrictive

The following are safety significant changes because they are less restrictive than the current TS requirements. Therefore, each proposed change is addressed individually.

Change L1: The licensee proposes to delete Action c of TS 3.6.4.1 and the associated surveillance requirements, SRs 4.6.4.1.b.2 and 4.6.4.1.b.3.b. These sections include requirements associated with the suppression chamber - drywell vacuum breaker position indicators.

The licensee proposed removing the requirement that vacuum breaker operability be contingent on the operability of the position indicators. The licensee has determined that these instruments have only an indication function and do not impact the operability of the vacuum relief system. There are no automatic or interlock functions associated with these instruments. In addition, the position of the vacuum breakers is required to be known to meet the operability requirements defined by the remaining SRs. If vacuum breaker position cannot be determined, the SRs cannot be satisfied and appropriate actions must be taken for inoperable vacuum breakers. The surveillances of these instruments and necessary compensatory actions, if they are not available, are addressed by plant procedures.

The staff has reviewed the action statement and related SRs proposed to be removed from the HCGS TSs against the criteria of 10 CFR 50.36(c)(2)(ii) and determined that none of the criteria applies to the TSs that are being removed as discussed below:

Criterion 1: "Installed instrumentation that is used to detect, and indicate in the control room, a significant abnormal degradation of the reactor coolant pressure boundary."

Evaluation: The suppression chamber to drywell vacuum breaker position indicators do not detect or indicate a significant degradation of the reactor coolant pressure boundary. The vacuum breakers are normally closed and are opened to equalize pressure between the drywell and suppression pool to avoid exceeding the drywell floor differential pressure design limit. Indication that a vacuum breaker is opening to achieve its designed purpose does not indicate degradation of the reactor coolant pressure boundary.

Criterion 2: "A process variable, design feature, or operating restriction that is an initial condition of a design basis accident (DBA) or transient analysis that either assumes the failure of or presents a challenge to the integrity of a fission product barrier."

Evaluation: The accident analyses assume a failure of one suppression chamber to drywell vacuum breaker or the failure of one suppression chamber to reactor building purge valve. However, the indicators that provide remote indication of the vacuum breakers' position are not assumed to be operable in the accident analyses. This is consistent with the STS and the TS will continue to require that the vacuum breakers be verified closed.

Criterion 3: "A structure, system, or component that is part of the primary success path and which functions or actuates to mitigate a DBA or transient that either assumes the failure of or presents a challenge to the integrity of a fission product barrier."

Evaluation: The vacuum breaker position indicators serve no active function in an accident or transient.

Criterion 4: "A structure, system, or component which operating experience or probabilistic safety assessment has shown to be significant to public health and safety."

Evaluation: These instruments have not been shown to be significant to public health and safety.

Existing TS requirements which fall within or satisfy any of the above criteria must be retained in the TSs, while those TS requirements which do not fall within or satisfy these criteria may be relocated to other, licensee-controlled documents.

Because the suppression chamber - drywell vacuum breaker position indicators do not meet the criteria of 10 CFR 50.36(c)(2)(ii) as being required to be included in the TSs, the staff has concluded that deleting the associated TS action statement and surveillances is acceptable.

Change L2: The licensee proposes to reduce the frequency of verifying that each vacuum breaker is closed from once per 7 days to once per 14 days.

The licensee stated that for position verification of most other safety-related valves, including those that affect primary containment, the frequency is 31 days. Based on the longer interval for similar verification of similar components and based on the licensee's operational experience, the valves are normally found in the correct position. Therefore, the staff finds the 14-day surveillance frequency acceptable. The proposed change is also consistent with the STS.

Change L3: The licensee proposes that the time requirement to perform functional testing after any discharge of steam to the suppression chamber from the safety relief valves (SRVs) be changed from 2 hours to 12 hours.

As stated by the licensee in their application, this change is consistent with the STS and is endorsed by Generic Letter 93-05, "Line-Item Technical Specifications Improvements to Reduce Surveillance Requirements for Testing During Power Operation," item 8.4. In addition, the licensee's application states that the operability of a vacuum breaker is not affected by an SRV lift and is not safety significant. The staff agrees with the licensee's determination that the

operability of the vacuum breakers are not affected by an SRV lift, and therefore finds this change acceptable.

Change L4: The licensee proposes to modify Action a to include the condition in which both valves in one vacuum breaker assembly are inoperable for opening.

As stated by the licensee in their application, the existing action includes only the condition in which one valve in an assembly is inoperable for opening. The staff determined that the proposed change recognizes that there are two valves in series in each of two vacuum breaker assemblies between the reactor building and suppression chamber. If one vacuum breaker assembly valve will not open, the vacuum breaker assembly is inoperable and not able to perform its relief function. Therefore, the potential consequences of two inoperable vacuum breaker assembly valves in the same assembly are no greater than one inoperable vacuum breaker assembly valve. In either case, containment integrity is maintained and venting capability is maintained through the redundant operable vacuum breaker assembly. Therefore, the staff finds this change acceptable.

Change L6: The licensee proposes to delete Action c, SRs 4.6.4.2.b.1.b and 4.6.4.2.b.2.c. These sections include requirements associated with the vacuum breaker position indicators.

As stated by the licensee in their application, position indication instrumentation availability and compensatory activities for inoperable position indication are controlled by plant procedures and policies. The staff determined that vacuum breaker position must be known to be able to satisfy proposed SRs 4.6.4.2.a, 4.6.4.2.b.1, and 4.6.4.2.b.2. If position indication is not available and vacuum breaker position cannot be determined, the SRs cannot be satisfied and actions must be taken for inoperable vacuum breakers in accordance with the applicable action statements. In addition, a loss of position indication is not related to the system's ability to perform its required function. In this regard, in comparison to the requirements of the STS, the current TS is overly restrictive in that a loss of position indication could lead to a shutdown. In addition, the STS does not specify any position indication requirement. Furthermore, as described earlier, one of the ways that implementation of the STS is expected to produce an improvement in the safety of nuclear power plants is by reducing action statement-induced plant transients. Accordingly, this change is consistent with the STS and the policy statement, and since the vacuum breaker position must be known to satisfy plant procedures, the staff finds this change acceptable.

Change L7: The licensee proposed to reduce the frequency of verifying that each vacuum breaker is closed from once per 7 days to once per 14 days.

As stated by the licensee in their application, the position verification frequency of most other safety-related valves, including those that affect primary containment, is 31 days. In addition, the licensee stated that because the valves are normally found in the correct position, the 14-day interval is considered to be adequate. This change maintains consistency with the STS and because operating experience has shown that the 14-day interval is adequate, the staff finds this change acceptable.

Change L8: The licensee proposes to delete SR 4.6.4.2.b.2.b which requires visual inspection of the vacuum breaker assemblies.

As stated by the licensee in their application, visual inspection of the vacuum breaker assemblies at least once per 18 months is not required to ensure their operability. Operability of the vacuum breaker assembly valves is ensured by functional testing at least once per 31 days in accordance with SR 4.6.4.2.b.1.a and by verifying their opening setpoint at least once per 18 months in accordance with SR 4.6.4.2.b.2. Visual inspection is not a requirement of the STS and since visual inspection is not required to ensure operability, the staff finds this change acceptable.

Change L9: The licensee proposes to delete SR 4.6.4.2.b.2.d which requires verification of the instrument actuation system for the inboard isolation valve auto open control system operability by channel calibration.

As stated by the licensee in their application, vacuum breaker actuation instrumentation is required to be operable to satisfy the setpoint verification surveillance requirement for the vacuum breakers. If the vacuum breaker actuation instrumentation is inoperable, the surveillance requirement cannot be satisfied and actions must be taken for inoperable vacuum breakers in accordance with the applicable action statements. Therefore, the requirement of SR 4.6.4.2.b.2.a to ensure that the vacuum breakers are full open at 0.25 psid is sufficient to demonstrate operability. This change is consistent with the STS and because SR 4.6.4.2.b.2.d is not required to demonstrate operability, the staff finds this change acceptable.

### 3.6 Comparison of Proposed Changes to the STS

In their application, the licensee included a section discussing the significant differences between the proposed changes and STS. The licensee cites differences in terminology and in specific surveillances. Regarding terminology, the licensee proposes to maintain the convention of stating the additional amount of time required to enter each subsequent operating mode instead of the STS convention of stating the total amount of time during which each mode must be entered. In addition, the licensee proposes to maintain the description of each mode instead of using a numeric designation. For example, where the STS states, "Be in MODE 3 in 12 hours and Be in MODE 4 in 36 hours," the HCGS TS equivalent would state, "be in at least HOT SHUTDOWN within the next 12 hours and in COLD SHUTDOWN within the following 24 hours. The staff finds this acceptable in order to maintain consistency with the other sections of the HCGS TSs.

The licensee also proposed maintaining the terminology "vacuum breaker assembly" instead of "vacuum breakers" which is used in the STS. The staff also finds this acceptable since the proposed terminology clarifies the component configuration and differentiates this component from other types of vacuum breakers at HCGS.

The licensee also stated that the STS includes two surveillances associated with "suppression chamber-to-drywell vacuum breakers" that are not included in the proposed changes to the HCGS TSs. The first STS requirement is to verify that each suppression chamber-to-drywell vacuum breaker is closed "Within 2 hours after any discharge of steam to the suppression

chamber from the safety/relief valves (S/RVs) operation that causes the drywell-to-suppression chamber differential pressure to be reduced by  $\geq [0.5]$  psid." The second STS requirement that is not included in the proposed changes to the HCGS TSs is to perform a functional test of each required suppression chamber-to-drywell vacuum breaker "[w]ithin 12 hours following an operation that causes any of the vacuum breakers to open."

Neither surveillance requirement is currently part of the licensing basis for the HCGS. Consequently, neither surveillance is required to be included in the HCGS TSs. Therefore, the staff finds that the differences between the STS and the proposed changes described above are acceptable.

### 3.7 Summary and Conclusion

The licensee submitted a variety of TS changes that were categorized as either administrative, more restrictive, less restrictive, or as a relocation of information. In addition, the licensee submitted a change to the TS Bases and provided a description of the significant differences between the proposed changes and the STS. The staff noted that the licensee's categorization of some of the changes was based on an inaccurate interpretation of the TSs. However, the staff reviewed each proposed change based on the description of the proposed change regardless of the category determined by the licensee. Therefore, the licensee's categorization had no effect on the staff's review.

In conclusion, the staff finds that the licensee's proposed changes, which are consistent with the STS, as modified to conform to their current licensing basis, would provide greater clarity and consistency within the HCGS TSs. In addition, many of the proposed changes are in accordance with the goals of the Final Commission Policy Statement on Technical Specification Improvements for Nuclear Power Reactors by: providing an expanded TS Bases consistent with the proposed changes, and, by providing greater operational flexibility to perform compensatory actions which would potentially reduce action statement induced plant transients. Other changes appropriately reduce the time that a potential radiological leakage path may be present and reduce surveillance frequencies based on operational experience or NRC guidance. Therefore, the staff finds that all the changes proposed by the licensee are acceptable.

### 4.0 STATE CONSULTATION

In accordance with the Commission's regulations, the New Jersey State Official was notified of the proposed issuance of the amendment. In a letter dated July 17, 2001, the State Official provided the following comments:

Removing the operability requirements for vacuum breaker position indication in conjunction with doubling the required surveillance interval, increases the risk associated uncertainty in vacuum breaker position. PSEG's justification for doubling the surveillance interval is based on experience. We request that a more risk informed justification be provided. Many technical specification changes make use of the Standard Technical Specifications. This one is another important example of that trend. The continued piecemeal use of

Standard Technical Specifications raises the necessity for PSEG to convert to the Standard Technical Specifications. The NRC was encouraging licensees to adopt Standard Technical Specifications. That approach seems to have changed in the last few years.

Regulatory Guide 1.174, "An Approach for Using Probabilistic Risk Assessment In Risk-Informed Decisions On Plant-Specific Changes to the Licensing Basis," dated July 1998, states that: "[l]icensee-initiated LB [licensing basis] changes that are consistent with currently approved staff positions (e.g., regulatory guides, standard review plans, branch technical positions, or the Standard Technical Specifications) are normally evaluated by the staff using traditional engineering analyses. A licensee would not be expected to submit risk information in support of the proposed change." The licensee has proposed to change the frequency of verifying that each vacuum breaker is closed from once every 7 days to once every 14 days. The 14-day interval is consistent with the STS. The 14-day Frequency is based on engineering judgement, is considered adequate in view of other indications of vacuum breaker status available to operations personnel, and has been shown to be acceptable through operating experience. Therefore, the NRC staff concludes that the licensee does not need to provide a risk-informed justification for the proposed change in surveillance interval.

NUREG-1433, Revision 2, dated April 2001, states that: "[l]icensees are encouraged to upgrade their technical specifications consistent with those criteria and conforming, to the practical extent, to Revision 2 to the improved STS. The Commission continues to place the highest priority on requests for complete conversions to the improved STS. Licensees adopting portions of the improved STS to existing technical specifications should adopt all related requirements, as applicable, to achieve a high degree of standardization and consistency." Although complete conversion to the STS is encouraged as a matter of Commission policy, there is no regulatory requirement to do so.

## 5.0 ENVIRONMENTAL CONSIDERATION

The amendment changes the limiting conditions of operation and surveillance requirements with respect to use of facility components located within the restricted area as defined in 10 CFR Part 20 and changes surveillance requirements. The NRC staff has determined that the amendment involves no significant increase in the amounts, and no significant change in the types, of any effluents that may be released offsite, and that there is no significant increase in individual or cumulative occupational radiation exposure. The Commission has previously issued a proposed finding that the amendment involves no significant hazards consideration, and there has been no public comment on such finding (65 FR 71137). Accordingly, the amendment meets the eligibility criteria for categorical exclusion set forth in 10 CFR 51.22(c)(9). Pursuant to 10 CFR 51.22(b) no environmental impact statement or environmental assessment need be prepared in connection with the issuance of the amendment.

## 6.0 CONCLUSION

The Commission has concluded, based on the considerations discussed above, that: (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) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

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