March 12, 2001

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

FROM: Richard B. Ennis, Project Manager, Section 2 **/RA/**
Project Directorate I
Division of Licensing Project Management
Office of Nuclear Reactor Regulation

SUBJECT: HOPE CREEK GENERATING STATION, FACSIMILE TRANSMISSION, ISSUES TO BE DISCUSSED IN AN UPCOMING CONFERENCE CALL (TAC NO. MB0323)

The attached information was transmitted by facsimile on March 9, 2001, to Mr. John Nagle of PSEG Nuclear LLC (PSEG or the licensee). This information was transmitted to facilitate an upcoming conference call in order to clarify the licensee's submittal dated October 12, 2000. This submittal requested approval of numerous changes to Technical Specification section 3/4.6.4 affecting "Reactor Building to Suppression Chamber" and "Suppression Chamber to Drywell" vacuum breakers for Hope Creek Generating Station. This memorandum and the attachment comments do not convey a formal request for information or represent an NRC staff position. The attached comments were provided to the licensee to ensure a mutual understanding of specific issues and to provide the licensee the opportunity to clarify the characterization of their proposed changes in order to facilitate further review by the staff.

Docket No. 50-354

Attachment: Issues for Discussion in Upcoming Telephone Conference

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Issues for Discussion in Upcoming Telephone Conference
Related to PSEG License Change Request H00-01, dated October 12, 2000
Changes to Vacuum Breaker Requirements

Italicized paragraphs are from PSEG's application dated October12, 2000. The non-italicized paragraphs are comments by NRC staff (John Harrison).

1. *Change A10: 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. 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.*

   This explanation is contrary to the explanation provided for Change L4. With the condition of one or two valves inoperable for opening, primary containment integrity is maintained since the valves are closed. Change L4 supports this by stating that, "If two vacuum breaker valves in one vacuum breaker assembly are inoperable but closed, containment integrity and venting capability [through the redundant assembly] are still maintained and 72 hours is provided to restore the redundant vacuum breaker assembly." Also, under the current TS, if more than one valve is discovered to be inoperable, 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. Therefore, this is not merely an administrative change because if the corrective measures are not successful, TS 3.0.3 would require shutdown initiation within 1 hour, whereas the proposed change would allow 1 hour to take corrective action and an additional 12 hours to be in hot standby.

2. *Change A12: 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 is consistent with the STS and is considered to be an administrative change to provide clarification.*

   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. 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. Therefore, this is not an administrative change because if the corrective measures are not successful, TS 3.0.3 would require shutdown initiation within 1 hour, whereas the proposed change would allow 1 hour to take corrective action and an additional 12 hours to be in hot standby. Please refer to the attached table depicting all the possible combinations of discovered valve positions.

3. *Change A13: 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* [sic] *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 and is considered to be an administrative change.*

If the "other" vacuum breaker is found to be open, this change is less restrictive because if the corrective measures are not successful, TS 3.0.3 would require shutdown initiation within 1 hour, whereas the proposed change would allow 1 hour to take corrective action and an additional 12 hours to be in hot standby. Please refer to the attached table depicting all the possible combinations of discovered valve positions.

4. *Change M2: 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. Implicit in this action is the requirement to close at least one of the valves in the subject assembly within the two-hour allowance if both valves in the assembly are found open. Otherwise, the plant must be shutdown. The new Action d decreases this time to 1 hour to be consistent with the time provided in Hope Creek TS 3.6.1.1 for primary containment integrity not maintained. The reduction in the completion time is considered to be a more restrictive change.*

   This does not appear to be an accurate interpretation of the Hope Creek Technical Specifications. The current 2 hour time limit is to verify the position of the second valve in the assembly; it is not time allotted to perform corrective measures. If the second valve is discovered to be open, 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. Please refer to the attached table depicting all the possible combinations of discovered valve positions.

5. Change L8 proposes to delete Surveillance Requirement 4.6.4.2.b.2.b. However, the hand-marked TS pages provided by PSEG in their application do not indicate that this TS is to be deleted.

Hope Creek Reactor Building - Suppression Chamber Vacuum Breakers, TAC MB0323

Config	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 **or** 1b within 1hr or be in HS within next 12 hrs... *then* 3.6.4.2.c Close remaining open valve within 72 hrs of initial 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 **and** 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 **or** 1b within 1hr or be in HS within next 12 hrs... *then* 3.6.4.2.c Close remaining open valves within 72 hrs of initial 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... *then* 3.6.4.2.c Close remaining open valves within 72 hrs of initial 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."