

Public Service
Electric and Gas
Company

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Vice President and Chief Nuclear Officer

September 28, 1988

NLR-N88154

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

Gentlemen:

REQUEST FOR AMENDMENT
FACILITY OPERATING LICENSE NPF-57
HOPE CREEK GENERATING STATION
DOCKET NO. 50-354

In accordance with the requirements of 10CFR 50.90, Public Service Electric and Gas Company (PSE&G) hereby transmits a Request for Amendment to Facility Operating License NPF-57 for Hope Creek Generating Station (HCGS). This amendment request revised Technical Specification Tables 2.2.1-1, 3.3.2-1, and 3.3.2-2 to replace the footnote created with the issuance of Amendment 8 (restrictions associated with the hydrogen injection test) with the necessary requirements associated with the installation of a permanent Hydrogen Water Chemistry System. This change would permit the operation of a HWC system by creating two separate main steam line background radiation levels and associated trip setpoints while restricting operation to power levels greater than 20% of Rated Thermal Power.

Attachment 1 provides adequate justification to demonstrate that the proposed change follows the guidance contained in the EPRI Guidelines for Permanent HWC Installation (NP-5283-SR-A reissued September 1987) and the NRC Safety Evaluation Report on the topic dated July 13, 1987. Based upon the justification provided, PSE&G believes that the proposed change does not involve a significant hazards consideration pursuant to 10CFR 50.92, does not require a detailed NRC Branch/specialist review, and therefore, can be processed as a Category 2 (Item 2) amendment request.

In accordance with the requirements of 10CFR 50.4(b)(ii), this submittal includes one (1) signed original, including affidavit, and thirty-seven (37) copies. In accordance with 10CFR 50.91(b)(1), a copy of this request has been sent to the State of New Jersey as indicated below. In accordance with the requirements of 10CFR 170.21, a check in the amount of \$150.00 is enclosed.

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w/check #150
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Should you have any questions or comments on this transmittal, do not hesitate to contact us.

Sincerely,



Attachments (2)
Affidavit

C Mr. J. C. Stone
Licensing Project Manager

Mr. R. W. Borchardt
Senior Resident Inspector

Mr. W. T. Russell, Administrator
Region I

Mr. D. M. Scott, Chief
Bureau of Nuclear Engineering
Department of Environmental Protection
380 Scotch Road
Trenton, NJ 08628

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

Steven E. Miltenberger, being duly sworn according to law deposes and says:

I am Vice President and Chief Nuclear Officer of Public Service Electric and Gas Company, and as such, I find the matters set forth in our letter dated September 28, 1988 , concerning Hope Creek Generating Station, are true to the best of my knowledge, information and belief.

Steven E. Miltenberger

Subscribed and Sworn to before me
this 28th day of September, 1988

Eileen M. Ochs

Notary Public of New Jersey

EILEEN M. OCHS
NOTARY PUBLIC OF NEW JERSEY
My Commission Expires July 16, 1992

My Commission expires on _____

ATTACHMENT 1

PROPOSED CHANGE TO THE TECHNICAL SPECIFICATIONS
FACILITY OPERATING LICENSE NPF-57
HOPE CREEK GENERATING STATION
DOCKET 50-354

LCR 88-05

I. Description of the Proposed Change

Revise Technical Specification (TS) Table 2.2.1-1, Reactor Protection System Instrumentation Setpoints, Table 3.3.2-1, Isolation Actuation Instrumentation, and Table 3.3.2-2, Isolation Instrumentation Setpoints to replace the footnote created with the issuance of Amendment 8 with the footnote shown in Attachment 2. Specifically, this request revises restrictions previously imposed for a hydrogen injection test with the necessary requirements associated with the installation of a permanent hydrogen water chemistry (HWC) system.

II. Reason for the Proposed Change

Public Service Electric and Gas Company (PSE&G) submitted a Request for Amendment on May 22, 1987, as supplemented on June 30, 1987, which revised the Main Steam Line (MSL) Radiation - High, High full power background radiation level and associated trip setpoints in TS tables referenced in Item I above. The requested change created a footnote which permitted the normal full power background radiation level to be increased (and thereby allowed the trip setpoint which is three times this level to be increased) to support a hydrogen injection test. The hydrogen injection test was performed to determine the feasibility of using hydrogen water chemistry as a technique for mitigating Intergranular Stress Corrosion Cracking (IGSCC) in the recirculation piping system and upper core area. The NRC staff approved the proposed change on August 17, 1987 by issuing Amendment 8 to Facility Operating License NPF-57 which revised the referenced TS tables as requested.

The hydrogen injection test was performed during January 1988 and based upon the evaluation of the test data, PSE&G has decided to pursue the installation of a permanent hydrogen water chemistry system. The hydrogen injection test involved the introduction of hydrogen into the secondary condensate pumps at increasing injection rates ranging from 0 to 58 scfm. While the injection was in progress, extensive radiological monitoring, both in plant and external to the station, was conducted (see Item III.8 below for a discussion of the results) and the

electrochemical potential (ECP) of the recirculation piping was measured (this latter measurement is an indication of the resistivity of stainless steel piping to IGSCC.) At a hydrogen injection rate of between 18 and 20 scfm, the optimum ECP reading of -230 mV (SHE) was obtained. A seven day Constant Extension Rate Tensile (CERT) test followed the weekend test during which injection was held steady at approximately 18 scfm and the ECP reading of -230 mV (SHE) was observed to remain constant. The ensuing laboratory analysis of a stainless steel test specimen exposed to this environment confirmed the ability of hydrogen, injected at between 18-20 scfm, to inhibit IGSCC. A consequence of hydrogen injection is an increased carryover of N-16 in the main steam lines which results in an increase in the main steam line radiation levels. Based upon the results of the testing and a review of the radiological impact, PSE&G has decided to design and operate a permanent HWC system which will inject hydrogen into the secondary condensate pumps at a rate of approximately 18 scfm in accordance with the details provided below.

In order to support the operation of a HWC system, the MSL Radiation - High, High setpoint must be increased to account for the higher levels of N-16 in the main steam lines. The MSL Radiation - High, High setpoint is established at three times the normal full power background radiation level. This setpoint is adequate during operation without hydrogen injection and while operation with hydrogen injection does not increase radiation levels above this setpoint, sufficient margin is not afforded for any occasional MSL radiation spiking or inherent instrumentation and control inaccuracies or drift. Therefore, PSE&G has concluded that two separate MSL background radiation levels must be established - one with and one without hydrogen injection - and controlled in a manner similar to the TS footnote contained in Amendment 8.

III. Justification for the Proposed Change

PSE&G is utilizing the EPRI Guidelines for Permanent BWR Hydrogen Water Chemistry Installation as contained in EPRI Special Report NP-5283-SR-A, reissued September 1987 (hereinafter known as the Guidelines). This report has been reviewed and approved by the NRC staff as documented in the letter from J. E. Richardson (NRC) to G. H. Neils (BWROG) dated July 13, 1987. In accordance with Section 3, Conclusions, of the Safety Evaluation Report (SER) accompanying this NRC letter, the EPRI report "...is acceptable for reference in future licensee requests for approval of permanent hydrogen water chemistry installations." However, it was further required that "a licensee request for approval for a permanent hydrogen water chemistry installation that incorporates this Licensing Topical Report by reference should include the following information."

1. Any exceptions or deviations from the "Guidelines for Permanent BWR Hydrogen Water Chemistry Installations," 1987 Revision, Licensing Topical Report.

PSE&G shall follow the above-referenced EPRI report without exception or deviation. This same commitment was made and followed for the hydrogen injection test (Amendment 8 to the Facility Operating License referenced and discussed above.)

2. Justification that any exception or deviation from the Guidelines will not affect the safety of the plant or the public.

As indicated, PSE&G will comply with the referenced Guidelines; therefore, no exceptions or deviations exist.

3. The maximum quantity of stored gaseous hydrogen and/or liquid hydrogen and oxygen and its distance from safety related structures.

Similar design parameters for gaseous storage quantity and location developed for the hydrogen injection test will be utilized for the permanent HWC system. PSE&G will initially utilize two hydrogen tube trailers for the HWC system, each containing approximately 130,000 scf and connected to a common manifold, rather than the one tube trailer utilized during the test, in order to permit continuous system operation without interruption. Rather than supplying oxygen via an oxygen tube trailer, PSE&G will initially utilize a portable oxygen storage tank with the capacity for 3000 gallons of liquid oxygen in order to better control system resupply.

The hydrogen tube trailers will be located outside the southern end of the turbine building at least 75 feet from the building or other structure. This siting is the same as provided during the hydrogen injection test, exceeds the requirements of NFPA 50A (Section 522 and Table 2) as specified in Section 4.1.1.2.1 of the Guidelines, and follows the recommendations identified in Figure 3 of Appendix B of the Guidelines. Furthermore, PSE&G has reviewed the potential hazards and their analyzes described in Sections 4.1.2 and 4.1.3 of the Guidelines (i.e. tube trailer failure due to fire or explosion or breaks in the piping to the trailers) and concludes that for the selected location at HCGS, the separation distance required by NFPA code is acceptable to prevent damage to safety related structures from an accident associated with the hydrogen tube trailers.

The oxygen storage tank will be located outside the radwaste building at least 50 feet from the building or other structure. This siting is the same as provided during the hydrogen injection test and meets the requirements of NFPA

50 (Section 2-2.1.5) as specified in Section 4.4.1.2.1 of the Guidelines. PSE&G has reviewed the potential hazards and their analyzes described in Sections 4.4.2 and 4.4.3 of the Guidelines (i.e. storage tank failure and vapor cloud dispersion) and concludes that for the selected location at HCGS, the separation distance required by NFPA code is acceptable to prevent damage to safety related structures from an accident associated with the oxygen storage tank.

4. Technical Specification changes, if required, to accommodate the expected increase in main steam line radiation setpoint.

The MSL radiation monitor setpoint is specified in TS Tables 2.2.1-1, 3.2.2-1 and 3.2.2-2 as 3.0 times the full power background radiation level. Normal full power background radiation levels in the MSLs range between 33-45 mrem/hour for each of the four main steam lines. As observed during the hydrogen injection test, at an injection rate of between 18 and 20 scfm, the full power MSL background radiation levels increased to approximately 75-80 mrem/hour (see Attachment 3). With the normal full power MSL radiation monitor setpoint established around 99-135 mrem/hour, sufficient margin is not afforded for any occasional MSL radiation spiking or inherent instrumentation and control inaccuracies or drift. Therefore, PSE&G has determined that in order to accommodate the expected increase in the MSL background radiation during operation with a HWC system, two background radiation levels (and hence the associated setpoints) are necessary. As discussed in Section 2.8 of the staff SER for the Guidelines, if a dual MSL radiation monitor setpoint is necessary to accommodate operation with a HWC system, Technical Specification changes are necessary.

Attachment 2 contains the proposed change to TS Tables 2.2.1-1, 3.2.2-1 and 3.2.2-2 which specifies when the HWC system can be operated and identifies restrictions associated with changing the MSL setpoints. First and foremost, the HWC system can not be placed in service until reactor power reaches 20% of Rated Thermal Power. This restriction is based upon the Control Rod Drop Accident which is discussed in detail in Item IV.1 below. After reaching 20% of Rated Thermal Power and prior to placing the HWC system in service, the MSL radiation monitor setpoint can be increased (to account for the increased MSL background radiation level previously determined during the hydrogen injection test) since no other UFSAR Chapter 15 accident scenarios take credit for the operation of the MSL radiation monitor scram and isolation setpoint. Prior to decreasing below 20% of Rated Thermal Power and after the HWC system has been shutoff, the background level and associated setpoint shall be returned to the normal full power values. In accordance with the NRC staff requirements contained in the SER for the Guidelines, if a power

reduction event occurs so that the reactor power is below 20% of Rated Thermal Power without the required setpoint change, control rod motion shall be suspended (except for scram or other emergency actions) until the necessary setpoint adjustment is made.

5. A description of hydrogen and oxygen storage facilities, including safety features.

As discussed in Item III.3 above, PSE&G will initially store hydrogen onsite in mobile tube trailers and oxygen onsite in a portable storage tank until an economic study can be performed to fully evaluate the gas supply options available. The storage conditions at HCGS will follow the recommendations contained in the Guidelines for hydrogen (Section 3.1) and oxygen (Section 3.4). The lines supplying hydrogen from the trailers and oxygen from the storage tank will be routed via pressure retaining piping which is leak tested, prior to either hydrogen or oxygen being introduced in the piping or reintroduced after piping maintenance or repair, with an appropriate gas. Hydrogen monitors are located at various locations along the hydrogen supply line and alarm when the hydrogen concentration exceeds 2% and isolate the line when the concentration reaches 4% to prevent the accumulation of an explosive concentration.

6. A description of the hydrogen and oxygen injection subsystems, including instrumentation, controls and safety features.

Hydrogen will be injected into the feedwater system on the suction side of the secondary condensate pumps. The injection system will meet the standards and design considerations described in Sections 2.3.1.2, 2.3.1.3, 2.4.1 and 2.4.3 of the Guidelines. In summary, the hydrogen control and distribution system will consist of supply lines, various control, safety and excess flow check valves. In addition, various hydrogen monitors located at the condensate booster pumps and near the control valves alarm at 2% and isolate the hydrogen source at 4% hydrogen concentration. Oxygen will be injected into the offgas system prior to entering the catalytic recombiners at approximately one-half of the rate of hydrogen injection. The injection system will meet the codes and design considerations discussed in Sections 2.3.2.2, 2.3.2.3, 2.4.2 and 2.4.3 of the Guidelines. Finally, the trips recommended in Table 2-1 and the instrumentation and control features listed in Table 2-2 of the Guidelines will be utilized to the extent necessary to assure safe and reliable system operation.

7. The delivery route of hydrogen and oxygen supply tank trucks onsite, including the truck capacity.

Hydrogen supply trucks (with an approximate capacity of 130,000 scf) and oxygen supply trucks (with an approximate capacity of 60,000 scf) will enter HCGS through the common security building for both the Salem and Hope Creek Generating Stations at Artificial Island (see the General Site Plan shown in UFSAR Figure 1.2-1.) After obtaining the necessary clearance by security, the trucks will proceed to either the hydrogen or oxygen storage locations. As discussed in Item III.3 above, hydrogen is stored outside the turbine building on the south end of the HCGS facility. Access to the storage location is via a roadway from the security building, west toward the river. In order to deliver oxygen, the truck will continue on the roadway, which encircles the facility, and head north toward the cooling tower. An area outside the radwaste building will be utilized to store the oxygen tank. PSE&G personnel will perform the necessary valve lineups prior to hydrogen or oxygen replacement.

8. A radiological protection program to ensure that radiological exposures to plant personnel and the general public are consistent with ALARA requirements.

As part of the hydrogen injection test conducted under the provisions of Amendment 8 to the Facility Operating License, HCGS conducted an extensive radiological monitoring program. During the test, radiation surveys were taken during each incremental increase in hydrogen injection at various points inside and outside the plant. Detailed results of this monitoring program are available upon request, but in general the following conclusions have been reached.

- At the optimum injection rate, no additional plant shielding is necessary nor are revised access control measures warranted. During operation with a HWC system, worker doses will be maintained ALARA.
- The overall turbine building shine increases slightly within the protected area, i.e. that area inside the security boundary; however, at an injection rate of approximately 18 scf, the increase can be considered negligible since the radiation levels measured are well below the 0.5 mrem/hr level at which radiological controls are required (Zone 1 as identified in UFSAR Table 12.3-1.) Thus the 10 CFR 20.10 restricted area dose standards of 1.25 rem/quarter whole body are not affected.

- Outside the owner controlled area (i.e. beyond PSE&G's property line - an unrestricted area), there are no measureable increases in radiation levels and thus neither the 10 CFR 20.105, 10 CFR 100.11 nor 40 CFR 190 site boundary doses are affected.

Therefore, PSE&G concludes that there are no appreciable affects on either onsite or offsite doses and hence the general public is not impacted by the operation of a HWC system.

9. A discussion on implementation of Water Chemistry Guidelines.

Hope Creek Generating Station is currently operating under the Chemistry Control Program (Procedure SA-AP.ZZ-052) which implements the EPRI "BWR Normal Water Chemistry Guidelines." In order to effectively control the chemistry of the station with the introduction of a permanent hydrogen water chemistry system, PSE&G intends to follow the latest available EPRI Guidelines. These standards are yet to be published, in the form of EPRI "BWR Hydrogen Water Chemistry Guidelines," but based upon the available final draft, EPRI HP-4947-SR-LD dated January 4, 1988, HCGS intends to follow these guidelines.

IV. Significant Hazards Analysis Consideration

The proposed changes to the Technical Specifications:

1. Do not involve a significant increase in the probability or consequences of an accident previously evaluated.

The only accident scenario which takes credit for the MSL high radiation scram and isolation setpoint is the Control Rod Drop Accident (CRDA) as described in the Updated Final Safety Analysis Report (UFSAR) Section 15.4.9. Specifically, the Main Steam Isolation Valves (MSIVs) are assumed to receive an automatic closure signal at 0.5 seconds after detection of high radiation in the main steam lines and to be fully closed at 5 seconds from the receipt of the closure signal. The MSL radiation monitors are provided to detect a gross failure of the fuel cladding. When high radiation is detected, a trip is initiated to reduce the continued failure of fuel cladding. At the same time, the MSIVs are closed to limit the release of fission products. The trip setting is high enough above background radiation levels to prevent spurious trips yet low enough to promptly detect gross failures in the fuel cladding.

NEDO-10527, Supplement 1, "General Electric Rod Drop Accident Analysis for Large Boiling Water Reactors" dated

July 1972 concluded that the consequences of the CRDA are most severe under Hot Standby conditions. Furthermore, the consequences of the CRDA are increasingly less severe above 10 percent power due to a faster Doppler response and a lower rodworth. Finally and most importantly, this report concluded that above 20 percent power the consequences of the CRDA are minimal. Therefore, the Guidelines (Section 8.2.1 and Table 2-1) indicate that the hydrogen injection system should not be operated below the limiting low power setpoint for the CRDA as discussed in the UFSAR. HCGS UFSAR Section 15.4.9 does not actually specify this low power limit; however, Sections 7.7.1.1.5.4 and 7.7.1.1.5.4.1 do - 20% of Rated Thermal Power. This limit is known as the Low Power Setpoint (LPSP) and is contained in Technical Specifications 3/4.1.4.1 (Rod Worth Minimizer) and 3/4.1.4.2 (Rod Sequence Control System).

As a result, the MSL radiation monitor setpoint will only be adjusted upward when the hydrogen water chemistry system is operated. HWC system operation is restricted to power levels greater than 20 percent of Rated Thermal Power. This power level differs from the 22 percent of Rated Thermal Power level contained in Amendment 8 for the hydrogen injection test for two main reasons. First, the hydrogen injection test was only a test, the permanent system is a complete, long-term system with the necessary instrumentation, controls and trips to more accurately control hydrogen injection. Since the HWC system is designed in accordance with the Guidelines and utilizes the experience gained during the hydrogen injection test and from systems installed at other utilities, system operation is closely and accurately controlled and monitored. Second, the Guidelines specify that injection should occur at the LPSP and does not require an additional margin. The hydrogen injection test added an additional 2% power margin simply to assure that the system was not operated below the LPSP. The permanent HWC system will contain sufficient controls to assure operation above the LPSP. Therefore, operating the HWC system at HCGS with such a setpoint (i.e. 20% of Rated Thermal Power) provides adequate assurance that the consequences of a CRDA are negligible when the system is in operation.

Furthermore, in order to assure that the setpoint adjustment process itself does not have any impact on the plant, if a power reduction event occurs so that the reactor power is below 20% of Rated Thermal Power without the required setpoint change, control rod motion will be suspended (except for scrams or other emergency conditions) until the necessary setpoints adjustment is adjusted. This restriction further assures that the possibility of a CRDA occurring while the setpoints are being adjusted is precluded.

Therefore, it can be concluded that the proposed changes to the Technical Specifications do not increase the probability or consequences of an accident previously evaluated.

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

The proposed changes do not affect the design of any safety related systems and as such do not affect the performance of any safety related functions. The proposed changes do permit the operation of the station with a new system, namely a hydrogen water chemistry system. However, this system has been extensively analyzed by EPRI, approved for use by the NRC (reference the Guidelines and the associated NRC SER on them cited in Item III above), and is in operation at a variety of utilities including the Dresden-2, Fitzpatrick and Duane Arnold stations. Attachment 4 contains a graphical comparison of the operation of HWC systems at these and other utilities which have utilized the services of General Electric in the design and operation of the hydrogen injection test and hydrogen water chemistry system.

The decision to seek a permanent change to the HCGS Technical Specifications is plant specific since a change is necessary only if the increase in the MSL radiation levels does not provide an acceptable margin to the MSL radiation monitor setpoint established without operation of a HWC system. Although the operation of a HWC system introduces hydrogen in the recirculation system, this condition has already been analyzed in UFSAR Sections 6.2.5 (Combustible Gas Control System), 10.4.2 (Main Condenser Evacuation System), and 11.3.2.1 (Offgas System). In addition, the level of hydrogen in the offgas system is controlled and monitored in accordance with Technical Specifications 3/4.3.7.11 and 3/4.11.2.6, respectively.

PSE&G is evaluating the impact of slightly increased radiation levels in the plant against the equipment qualification criteria for systems and components located in the affected areas. Any changes in qualified life or service will be accounted for in the design/installation of the HWC system and reflected in the plant prior to HWC system operation.

With regard to the presence of hydrogen and oxygen in the yard, the two mediums meet the requirements of NPPA 50 and 50A for separation from the facility as discussed in Item III.3 above. UFSAR Section 9.5.1.1.11 has analyzed the presence and storage of combustible materials in the yard and the HWC hydrogen and oxygen storage facilities do not affect the conclusions reached (other than the incorporation of the storage information in Table 9.5-3). Finally, in

following the EPRI Guidelines and addressing the NRC staff requirements in Item III above, PSE&G concludes that the probability for an explosion, flammable vapor cloud or fire is minimized. Even if such an accident were to occur, there would be no impact of the station due to the separation distance to the storage vessels from safety related structures. Thus the information contained in UFSAR Section 2.2.3.1 is not affected due to the presence of a HWC system.

Finally, extensive safety features for the HWC system have been established which provide assurance that the operation of the system at HCGS will not create an unacceptable situation nor adversely impact the operation of any other system. Therefore, since the changes to the Technical Specifications themselves do not affect existing system function nor create a situation which has not been previously analyzed and appropriately designed for, the changes do not create any new or different kinds of accidents than previously evaluated.

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

The proposed changes to the Technical Specifications contain specific requirements regarding their applicability:

- Operation of the HWC system is only permitted above 20 percent of Rated Thermal Power.
- When the HWC system is in operation the MSL radiation monitor setpoints can be adjusted upward, to levels previously determined during the hydrogen injection test, to account for the increase in the background MSL radiation levels.
- Prior to decreasing reactor power to below 20% of Rated Thermal Power, the setpoints must be readjusted to their pre-HWC system operation levels.
- If the power level falls below 20% without the setpoint change, control rod motion is suspended (except for scrams or other emergency situations) until the setpoint adjustment is made.

These requirements will assure that the HWC system is operated safely and with sufficient margin such that spurious MSL isolations are precluded while still assuring that any gross failures in the fuel cladding remain detectable.

As discussed in Item IV.1 above, the CRDA is the only accident which takes credit for the MSL isolation trip function; however, above 20 percent power, the consequences of the CRDA are so minimal that they may be considered negligible (reference the above cited NEDO report.) Therefore, the change in the Technical Specification setpoint has no significant effect on the margins of safety for this accident scenerio and the restriction regarding suspending control rod motion further assures that during setpoint adjustments, a CRDA is minimized.

Finally as discussed in Item III.8 above, the increase in background radiation levels has been analyzed and PSE&G has concluded that neither plant personnel nor the health and safety of the public are at risk when operating with the HWC system. Therefore, it can be concluded that the proposed changes do not involve a significant reduction in a margin of safety.

V. Conclusions

As discussed in Item IV above, PSE&G has concluded that the proposed changes to the Technical Specifications do not involve a significant hazards consideration since the changes (i) do not involve a significant increase in the probability or consequences of an accident previously evaluated, (ii) do not create the possibility of a new or different kind of accident from any accident previously evaluated, and (iii) do not involve a significant reduction in a margin of safety.

This conclusion is further substantiated when the Examples of Amendments That Are Considered Not Likely To Involve Significant Hazards (Federal Register (FR) Volume 51, Number 44 dated March 3, 1986) are reviewed. Specifically, this proposed change can be considered to meet Example (ii) of the above cited FR in that the proposed change "...constitutes an additional limitation, restriction or control not presently included in the Technical Specifications." The proposed change identifies specific limitations for the operation of the HWC and imposes control rod restrictions during the setpoint adjustment process thereby serving to include in the Technical Specifications additional control not currently present.

Finally, PSE&G has demonstrated through the discussions contained in this request that the proposed HWC system will completely meet the identified EPRI guidelines. This configuration (also use at a variety of facilities - see the graphical presentation in Attachment 4) was reviewed and approved by the NRC staff and therefore, the incorporation of such a system at HCGS meets the regulatory criteria currently specified. In addition, as provided in

Item III above, PSE&G has responded to the NRC staff issues which must be addressed during the plant-specific implementation of a HWC system. For these reasons, PSE&G concludes that the proposed changes satisfy the criteria identified for a Category 2 Technical Specification change.

ATTACHMENT 2