August 9, 2005

Mr. William Levis
Senior Vice President & Chief Nuclear Officer
PSEG Nuclear - X15
Post Office Box 236
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION - ISSUANCE OF AMENDMENT RE: ELIMINATION OF REQUIREMENTS FOR HYDROGEN RECOMBINERS AND HYDROGEN/OXYGEN MONITORS USING THE CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS (TAC NO. MC4792)

Dear Mr. Levis:

The Commission has issued the enclosed Amendment No. 160 to Facility Operating License No. NPF-57 for the Hope Creek Generating Station. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 1, 2004.

The amendment revises the TSs by eliminating the requirements associated with hydrogen recombiners, and hydrogen and oxygen monitors. The changes support the implementation of a revision to Title 10 of the *Code of Federal Regulations*, Section 50.44, "Combustible Gas Control for Nuclear Power Reactors." A notice of availability for this TS improvement using the consolidated line item improvement process was published in the *Federal Register* on September 25, 2003 (68 FR 55416).

A copy of our Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,

/RA/

Stewart Bailey, Senior 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. 160 to License No. NPF-57
2. Safety Evaluation

cc w/encls: See next page

Hope Creek Generating Station

cc:

Mr. Michael P. Gallagher
Vice President - Eng/Tech Support
PSEG Nuclear
P.O. Box 236
Hancocks Bridge, NJ 08038

Mr. Michael Brothers
Vice President - Nuclear Assessments
PSEG Nuclear
P.O. Box 236
Hancocks Bridge, NJ 08038

Mr. George P. Barnes
Site Vice President - Hope Creek
PSEG Nuclear
P.O. Box 236
Hancocks Bridge, NJ 08038

Mr. George H. Gellrich
Plant Support Manager
PSEG Nuclear
P.O. Box 236
Hancocks Bridge, NJ 08038

Mr. Michael J. Massaro
Plant Manager - Hope Creek
PSEG Nuclear
P.O. Box 236
Hancocks Bridge, NJ 08038

Ms. Christina L. Perino
Director - Regulatory Assurance
PSEG Nuclear - N21
P.O. Box 236
Hancocks Bridge, NJ 08038

Jeffrie J. Keenan, Esquire
PSEG Nuclear - N21
P.O. Box 236
Hancocks Bridge, NJ 08038

Ms. R. A. Kankus
Joint Owner Affairs
Exelon Generation Company, LLC
Nuclear Group Headquarters KSA1-E
200 Exelon Way
Kennett Square, PA 19348

Lower Alloways Creek Township
c/o Mary O. Henderson, Clerk
Municipal Building, P.O. Box 157
Hancocks Bridge, NJ 08038

Dr. Jill Lipoti, Asst. Director
Radiation Protection Programs
NJ Department of Environmental
Protection and Energy
CN 415
Trenton, NJ 08625-0415

Brian Beam
Board of Public Utilities
2 Gateway Center, Tenth Floor
Newark, NJ 07102

Regional Administrator, Region I
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Senior Resident Inspector
Hope Creek Generating Station
U.S. Nuclear Regulatory Commission
Drawer 0509
Hancocks Bridge, NJ 08038

Mr. William Levis
Senior Vice President & Chief Nuclear Officer
PSEG Nuclear - X15
Post Office Box 236
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION - ISSUANCE OF AMENDMENT RE: ELIMINATION OF REQUIREMENTS FOR HYDROGEN RECOMBINERS AND HYDROGEN/OXYGEN MONITORS USING THE CONSOLIDATED LINE ITEM IMPROVEMENT PROCESS (TAC NO. MC4792)

Dear Mr. Levis:

The Commission has issued the enclosed Amendment No. 160 to Facility Operating License No. NPF-57 for the Hope Creek Generating Station. This amendment consists of changes to the Technical Specifications (TSs) in response to your application dated October 1, 2004.

The amendment revises the TSs by eliminating the requirements associated with hydrogen recombiners, and hydrogen and oxygen monitors. The changes support the implementation of a revision to Title 10 of the *Code of Federal Regulations*, Section 50.44, "Combustible Gas Control for Nuclear Power Reactors." A notice of availability for this TS improvement using the consolidated line item improvement process was published in the *Federal Register* on September 25, 2003 (68 FR 55416).

A copy of our Safety Evaluation is also enclosed. Notice of Issuance will be included in the Commission's biweekly *Federal Register* notice.

Sincerely,
/RA/
Stewart Bailey, Senior 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. 160 to License No. NPF-57
2. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION

DRoberts	OGC	GMeyer, RGN-I
PUBLIC	DCollins	ACRS
PDI-2 Reading	CRaynor	TBoyce
GHill (2)	SBailey	

ADAMS ACCESSION NUMBER: ML050410361

OFFICE	PDIV-1/PE	PDIV-1/PM	PDI-2/PM	PDI-2/LA	OGC	PDI-2/SC
NAME	MThorpe-Kavanaugh	WReckley	SBailey	CRaynor	TSmith	DRoberts
DATE	1/19/05	2/7/05	7/22/05	7/21/05	7/21/05	8/03/05

OFFICIAL RECORD COPY

PSEG NUCLEAR LLC

DOCKET NO. 50-354

HOPE CREEK GENERATING STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 160
License No. NPF-57

1. The Nuclear Regulatory Commission (the Commission) has found that:

   A. The application for amendment filed by the PSEG Nuclear LLC dated October 1, 2004, 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. 160, 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/

Darrell J. Roberts, 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: August 9, 2005

ATTACHMENT TO LICENSE AMENDMENT NO. 160

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	Insert
xii	xii
3/4 3-85	3/4 3-85
3/4 3-86	3/4 3-86
3/4 3-87	3/4 3-87
3/4 6-54	3/4 6-54
B3/4 6-14	B3/4 6-14

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 160 TO FACILITY OPERATING LICENSE NO. NPF-57

PSEG NUCLEAR LLC

HOPE CREEK GENERATING STATION

DOCKET NO. 50-354

1.0 INTRODUCTION

By letter dated October 1, 2004 (see Agencywide Document Access and Management System Accession No. ML042880479), PSEG Nuclear LLC (PSEG, or the licensee) requested changes to the Hope Creek Generating Station Technical Specification (TSs). The proposed changes would delete the TS requirements associated with the hydrogen recombiners, and hydrogen and oxygen monitors.

The Nuclear Regulatory Commission (NRC or the Commission) has revised Title 10 of the *Code of Federal Regulations* (10 CFR) Section 50.44, "Standards for Combustible Gas Control System in Light-Water-Cooled Power Reactors." The amended standards eliminated the requirements for hydrogen recombiners and relaxed the requirements for hydrogen and oxygen monitoring. In letters dated December 17, 2002, and May 12, 2003, the Nuclear Energy Institute (NEI) Technical Specification Task Force (TSTF) proposed to remove requirements for hydrogen recombiners and hydrogen and oxygen monitors from the standard technical specifications (STS) (NUREGs 1430 - 1434) on behalf of the industry to incorporate the amended standards. This proposed change is designated TSTF-447.

The NRC staff prepared this model safety evaluation (SE) for the elimination of requirements regarding containment hydrogen recombiners and the removal of requirements from TSs for containment hydrogen and oxygen monitors and solicited public comment (67 FR 50374, published August 2, 2002) in accordance with the Consolidated Line Item Improvement Process (CLIIP). The use of the CLIIP in this matter is intended to help the NRC efficiently process amendments that propose to remove the hydrogen recombiner and hydrogen and oxygen monitor requirements from TSs. Licensees of nuclear power reactors to which this model applies were informed (68 FR 55416; September 25, 2003) that they could request amendments conforming to the model and, in such requests, should confirm the applicability of the SE to their reactors and provide the requested plant-specific verifications and commitments.

2.0 BACKGROUND

Regulatory Issue Summary (RIS) 2000-06, "Consolidated Line Item Improvement Process for Adopting Standard Technical Specification Changes for Power Reactors," was issued on March 20, 2000. The CLIIP is intended to improve the efficiency of NRC licensing processes.

This is accomplished by processing proposed changes to the STS in a manner that supports subsequent license amendment applications. The CLIIP includes an opportunity for the public to comment on proposed changes to the STS following a preliminary assessment by the NRC staff and finding that the change will likely be offered for adoption by licensees. The NRC staff evaluates any comments received for a proposed change to the STS and either reconsiders the change or proceeds with announcing the availability of the change for proposed adoption by licensees. Those licensees opting to apply for the subject change to TS are responsible for reviewing the staff's evaluation, referencing the applicable technical justifications, and providing any necessary plant-specific information. Each amendment application made in response to the notice of availability would be processed and noticed in accordance with applicable rules and NRC procedures.

The Commission's regulatory requirements related to the content of TS are set forth in 10 CFR 50.36. This regulation requires that the TSs include items in five specific categories. These categories include: 1) safety limits, limiting safety system settings and limiting control settings, 2) limiting conditions for operation (LCOs), 3) surveillance requirements (SRs), 4) design features, and 5) administrative controls. However, the regulation does not specify the particular TSs to be included in a plant's license.

Additionally, 10 CFR 50.36(c)(2)(ii) sets forth four criteria to be used in determining whether an LCO is required to be included in the TSs. These criteria are as follows:

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

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

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

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

Existing LCOs and related surveillances included as TS requirements which satisfy any of the criteria stated above must be retained in the TSs. Those TS requirements which do not satisfy these criteria may be relocated to other licensee-controlled documents.

As part of the rulemaking that revised 10 CFR 50.44, the Commission retained requirements for ensuring a mixed atmosphere, inerting Mark I and II containments, and providing hydrogen control systems capable of accommodating an amount of hydrogen generated from a metal-water reaction involving 75 percent of the fuel cladding surrounding the active fuel region in Mark III and ice condenser containments. The Commission eliminated the design-basis loss-of-coolant accident (LOCA) hydrogen release from 10 CFR 50.44 and consolidated the requirements for hydrogen and oxygen monitoring to 10 CFR 50.44 while relaxing safety

classifications and licensee commitments to certain design and qualification criteria. The Commission also relocated, without change, the hydrogen control requirements in 10 CFR 50.34(f) to 10 CFR 50.44 and the high point vent requirements from 10 CFR 50.44 to 10 CFR 50.46a.

3.0 EVALUATION

The ways in which the requirements and recommendations for combustible gas control were incorporated into the licensing bases of commercial nuclear power plants varied as a function of when plants were licensed. Plants that were operating at the time of the Three Mile Island (TMI), Unit 2 accident are likely to have been the subject of confirmatory orders that imposed the combustible gas control functions described in NUREG-0737, "Clarification of TMI Action Plan Requirements," as obligations. The issuance of plant-specific amendments to adopt these changes, which would remove hydrogen recombiner and hydrogen and oxygen monitoring controls from TSs, supersede the combustible gas control specific requirements imposed by post-TMI confirmatory orders.

3.1 Hydrogen Recombiners

The revised 10 CFR 50.44 no longer defines a design-basis LOCA hydrogen release, and eliminates requirements for hydrogen control systems to mitigate such a release. The installation of hydrogen recombiners and/or vent and purge systems required by 10 CFR 50.44(b)(3) was intended to address the limited quantity and rate of hydrogen generation that was postulated from a design-basis LOCA. The Commission has found that this hydrogen release is not risk-significant because the design-basis LOCA hydrogen release does not contribute to the conditional probability of a large release up to approximately 24 hours after the onset of core damage. In addition, these systems were ineffective at mitigating hydrogen releases from risk-significant beyond design-basis accidents (BDBA). Therefore, the Commission eliminated the hydrogen release associated with a design-basis LOCA from 10 CFR 50.44 and the associated requirements that necessitated the need for the hydrogen recombiners and the backup hydrogen vent and purge systems. As a result, the staff finds that requirements related to hydrogen recombiners no longer meet any of the four criteria in 10 CFR 50.36(c)(2)(ii) for retention in TSs and the existing TS requirements may, therefore, be eliminated for all plants.

3.2 Hydrogen Monitoring Equipment

Section 50.44(b)(1) of 10 CFR, the STS, and plant-specific TSs currently contain requirements for monitoring hydrogen. Licensees have also made commitments to design and qualification criteria for hydrogen monitors in Item II.F.1, Attachment 6 of NUREG-0737 and Regulatory Guide (RG) 1.97, "Instrumentation for Light-Water-Cooled Nuclear Power Plants to Assess Plant and Environs Conditions During and Following an Accident." The hydrogen monitors are required to assess the degree of core damage during a BDBA and confirm that random or deliberate ignition has taken place. If an explosive mixture that could threaten containment integrity exists during a BDBA, then other severe accident management strategies, such as purging and/or venting, would need to be considered. The hydrogen monitors are needed to implement these severe accident management strategies.

With the elimination of the design-basis LOCA hydrogen release, hydrogen monitors are no longer required to mitigate design-basis accidents (DBAs) and, therefore, the hydrogen monitors do not meet the definition of a safety-related component as defined in 10 CFR 50.2. RG 1.97 recommends classifying the hydrogen monitors as Category 1. RG 1.97 Category 1, is intended for key variables that most directly indicate the accomplishment of a safety function for DBA events and, therefore, are items usually addressed within TS. As part of the rulemaking to revise 10 CFR 50.44, the Commission found that the hydrogen monitors no longer meet the definition of Category 1 in RG 1.97. The Commission concluded that Category 3, as defined in RG 1.97, is an appropriate categorization for the hydrogen monitors because the monitors are required to diagnose the course of beyond design-basis accidents. Hydrogen monitoring is not the primary means of indicating a significant abnormal degradation of the reactor coolant pressure boundary (RCPB). Section 4 of Attachment 2 to SECY-00-0198, "Status Report on Study of Risk-Informed Changes to the Technical Requirements of 10 CFR Part 50 (Option 3) and Recommendations on Risk-Informed Changes to 10 CFR 50.44 (Combustible Gas Control)," found that the hydrogen monitors were not risk-significant. Therefore, the staff finds that hydrogen monitoring equipment requirements no longer meet any of the four criteria in 10 CFR 50.36(c)(2)(ii) for retention in TSs and, therefore, may be relocated to other licensee-controlled documents. However, because the monitors are required to diagnose the course of BDBAs, each licensee should verify that it has, and make a regulatory commitment to maintain, a hydrogen monitoring system capable of BDBAs.

The elimination of post-accident sampling system requirements from some plant-specific TSs (and associated CLIIP notices) indicated that during the early phases of an accident, safety-grade hydrogen monitors provide an adequate capability for monitoring containment hydrogen concentration. The staff has subsequently concluded that Category 3 hydrogen monitors also provide an adequate capability for monitoring containment hydrogen concentration during the early phases of an accident.

3.3 Oxygen Monitoring Equipment

STSs and plant-specific TS currently require oxygen monitoring to verify the status of the inert containment. Combustible gases produced by BDBAs involving both fuel-cladding oxidation and core-concrete interaction would be risk-significant for plants with Mark I and II containments if not for the inerted containment atmospheres. If an inerted containment was to become de-inerted during a beyond design-basis accident, then other severe accident management strategies, such as purging and venting, would need to be considered. The oxygen monitors are needed to implement these severe accident management strategies. Oxygen concentration also appears extensively in the emergency procedure guidelines/severe accident guidelines of plants with inerted containment atmospheres.

With the elimination of the design-basis LOCA hydrogen release, the oxygen monitors are no longer required to mitigate DBAs and, therefore, the oxygen monitors do not meet the definition of a safety-related component as defined in 10 CFR 50.2. RG 1.97 recommends that, for inerted containment plants, the oxygen monitors be Category 1 which is intended for key variables that most directly indicate the accomplishment of a safety function for DBA events.

As part of the rulemaking to revise 10 CFR 50.44, the Commission found that Category 2[1], as defined in RG 1.97, is an appropriate categorization for the oxygen monitors, because the monitors are required to verify the status of the inert containment. Oxygen monitoring is not the primary means of indicating a significant abnormal degradation of the RCPB. Oxygen monitors have not been shown by a probabilistic risk assessment to be risk-significant. Therefore, the staff finds that oxygen monitoring equipment requirements no longer meet any of the four criteria in 10 CFR 50.36(c)(2)(ii) for retention in TSs and, therefore, may be relocated to other licensee-controlled documents.

However, for plant designs with an inerted containment, each licensee should verify that it has, and make a regulatory commitment to maintain, an oxygen monitoring system capable of verifying the status of the inert containment. In addition, separate requirements for primary containment oxygen concentration will be retained in TSs for plant designs with an inerted containment. The basis for retention of this requirement in TSs is that it meets Criterion 2 of 10 CFR 50.36(c)(2)(ii) in that it is a process variable, design feature, or operating restriction that is an initial condition of a DBA or transient analysis that either assumes the failure of, or presents a challenge to, the integrity of a fission product barrier. This is based on the fact that calculations typically included in Chapter 6 of Updated Final Safety Analysis Reports (UFSAR) assume that the primary containment is inerted, that is, oxygen concentration < 4.0 volume percent, when a design-basis LOCA occurs.

The deletion of the requirements for the hydrogen recombiner, and hydrogen and oxygen monitors resulted in numbering and formatting changes to other TS, which were otherwise unaffected by this proposed amendment. The NRC staff has confirmed that the related changes are appropriate and do not affect the technical requirements.

4.0 VERIFICATIONS AND COMMITMENTS

As requested by the staff in the notice of availability for this TS improvement, the licensee has addressed the following plant-specific verifications and commitments:

4.1 Each licensee should verify that it has, and make a regulatory commitment to maintain, a hydrogen monitoring system capable of diagnosing beyond design-basis accidents.

The licensee has verified that it has a hydrogen monitoring system capable of diagnosing beyond design-basis accidents. The licensee has committed to maintain the hydrogen monitors within its Updated Final Safety Analysis Report. The licensee will implement this commitment within 60 days of issuance of the amendment.

---

[1] While discussing the designation of the oxygen monitors as Category 2, the NRC acknowledged in the final rule (68 FR 54123) that the monitors need not be qualified in accordance with 10 CFR 50.49. The amended rule implements performance-based requirements for hydrogen and oxygen monitors to be functional, reliable, and capable of continuously measuring the appropriate parameter in the BDBA environment.

4.2 For plant designs with an inerted containment, each licensee should verify that it has, and make a regulatory commitment to maintain, an oxygen monitoring system capable of verifying the status of the inert containment.

The licensee has verified that it has an oxygen monitoring system capable of verifying the status of the inert containment. The licensee has committed to maintain the oxygen monitors within its Updated Final Safety Analysis Report. The licensee will implement this commitment within 60 days of issuance of the amendment.

The NRC staff finds that reasonable controls for the implementation and for subsequent evaluation of proposed changes pertaining to the above regulatory commitments are provided by the licensee's administrative processes, including its commitment management program. Should the licensee choose to incorporate a regulatory commitment into the emergency plan, UFSAR, or other document with established regulatory controls, the associated regulations would define the appropriate change-control and reporting requirements. The staff has determined that the commitments do not warrant the creation of regulatory requirements which would require prior NRC approval of subsequent changes. The NRC staff has agreed that NEI 99-04, Revision 0, "Guidelines for Managing NRC Commitment Changes," provides reasonable guidance for the control of regulatory commitments made to the NRC staff. (See RIS 2000-17, "Managing Regulatory Commitments Made by Power Reactor Licensees to the NRC Staff," dated September 21, 2000.) The commitments should be controlled in accordance with the industry guidance or comparable criteria employed by a specific licensee. The staff may choose to verify the implementation and maintenance of these commitments in a future inspection or audit.

5.0 STATE CONSULTATION

By letter dated April 25, 2005, the State of New Jersey provided the following comments on the licensee's application:

As part of the request to delete the applicable Technical Specifications, PSEG Nuclear, LLC (PSEG) has made regulatory commitments to maintain both a Primary Containment Hydrogen Monitoring System capable of diagnosing beyond design basis accidents and an Oxygen Monitoring System capable of verifying the status of the inert Primary Containment.

These commitments are in accordance with the following sections of the "Notice of Availability of Model Application Concerning Technical Specification Improvement to Eliminate Hydrogen Recombiner Requirement, and Relax the Hydrogen and Oxygen Monitor Requirements for Light Water Reactors Using the Consolidated Line Item Improvement Process," as described in the September 25, 2003 Federal Register (68 FR 55416): 1) Applicability; 2) Model Safety Evaluation (SE), Section 3.2, Hydrogen Monitoring Equipment; and 3) Model Safety Evaluation (SE), Section 3.3, Oxygen Monitoring Equipment.

PSEG has made no commitment to retain any requirements pertaining to the Primary Containment Hydrogen Recombiners although Model SE Section 3.1, Hydrogen Recombiners states that "requirements related to hydrogen

recombiners no longer meet any of the four criteria in 10 CFR 30.36(c)(2)(ii) for retention in TS and may be relocated to other licensee-controlled documents for all plants."

The BNE [Bureau of Nuclear Engineering] recommends that the NRC require PSEG to make a commitment to relocate the TS requirements for maintaining the Primary Containment Hydrogen Recombiners to other licensee-controlled documents as PSEG has done for the Primary Containment Hydrogen and Oxygen Monitoring Equipment. By making such a commitment, PSEG would then be in compliance with the NRC staff's Model SE position. In addition, this commitment would satisfy Section 9 (Precedent) of LCR-H04-006 [Licensee's application dated October 1, 2004], which states that "PSEG is not proposing variations or deviations from the TS changes described in Revision 1 to TSTF-447 or the NRC staff's model SE published on September 25, 2003 (68 FR 55416)."

Although the above referenced Applicability section states the licensee need not provide details about the designs or procedures when making the regulatory commitments, the BNE considers the program details that will be utilized by PSEG to ensure the operability and functionality of the Oxygen/Hydrogen Monitoring Equipment and the Hydrogen Recombiners to be essential in providing the confidence that this equipment will be available to analyze and mitigate the consequences of an accident in order to protect the health and safety of the public. Therefore, the BNE requests that these details be provided by PSEG for review prior to the NRC approving the proposed TS changes.

NRC Response

The NRC staff regrets that the wording in the model SE resulted in some misunderstanding of our intent. The language in the model SE published in the *Federal Register* did state that upon removal from the TSs, the current requirements for the hydrogen recombiners could be relocated to other licensee-controlled documents. However, the staff did not request nor expect that licensees would maintain the hydrogen recombiners as a regulatory commitment or continue to maintain the relocated provisions within the UFSAR or other licensee-controlled document.

The wording from the final rule published in the *Federal Register* on September 16, 2003, (68 FR 54123) and the title of the associated CLIIP amendment refer to eliminating the requirements for hydrogen recombiners and hydrogen purge systems, and relaxing the requirements for hydrogen and oxygen monitoring equipment. The NRC maintained requirements for the hydrogen and oxygen monitors in the revised 10 CFR 50.44 and requested specific regulatory commitments on how that requirement would be satisfied. The NRC staff anticipated the elimination of the hydrogen recombiners but worded the model SE as if the provisions would first be relocated to another document. For example, the provisions for the hydrogen recombiners would be relocated to the UFSAR and then removed under the process defined in 10 CFR 50.59, "Changes, Tests, and Experiments." Some licensees commented after the publication of the Notice of Availability for this change that the wording in the model SE was confusing. The licensees stated that they did not expect to use a two-step process but would instead eliminate the hydrogen recombiners from the licensing bases for the plants upon

issuance of the license amendment. In response to these comments, most of the amendments issued for this change (including this one for Hope Creek) have deleted the reference to relocating the provisions to other licensee-controlled documents and used the following language in the SE:

> ... Therefore, the Commission eliminated the hydrogen release associated with a design-basis LOCA from 10 CFR 50.44 and the associated requirements that necessitated the need for the hydrogen recombiners and the backup hydrogen vent and purge systems. As a result, the staff finds that requirements related to hydrogen recombiners no longer meet any of the four criteria in 10 CFR 50.36(c)(2)(ii) for retention in TSs and the existing TS requirements may, therefore, be eliminated for all plants.

The NRC staff finds that the licensee's proposal is consistent with the changes announced using the CLIIP and the associated change to 10 CFR 50.44.

As mentioned in the comments from the State of New Jersey, the NRC staff specifically stated in the notice of availability published in the *Federal Register* that licensees need not provide details about designs or procedures associated with the relaxed requirements for hydrogen and oxygen monitors. This statement reflects that each plant currently has monitors and the revised 10 CFR 50.44 requires that licensees maintain the capability to monitor hydrogen and oxygen. In addition, licensees are making regulatory commitments to maintain the monitors and indicate where the capability or procedure will be described (e.g., severe accident management guidelines, emergency operating procedures, emergency plan implementing procedures). The licensee for Hope Creek has stated that a description of their capabilities to monitor hydrogen and oxygen will be incorporated into the UFSAR. The inclusion of the hydrogen and oxygen monitors in a specific program or document provides the NRC staff with the necessary level of detail regarding how licensees plan to satisfy the requirements in 10 CFR 50.44. The licensee's programs are routinely subject to NRC inspections and audits. The NRC staff routinely refers to established licensee programs and related regulatory requirements in support of its licensing decisions. This approach was chosen for the TS changes associated with implementing the revision of 10 CFR 50.44 and is reflected in the *Federal Register* notice that stated licensees need not provide design or procedural details. The application from the licensee for Hope Creek is similar to requests from other licensees for whom the NRC staff has issued plant-specific license amendments using the CLIIP.

6.0 ENVIRONMENTAL CONSIDERATION

The amendment changes a requirement with respect to installation or use of a facility component located within the restricted area as defined in 10 CFR Part 20 and changes SRs. 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 (70 FR 12749). 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.

7.0 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.

Principal Contributor: W. Reckley

Date: August 9, 2005