January 13, 2006

Mr. William Levis
Senior Vice President and Chief Nuclear Officer
PSEG Nuclear LLC - X04
Post Office Box 236
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION - ISSUANCE OF AMENDMENT RE: REVISED ACTION FOR SCRAM DISCHARGE VOLUME VENT AND DRAIN VALVES (TAC NO. MC6697)

Dear Mr. Levis:

The Commission has issued the enclosed Amendment No. 162 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 February 25, 2005.

The amendment revises TS 3.1.3.1, "Control Rod Operability," for the condition of having one or more scram discharge volume vent or drain lines with inoperable valves. A notice of availability for this TS improvement using the consolidated line item improvement process was published in the *Federal Register* on April 15, 2003 (68 FR 18294).

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 N. Bailey, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-354

Enclosures: 1. Amendment No. 162 to License No. NPF-57
2. Safety Evaluation

cc w/encls: See next page

Mr. William Levis
Senior Vice President and Chief Nuclear Officer
PSEG Nuclear LLC - X04
Post Office Box 236
Hancocks Bridge, NJ 08038

SUBJECT: HOPE CREEK GENERATING STATION - ISSUANCE OF AMENDMENT RE: REVISED ACTION FOR SCRAM DISCHARGE VOLUME VENT AND DRAIN VALVES (TAC NO. MC6697)

Dear Mr. Levis:

The Commission has issued the enclosed Amendment No. 162 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 February 25, 2005.

The amendment revises TS 3.1.3.1, "Control Rod Operability," for the condition of having one or more SDV vent or drain lines with one valve inoperable. A notice of availability for this TS improvement using the consolidated line item improvement process was published in the *Federal Register* on April 15, 2003 (68 FR 18294).

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 N. Bailey, Senior Project Manager
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Docket No. 50-354

Enclosures: 1. Amendment No. 162 to License No. NPF-57
2. Safety Evaluation

cc w/encls: See next page

DISTRIBUTION

PUBLIC	CHolden	TechBranch	MGray, RI	WReckley
LPL1-2 Reading	DRoberts	TBoyce	GHill(2)	DORL DPR
ACRS	SBailey	CRaynor	OGC	

Package: ML Amendment: ML060050304 Tech Specs: ML

OFFICE	CLIIP LPM	NRR/LPL1-2/PE	NRR/LPL1-2/PM	NRR/LPL1-2/LA	NRR/LPL1-2/BC
NAME	WReckley:eo	TValentine	SBailey	CRaynor	DRoberts
DATE	6/15/2005	1/11/06	1/11/06	1/10/06	1/11/06

OFFICIAL RECORD COPY

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. Dennis Winchester
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

Mr. Darin Benyak
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 Ms. 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

Mr. 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

PSEG NUCLEAR LLC

DOCKET NO. 50-354

HOPE CREEK GENERATING STATION

AMENDMENT TO FACILITY OPERATING LICENSE

Amendment No. 162
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 February 25, 2005, 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. 162, 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
Plant Licensing Branch I-2
Division of Operating Reactor Licensing
Office of Nuclear Reactor Regulation

Attachment: Changes to the Technical Specifications

Date of Issuance: January 13, 2006

ATTACHMENT TO LICENSE AMENDMENT NO. 162

FACILITY OPERATING LICENSE NO. NPF-57

DOCKET NO. 50-354

Replace the following page of the Appendix A Technical Specifications with the attached revised page. The revised page is identified by amendment number and contains marginal lines indicating the areas of change.

Remove	Insert
3/4 1-4	3/4 1-4

SAFETY EVALUATION BY THE OFFICE OF NUCLEAR REACTOR REGULATION

RELATED TO AMENDMENT NO. 162 TO FACILITY OPERATING LICENSE NO. NPF-57

PSEG NUCLEAR LLC

HOPE CREEK GENERATING STATION

DOCKET NO. 50-354

1.0 INTRODUCTION

By letter dated February 25, 2005 (Agencywide Documents Access and Management System (ADAMS) Accession No. ML050670385), PSEG Nuclear LLC (PSEG or the licensee) requested changes to the Hope Creek Generating Station (Hope Creek) Technical Specifications (TSs).

The requested changes would revise the required action within TS 3.1.3.1, "Control Rod Operability." The change is similar to the changes included in TSs Task Force (TSTF) change traveler TSTF-404 (Revision 0) that has been approved generically for the Boiling Water Reactor (BWR)/4 Standard Technical Specifications (STS), NUREG-1433. A notice announcing the availability of this proposed TS change using the consolidated line item improvement process was published in the *Federal Register* on April 15, 2003 (68 FR 18294).

2.0 REGULATORY EVALUATION

Nuclear Regulatory Commission (NRC or the Commission) regulations and review standards such as Appendix A, "General Design Criteria for Nuclear Power Plants," to Title 10 of the *Code of Federal Regulations* (10 CFR), Part 50, include specific requirements for reactor protection and reactivity control systems. The reactor protection systems for BWRs use a hydraulic system to insert control rods into the reactor core. During an actuation of the reactor protection system (a scram), water is exhausted from the control rod drive mechanisms to the scram discharge volume (SDV). Proper maintenance and operation of the SDVs in terms of instrumentation and limiting water volumes are essential for assuring the reliability of the reactor protection system (see NRC Bulletin 80-17, "Failure of Control Rods to Insert During a Scram at a BWR," related Orders to specific facilities, and information provided in plant final safety analysis reports and TS Bases). Vents and drain valves are required for maintenance of the SDVs to ensure that accumulated water does not hamper or slow the insertion of control rods. The vent and drain valves isolate during a scram to limit the amount of coolant discharged so that adequate core cooling is maintained and offsite doses remain within regulatory limits.

Specific regulatory requirements for SDV vent and drain valves for Hope Creek are defined in TS 3.1.3.1. The existing Limiting Condition for Operation 3.1.3.1 requires that each SDV vent and drain valve be operable. The operability of all SDV vents and drain valves ensures that the SDV vents and drain valves will close during a scram to contain reactor water discharged to the SDV piping. Since the vents and drain lines are provided with two valves in series, the single failure of one valve in the open position will not impair the isolation function of the system.

Additionally, the valves are required to open on scram reset and during plant operation to control the amount of water accumulating in the SDV. If one or more SDV vents and drain lines have a single valve that is inoperable and open, the existing required action is to restore the valve(s) to operable status within 24 days. If an inoperable valve is not restored to operable status, the plant must go to hot shutdown within 12 hours. If a SDV vent or drain valve is otherwise inoperable, the existing required action is to restore the valve(s) to operable status within 8 hours or be in hot shutdown within the next 12 hours.

In the STS and many TSs for plants similar to Hope Creek, if one or more SDV vents or drain lines have both valves inoperable, the associated line must be isolated within 8 hours. In this condition, the plants are allowed to operate indefinitely. A note associated with the required action clarifies that the valves may be opened under administrative controls to allow draining of the SDV. However, the STS and other plant TSs required restoration of a single inoperable valve within 7 days or be in hot shutdown within 12 hours. The existing SDV vent and drain valve required actions in the STS and many plant-specific TSs were inconsistent in that, although the operational and safety concerns are similar for having one or both valves in a line being inoperable, the actions for a single inoperable valve do not allow for the isolation of the line and administrative controls to support the draining of the SDV. This prompted the industry to submit TSTF-404 and subsequent incorporation of the change into the STS.

The proposed change would revise the required actions to be more consistent with the safety significance of inoperable valve(s) in an SDV line. Although the existing Hope Creek TSs differ somewhat from the STS, the proposed changes reflect the incorporation of the approved TSTF-404 specification into the Hope Creek TSs.

3.0 TECHNICAL EVALUATION

The proposed changes to TS 3.1.3.1 are:

> Required Action d is revised from restoring the inoperable and open SDV vent and drain valve(s) to operable status within 24 hours to isolating the associated line within 7 days.
>
> Required Action e is revised from restoring otherwise inoperable SDV vent and drain valve(s) to operable status within 8 hours to isolating the associated line within 8 hours.
>
> Notes are added to Required Actions d and e, to clarify that separate action entry is allowed for each SDV vent and drain line and to allow an isolated line to be unisolated under administrative controls for the purpose of draining and venting the SDV

With one SDV vent or drain valve inoperable in one or more lines, the SDV isolation function would be maintained by the redundant valve in the affected line. The current ACTION statement allows 24 days to repair the inoperable valve. The proposed change allows for the isolation of the affected line and continued operation. If the affected line is not isolated within the 7-day time period (or the inoperable valve is not restored), the licensee would then be required to proceed to MODE 3 in the next 12 hours. The 7-day completion time (CT) is acceptable because of the low probability of the concurrent events of a scram within the 7 days of the CT and a failure of the redundant valve(s). Alternately, if the inoperable valve was initially closed, there would be ample time and warning available to drain the SDV before an automatic scram would occur due to SDV high level. The proposed changes to Required

Action e are likewise acceptable in that isolation of the line provides the safety function and the shorter completion time (8 hours versus 7 days) reflects the increased importance of addressing the problem when multiple valves are inoperable.

Opening an isolated line under administrative control permits venting of the SDV and drainage of any accumulated water in the line to preclude a reactor scram on SDV high level. A reactor scram is initiated if the SDV water level in the instrument volume exceeds a specified setpoint. The setpoint is chosen so that the SDV does not fill on a scram before all control rods are inserted. If an isolated line with one inoperable valve is opened under administrative control, the remaining operable SDV vent(s) and drain valve(s) would close automatically on a scram signal to isolate the lines. Or, if both valves in a line were inoperable (and opened under this provision), the reactor coolant release could be terminated by resetting the scram from the control room, or by manually closing the valves. Resetting the scram automatically closes the scram outlet valves, isolating the control rod drive discharge path to the SDV. Based on the low probability of an event occurring during the defined CT associated with this condition, the subsequent isolation of the affected lines, and the ability to open and drain the lines before an automatic scram due to SDV high water level, the proposed change maintains the necessary safety features and is, therefore, acceptable.

The licensee included in the application changes to the Bases Section for TS 3.1.3.1 for information. The actual changes to the Bases Section will be made in accordance with the Bases Control Program. The NRC staff agrees that the TS Bases Control Program is the appropriate process for updating the affected TS Bases pages.

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. As stated in a letter dated July 5, 2005, the State official had no comments.

5.0 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. 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 33217, June 7, 2005). 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.

Principal Contributor: W. Reckley

Date: January 13, 2006