PSEG Nuclear LLC
P.O. Box 236, Hancocks Bridge, New Jersey 08038-0236

PSEG
Nuclear LLC

FEB 1 8 2011

LR-N11-0046 **10CFR50.73**

United States Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, DC 20555-001

Hope Creek Generating Station Unit 1
Facility Operating License No. NPF-57
Docket No. 50-354

Subject: Licensee Event Report 2010-001-001

In accordance with 50.73(a)(2)(i)(B), PSEG Nuclear LLC is submitting supplemental Licensee Event Report (LER) Number 2010-001-001.

Should you have any questions concerning this letter, please contact Mr. Leon E. Whitney at (856) 339-1961.

No regulatory commitments are contained in the LER.

Sincerely,

Lawrence M. Wagner
Plant Manager
Hope Creek Generating Station

Attachment: Licensee Event Report 2010-001-001

IE22
NRR

cc: LEREvents@inpo.org (Word version)

Mr. W. Dean, Administrator – Region 1
U.S. Nuclear Regulatory Commission
475 Allendale Road
King of Prussia, PA 19406

Mr. R. Ennis, Project Manager Salem and Hope Creek
U.S. Nuclear Regulatory Commission
One White Flint North
Mail Stop O8 B1A
11555 Rockville Pike
Rockville, MD 20852

USNRC Senior Resident Inspector – Hope Creek (X24)

P. Mulligan, Manager IV
Bureau of Nuclear Engineering
PO Box 415
Trenton, NJ 08625

Lee Marabella – PSEG Commitment Coordinator (N21)

Philip Duca, Hope Creek Commitment Coordinator (H02)

NRC FORM 366 (10-2010) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB: NO. 3150-0104 EXPIRES: 10/31/2013

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Records and FOIA/Privacy Section (T-5 F53), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by internet e-mail to infocollects.resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET NUMBER	3. PAGE
Hope Creek Generating Station	05000 354	1 of 4

4. TITLE
Technical Specification Surveillance Requirement Not Met

5. EVENT DATE			6. LER NUMBER			7. REPORT DATE			8. OTHER FACILITIES INVOLVED	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO.	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
06	08	2010	2010	0 0 1	1	2	18	2011		DOCKET NUMBER

9. OPERATING MODE
1

10. POWER LEVEL
100

11. THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR§: *(Check all that apply)*

- ☐ 20.2201(b)
- ☐ 20.2201(d)
- ☐ 20.2203(a)(1)
- ☐ 20.2203(a)(2)(i)
- ☐ 20.2203(a)(2)(ii)
- ☐ 20.2203(a)(2)(iii)
- ☐ 20.2203(a)(2)(iv)
- ☐ 20.2203(a)(2)(v)
- ☐ 20.2203(a)(2)(vi)
- ☐ 20.2203(a)(3)(i)
- ☐ 20.2203(a)(3)(ii)
- ☐ 20.2203(a)(4)
- ☐ 50.36(c)(1)(i)(A)
- ☐ 50.36(c)(1)(ii)(A)
- ☐ 50.36(c)(2)
- ☐ 50.46(a)(3)(ii)
- ☐ 50.73(a)(2)(i)(A)
- ☒ 50.73(a)(2)(i)(B)
- ☐ 50.73(a)(2)(i)(C)
- ☐ 50.73(a)(2)(ii)(A)
- ☐ 50.73(a)(2)(ii)(B)
- ☐ 50.73(a)(2)(iii)
- ☐ 50.73(a)(2)(iv)(A)
- ☐ 50.73(a)(2)(v)(A)
- ☐ 50.73(a)(2)(v)(B)
- ☐ 50.73(a)(2)(v)(C)
- ☐ 50.73(a)(2)(v)(D)
- ☐ 50.73(a)(2)(vii)
- ☐ 50.73(a)(2)(viii)(A)
- ☐ 50.73(a)(2)(viii)(B)
- ☐ 50.73(a)(2)(ix)(A)
- ☐ 50.73(a)(2)(x)
- ☐ 73.71(a)(4)
- ☐ 73.71(a)(5)
- ☐ OTHER

Specify in Abstract below or in NRC Form 366A

12. LICENSEE CONTACT FOR THIS LER

FACILITY NAME	TELEPHONE NUMBER (Include Area Code)
Leon E. Whitney, Sr. Compliance Engineer	(856) 339 - 1961

13. COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
D	CC	ISV	M138	N	D	CC	ISV	M138	N

14. SUPPLEMENTAL REPORT EXPECTED

☐ YES *(If yes, complete 15. EXPECTED SUBMISSION DATE)* ☒ NO

15. EXPECTED SUBMISSION DATE

MONTH	DAY	YEAR

ABSTRACT *(Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines)*

On June 8, 2010, during a review of Technical Specification (TS) surveillance requirement (SR) 4.7.1.1.b, it was noted that existing surveillance tests for the Safety Auxiliary Cooling System (SACS) heat exchanger (HX) bypass valves (EG-HV-2457A/B and EGTV-2517A/B), did not appear to adequately test the isolation circuitry of the valves. This event is reportable under 10 CFR 50.73(a)(2)(i)(B) as a condition which was prohibited by the plant's TS.

The SACS HX bypass valves were shut, purposely failed closed, and declared inoperable while an engineering assessment was conducted to determine if the valves were required to be tested in accordance with the SR and/or whether existing surveillance tests met the requirements of the SR.

The 2457A/B and 2517A/B valves have been tested under SR 4.7.1.1.b. before returning them to operation. Extent of condition reviews of other automatic SACS valves and automatic Station Service Water (SSW) valves servicing safety related equipment are being performed. If additional valves are identified as not being adequately included in the SR population, a supplement to this LER will be provided.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Hope Creek Generating Station	05000354	2010	- 0 0 1 -	001	2 of 4

NARRATIVE

PLANT AND SYSTEM IDENTIFICATION

General Electric – Boiling Water Reactor (BWR/4)
Safety Auxiliaries Cooling System (SACS)– EIIS Identifier {CC}*
Isolation Valve – EIIS Identifier {ISV}
Station Service Water System (SSW) – EEIS Identifier {BI}*

*Energy Industry Identification System {EIIS} codes and component function identifier codes appear as {SS/CCC}

IDENTIFICATION OF OCCURRENCE

Event Date: June 8, 2010
Discovery Date: June 8, 2010

CONDITIONS PRIOR TO OCCURRENCE

Hope Creek was in Operational Condition 1 at 100% core thermal power (CTP). No other structures, systems or components contributed to the event.

DESCRIPTION OF OCCURRENCE

On June 8, 2010, a review of the TS SR 4.7.1.1.b revealed that the SACS {CC} HX bypass valves (EG-HV-2457A/B {ISV} and EGTV-2517A/B {ISV}) may not have been adequately surveillance tested in accordance with the requirements of TS SR 4.7.1.1.b. A corrective action program notification (20466109) was written to document the concern. Due to the system configuration, these SACS HX Bypass valves were closed and declared inoperable while a review of design documents, procedures and historical records was performed to determine whether or not these valves met the requirement to be included in the TS SR test population.

SR 4.7.1.1.b states that verification for SACS operability must be made "...at least once per 18 months by verifying that 1) Each automatic valve servicing safety-related equipment actuates to its correct position on the appropriate test signal(s)...".

The HCGS UFSAR (section 9.2.2.2) states "In the event of excessive temperature rise, the heat exchanger bypass valves are automatically closed to provide maximum cooling". Engineering calculations for SACS during design basis accidents assumes the bypass valves are closed to maintain SACS temperature less than 100 degrees F.

It has been determined that the 2457A/B and 2517A/B valves should be tested under SR 4.7.1.1.b. Surveillance tests have been written and performed prior to restoring the EG-HV-2457A/B and EGTV-2517A/B valves to operation. An extent of condition review of other SACS valves is being performed.

The Hope Creek TSs were reviewed to determine if there are similar SRs in other systems. It was determined that there is only one other system with similarly worded surveillance Technical Specifications, the Station Service Water System (SSW) {BI} (SR 4.7.1.2.b.1). An extent of condition review of the automatic valves servicing safety related Service Water equipment is being performed.

If additional valves are identified in the SACS and SSW system extent of condition reviews are identified as not being adequately included in the SR population, a supplement to this LER will be provided.

SAFETY CONSEQUENCES AND IMPLICATIONS

When the SR satisfaction was questioned for the 2457A/B valves and 2517A/B valves, both sets of valves were conservatively declared INOPERABLE and the valves were purposely failed closed, securing the HX bypass flow. Engineering and Operations personnel reviewed plant data, design basis documents, surveillance tests, inservice test procedures and other data to determine if the 2457A/B and 2517A/B valves should be tested in accordance with TS SR 4.7.1.1.b, and/or if the existing testing performed on the 2457A/B and 2517A/B valves and associated circuitry was adequate to meet SR 4.7.1.1.b.

During the mid-to-late 1990s, Hope Creek Generating Station (HCGS) conducted a Technical Specification Surveillance Improvement Program (TSSIP) as a corrective action to LER 95-017. The TSSIP program reviewed TS SRs against existing procedures and processes to ensure compliance with the TS SRs. LERs were generated (95-035, 95-034, 95-033 and supplements) to document areas where the SRs were not being met. Although LER 95-033-02 documented the SACS HX inlet valves as not being adequately tested for SR 4.7.1.1.b, no documentation could be located regarding the 2457A/B or the 2517A/B SACS HX bypass valves.

HCGS UFSAR section 9.2.2.2, SACS System Description, states "...the SACS loop coolant supply temperature is continuously monitored and controlled to the designed temperature range...In the event of excessive temperature rise, the heat exchanger bypass valves are automatically closed to provide maximum cooling...". Engineering calculations for the SACS during design basis accidents assumes the HX bypass line is isolated to maintain SACS temperature less than 100 degrees F.

A review of plant historical data from 07/01/2007 showed that the EG-HV-2457A and EG-HV-2457B valves each indicated closed whenever the SACS temperature in the respective loop rose to approximately 90 deg F. A sampling of the operating logs on dates that the valves indicated closed shows that the closures were automatic, and not manual, actuations. There were multiple closures each year for each valve. This provides a reasonable assurance that if the valves were called upon to respond to an accident condition, they would have fulfilled their design requirement by closing as the SACS temperature increased, and would be closed prior to SACS temperature reaching the design temperature of 100 deg. F.

A similar review for the EGTV-2517A/B valves was not possible due to lack of plant computer data points, but the past operability of the SACS system is assured due to the reasonable assurance of accident condition response by the EG-HV-2457A and EG-HV-2457B valves as discussed immediately above.

The inservice test program (IST) tests the closure of the 2457A/B valves using a local control switch. The IST program testing does not test the temperature trip function of the valves.

LICENSEE EVENT REPORT (LER)

1. FACILITY NAME	2. DOCKET	6. LER NUMBER			3. PAGE
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
Hope Creek Generating Station	05000354	2010	0 0 1	001	4 of 4

NARRATIVE

A review of this event determined that a Safety System Functional Failure (SSFF) did not occur as defined in Nuclear Energy Institute (NEI) 99-02.

CAUSE OF OCCURRENCE

The cause of this event was inadequate documentation and analysis of the surveillance procedures used to satisfy TS SR 4.7.1.1.b. The documentation and analysis occurred in the 1995 to 1997 timeframe during the TSSIP program that was instituted as a response to LER 95-017.

PREVIOUS OCCURRENCES

A review of Licensee Event Reports for the past three years at Hope Creek was performed to determine if a similar event had occurred. No similar events were noted.

CORRECTIVE ACTIONS

(1) Surveillance test procedures have been written to adequately test the EG-HV-2457A/B valves to the standard of TS SR 4.7.1.1.b.

(2) Surveillance test procedures have been written to adequately test the EGTV-2517A/B valves to the standard of TS SR 4.7.1.1.b.

(3) The surveillance test was successfully performed for the EG-HV-2457A/B valves prior to returning the valves to service.

(4) The surveillance test was successfully performed for the EGTV-2517A/B valves prior to returning the valves to service.

(5) An extent of condition review is being performed to validate the SACS automatic valves that service safety related equipment are included and tested to TS SR 4.7.1.1.b requirements.

(6) An extent of condition review is being performed to validate the SSW automatic valves that service safety related equipment are included and tested to TS SR 4.7.1.2.b.1 requirements.

COMMITMENTS

This LER contains no commitments.