PSEG

Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038-0236

Nuclear Business Unit

NOV 0 9 1998

LR-N98543

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

HOPE CREEK GENERATING STATION
DOCKET NO. 50-354
UNIT NO. 1
LICENSEE EVENT REPORT NO. 98-007-00

Dear Sir:

This Licensee Event Report (LER) entitled "Standby Liquid Control Pump Inoperability due to Incorrectly Performed Inservice Test" is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(i)(B).

There are no commitments being made by Public Service Electric & Gas Company in connection with this LER.

Sincerely,

Mark Bezilla
General Manager
Hope Creek Operations

IE22 1/1

PRD/

C Distribution
LER File

9811170327 981109
PDR ADOCK 05000354
S PDR

NRC FORM 366 (6-1998) U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

APPROVED BY OMB NO. 3150-0104 EXPIRES 06/30/2001
Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If 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.

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Hope Creek Generating Station	05000354	1 OF 4

TITLE (4)
Standby Liquid Control Pump Inoperability due to Incorrectly Performed Inservice Test

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	MONTH	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
										05000
10	09	98	98	-007-	00	11	09	98	FACILITY NAME	DOCKET NUMBER 05000

OPERATING	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)							
			20.2201(b)		20.2203(a)(2)(v)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)
POWER	100		20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71
			20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER
			20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)		Specify in Abstract below or in NRC Form 366A
			20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Paul Duke, Licensing Engineer	609-339-1466

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED	MONTH	DAY	YEAR
	YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On October 9, 1998, PSE&G concluded that the procedure for standby liquid control (SLC) pump inservice testing was not consistent with Part 6 of ASME Standard OM-1987, Operation and Maintenance of Nuclear Power Plants. After additional review, PSE&G concluded on October 22, 1998 that the procedure did not satisfy Technical Specification Surveillance Requirement (SR) 4.0.5. Inservice testing for standby liquid control pumps is required by SRs 4.0.5 and 4.1.5.c. The test procedure was not consistent with OM-1987, Part 6, Section 5.6 (Duration of Tests) since it did not require at least two minutes of stable operation immediately before obtaining required flow rate data. The cause for this event was personnel error in the initial development of the procedures for SLC pump inservice testing. There were no safety consequences associated with this condition. The pumps were tested satisfactorily on October 20, 1998 after the test procedures were revised to require a period of stable operation consistent with the requirements in ASME standard OM-1987, Part 6. This event is being reported pursuant to 10CFR50.73(a)(2)(i)(B) as an operation or condition prohibited by Technical Specifications.

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor (BWR/4)
Standby Liquid Control System - EIIS Identifier {BR/--}*

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

IDENTIFICATION OF OCCURRENCE

Event Date: October 9, 1998
Discovery Date: October 9, 1998

CONDITIONS PRIOR TO OCCURRENCE

The plant was in OPERATIONAL CONDITION 1 (POWER OPERATIONS), at approximately 100% of rated thermal power. There were no structures, systems, or components that were inoperable at the beginning of the event that contributed to the event.

DESCRIPTION OF OCCURRENCE

On October 9, 1998, PSE&G concluded that the procedure for standby liquid control (SLC) pump inservice testing was not consistent with Part 6 of ASME Standard OM-1987, Operation and Maintenance of Nuclear Power Plants. After additional review, PSE&G concluded on October 22, 1998 that the procedure did not satisfy Technical Specification Surveillance Requirement (SR) 4.0.5. Inservice testing for standby liquid control pumps is required by SRs 4.0.5 and 4.1.5.c.

OM-1987, Part 6, Section 5.6 (Duration of Tests) states that each pump shall be run at least two minutes after pump conditions are as stable as the system permits; and at the end of this time, at least one measurement or observation of each of the quantities required for the inservice test shall be made and recorded. The procedures for testing the SLC pumps specified a stable period of at least two minutes before measuring pump vibration or discharge pressure. Vibration and discharge pressure were measured while the pump operated in a closed loop with suction from and return to the SLC test tank. The pumps were then shutdown and the SLC system was reconfigured for flow rate testing. Flow rate was measured by level change over time in the SLC test tank.

DESCRIPTION OF OCCURRENCE (continued)

For the flow rate measurement, the SLC pump was first started and operated in the test configuration while the pump discharge pressure was adjusted to the IST reference value. The pump was then shutdown and the SLC test tank was refilled to a reference level. The pump was re-started and operated for one minute to obtain required flow rate data. The procedure did not require a stable period of at least two minutes before the flow measurement was performed.

After this condition was discovered, the SLC pump inservice test procedures were revised to require at least two minutes of stable operation before pump flow is measured. The tests were performed satisfactorily in accordance with the revised procedures on October 20, 1998.

Technical Specification 4.0.5 requires that inservice testing of ASME Code Class 1, 2 and 3 pumps be performed in accordance with Section XI of the ASME Boiler and Pressure Vessel Code and applicable Addenda. Failure to perform inservice testing for the SLC pumps in accordance with the requirements in ASME standard OM-1987, Part 6 (or its predecessor documents) from initial plant operation until October 20, 1998 is reportable pursuant to 10CFR50.73(a)(2)(i)(B) as an operation or condition prohibited by Technical Specifications.

APPARENT CAUSE OF OCCURRENCE

The cause for this event was personnel error in the initial development of the procedures for SLC pump inservice testing for the first IST program interval (circa 1984). PSE&G regarded a two minute stabilization period for pump discharge pressure and vibration measurements as sufficient to satisfy the OM-1987 requirement for test duration. The SLC pumps are positive displacement pumps designed to provide a fixed flow rate at nominal motor speed over the required range of discharge pressures. Since the procedure required stable operation at reference discharge pressure for at least two minutes before recording pressure and vibration readings, PSE&G did not believe OM-1987 required another period of stabilization after the pump was restarted before taking flow data.

SAFETY SIGNIFICANCE AND IMPLICATIONS

The standby liquid control system provides a backup capability for bringing the reactor from full power to a cold, Xenon-free shutdown, assuming that the withdrawn control rods remain fixed in the rated power pattern. The

SAFETY SIGNIFICANCE AND IMPLICATIONS (continued)

time required to inject the cold shutdown boron concentration is consistent with the nuclear reactivity rate of change predicted between rated operating and cold shutdown conditions. The required pumping rate for the SLC pumps meets the time requirement for achieving the cold shutdown boron concentration.

There were no safety consequences associated with this condition since the inservice test results demonstrate the SLC pumps would have functioned as required if called upon to shutdown the reactor. The pumps were tested satisfactorily on October 20, 1998 after the test procedures were revised to require a period of stable operation consistent with the requirements in ASME standard OM-1987, Part 6. In addition, although the OM-1987 requirement for test duration was not satisfied, inservice testing performed before October 20, 1998, demonstrated that the SLC pumps met the minimum flow requirement in SR 4.1.5.c.

Since this condition did not prevent the SLC pumps from performing their required safety functions during the period of TS noncompliance, this event did not affect the health and safety of the public.

PREVIOUS OCCURRENCES

A review of previously reported events identified five instances within the last two years in which required inservice testing was not performed (LERs 354/96-030, 354/97-030, 354/97-034, 354/98-003 and 354/98-005). The details of these events differed from this event such that the root causes and corrective actions were not applicable to this event and could not have prevented a recurrence.

CORRECTIVE ACTIONS

1. The procedures for SLC pump inservice testing were revised to require at least two minutes of stable operation before pump flow is measured. The tests were performed satisfactorily in accordance with the revised procedures on October 20, 1998.