



Public Service Electric and Gas Company P.O. Box 236 Hancocks Bridge, New Jersey 08038
Hope Creek Operations

DEC 04 1995
LR-N95227

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

Dear Sir:

HOPE CREEK GENERATING STATION
DOCKET NO. 50-354
UNIT NO. 1
LICENSEE EVENT REPORT 95-029-00

This Licensee Event Report is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(i)(B) and 10CFR50.73(a)(2)(vii).

Sincerely,

M. E. Reddemann
General Manager -
Hope Creek Operations

RAR/tcp

Attachment
SORC Meeting 95-115
c Distribution

070017

LICENSEE EVENT REPORT (LER)

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND 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.

FACILITY NAME (1) HOPE CREEK		DOCKET NUMBER (2) 05000354	PAGE (3) 1 OF 5
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TITLE (4)
Both Trains of Standby Liquid Control Declared Inoperable Due to the Failure to Perform Surveillances in accordance with Inservice Testing Requirements

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
11	02	95	95	029	00	12	04	95		05000
										05000

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)									
POWER LEVEL (10) 089	20.2201(b)	20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)(B)	50.73(a)(2)(viii)					
	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)	<input checked="" type="checkbox"/>	50.73(a)(2)(vii)						

LICENSEE CONTACT FOR THIS LER (12)	
NAME John Nichols, Specialty Engineering Manager	TELEPHONE NUMBER (Include Area Code) (609) 339-2313

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	<input checked="" type="checkbox"/>	NO					

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

During October and November of 1995, Quality Assurance conducted an audit of the Hope Creek Inservice Test (IST) Program. In the course of this audit, on November 2, 1995, the inspection team identified a concern that Hope Creek was not testing the 'A' and 'B' Standby Liquid Injection Control Pump Discharge Check Valves in the reverse flow direction. It was further determined that these valves had never been tested in the reverse flow direction. As a result of this determination, both trains of the Standby Liquid Injection Control System were declared inoperable. The apparent cause of this occurrence is procedural inadequacy in that the IST test procedures did not require the testing of the valves in the reverse direction. The safety significance of this event was minimal. Radiography showed that the 'A' and 'B' Standby Liquid Injection Control Pump Discharge Check Valves were closed, and would have performed their closed function if called upon. Radiography was performed, future corrective actions include revisions to the procedures and the IST Manual. This LER is being submitted in accordance with 10CFR50.73(a)(2)(i)(B) and 10CFR50.73(a)(2)(vii).

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

CONDITIONS PRIOR TO OCCURRENCE

Plant in Operational Condition 1 (Power Operations)
Reactor power at 89% of rated, Coastdown in progress

There were no systems, structures, or components that were known to be inoperable at the start of the event that contributed to the event.

DESCRIPTION OF OCCURRENCE

During October and November of 1995, Quality Assurance (QA) conducted an audit of the Hope Creek Inservice Test (IST) Program. This audit was conducted by a combination of QA personnel and experts from outside of PSE&G.

On November 2, 1995, the QA inspection team identified a concern that Hope Creek was not testing the 'A' and 'B' Standby Liquid Injection Control Pump Discharge Check Valves (1BHV-004 and 1BHV-005) in the reverse flow direction. It was further determined that these valves had never been tested in the reverse flow direction.

As a result of this determination, both trains of the Standby Liquid Injection Control System were declared inoperable. Radiography was performed on the 'A' and 'B' Standby Liquid Injection Control Pump Discharge Check Valves within 8 hours of discovery that the valves had not been tested in the reverse flow direction. After the radiographs showed that the valves were closed, the 'A' and 'B' Standby Liquid Injection Control Pump Discharge Check Valves were declared operable and returned to service.

ANALYSIS OF OCCURRENCE

The purpose of the Standby Liquid Control system is to provide an independent method to shut down the reactor in the unlikely event that the control rods cannot be inserted into the reactor core to accomplish shutdown and cooldown in the normal manner. This would be accomplished by pumping sodium pentaborate into the reactor.

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

ANALYSIS OF OCCURRENCE

An IST expert panel was formed to review and approve component review sheets during the initial review and approval cycle of the IST Program. The basis for IST testing requirements is the involvement of the component in safely shutting down the reactor, mitigation of the consequences of an accident, and keeping the reactor safely shut down.

The IST Program expert review panel determined that, for the 'A' and 'B' Standby Liquid Injection Control Pump Discharge Check Valves, the open function was the only function that was required to be tested. The open function allows sodium pentaborate injection into the reactor vessel.

The QA audit team determined that Hope Creek was not testing the 'A' and 'B' Standby Liquid Injection Control Pump Discharge Check Valves in the reverse flow direction. Components that are not tested to perform their safety function cannot be relied upon to perform the required function in any accident scenario. Therefore, these valves cannot be relied upon to perform a closure function in an accident situation.

On system initiation, which starts both Standby Liquid Injection Control Pumps, a malfunction of a pump or a pump safety valve, coupled with an open discharge check valve, could result in the divergence of part of the discharge flow back into the system test tank. This scenario could limit the amount of sodium pentaborate that can be sent to the reactor vessel to 50% of the design amount.

PRIOR SIMILAR OCCURRENCES

There have been several previous examples of failure to perform a surveillance test as required by Technical Specifications. The most recent example is documented in LER 354/95-018. LER 354/95-017 documents a similar event in that the required surveillance test had not previously been completely satisfied.

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CAUSE OF THE OCCURRENCE

The cause of this occurrence is procedural inadequacy in that the IST test procedures did not require the testing of the 'A' and 'B' Standby Liquid Injection Control Pump Discharge Check Valves in the reverse direction. The procedures were not adequate due to a cognitive personnel error in that the IST expert review panel that was assembled in December of 1988 did not recognize the requirement to test the 'A' and 'B' Standby Liquid Injection Control Pump Discharge Check Valves in the closed direction.

SAFETY SIGNIFICANCE

The safety significance of this event was minimal. Radiography showed that the 'A' and 'B' Standby Liquid Injection Control Pump Discharge Check Valves were closed, and would have performed their closed function if called upon.

CORRECTIVE ACTIONS

The audit team performed an in-depth review of the following systems in addition to Standby Liquid Control: High Pressure Coolant Injection, Reactor Core Isolation Cooling, Service Water, Safety and Turbine Auxiliaries Cooling, and Residual Heat Removal. No other similar occurrences were discovered; therefore, it is believed that this is an isolated instance. However, the ten year review of the IST program, which will be completed by December 1996, will encompass the entire IST Program. During this review, the expert review panel will look for other similar issues. The expert panel that is being assembled for this review will consist of representatives from Probabilistic Risk Assessment and design engineering in addition to the makeup of the previous expert panel (IST Engineer, Operations, Maintenance, and System Engineering).

The IST Engineer will review the lessons learned from this LER with the expert panel.

The 'A' and 'B' Standby Liquid Injection Control Pump Discharge Check Valves were radiographed to furnish the positive means of indicating the valves had closed. The radiography was performed less than 8 hours after discovery of the situation.

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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

CORRECTIVE ACTIONS

The quarterly IST test procedures will be revised to include a step and verification at the end of the procedure to furnish a positive means of indicating that the 'A' and 'B' Standby Liquid Injection Control Pump Discharge Check Valves are closed. The procedures will be revised by January 18, 1996.

The Hope Creek IST Manual will be updated to reflect the addition of a positive means of indicating that the 'A' and 'B' Standby Liquid Injection Control Pump Discharge Check Valves are closed. The IST Manual will be updated by March 1, 1996.