

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Hope Creek Generating Station	DOCKET NUMBER (2) 0 5 0 0 0 3 5 4	PAGE (3) 1 OF 0 5
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TITLE (4) Two HPCI Oil Control Valves Discovered Not In The Required Position For Operability - HPCI Declared Inoperable - Personnel Errors

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 NAMES		DOCKET NUMBER(S)
0 4	1 4	8 8	8 8	0 1 0	0 0	0 5	2 5	8 8			0 5 0 0 0
											0 5 0 0 0

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)

OPERATING MODE (9) 2	20.402(b)	20.406(e)	50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 0 0 5	20.406(a)(1)(i)	50.36(a)(1)	X 50.73(a)(2)(v)	73.71(e)
	20.406(a)(1)(ii)	50.36(a)(2)	50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 355A)
20.406(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(vii)(A)		
20.406(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)		
20.406(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(ix)		

LICENSEE CONTACT FOR THIS LER (12)

NAME A. M. Ervin, Lead Engineer - Technical	TELEPHONE NUMBER AREA CODE 6 0 9 3 3 9 - 5 2 3 9
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

SUPPLEMENTAL REPORT EXPECTED (14)

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

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

On April 14, 1988 at 1900 hours, the Plant was in OPERATIONAL CONDITION 2 (Startup) at 5% power generating 0 MWe when two (2) HPCI oil control valves were discovered not to be in the required position for operability. It was determined that the mispositioning of these valves resulted in a failure of HPCI during testing to develop a flow of at least 5600 gpm to the Reactor Pressure Vessel (RPV) at rated pressure in less than 27 seconds, as required to perform its safety function. HPCI was declared inoperable and action statement of Technical Specification 3.5.1.C was entered. The two valves were returned to their required position for operability and HPCI testing was completed satisfactory. The root cause of this occurrence was unauthorized repositioning of the two HPCI oil control valves - personnel error. Corrective actions include restoring the valves to their required positions and posting signs cautioning that they not be unlocked or repositioned without proper authorization.

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S PDR

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TEXT (if more space is required, use additional NRC Form 366A's) (17)

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor (BWR/4)  
High Pressure Coolant Injection System (HPCI) (EIIS  
Designator:BJ)

IDENTIFICATION OF OCCURRENCE

Two HPCI Oil Control Valves Discovered Not In The Required  
Position for Operability - HPCI Declared Inoperable - Personnel  
Errors

Event Date: April 14, 1988  
Event Time 1900 Hours  
This LER was initiated by Incident Report No. 88-072

CONDITIONS PRIOR TO OCCURRENCE

The Plant was in OPERATIONAL CONDITION 2 (Startup) at 5% power  
generating 0 MWe.

DESCRIPTION OF OCCURRENCE

On April 14, 1988 at 1900 hours, two (2) HPCI oil control valves  
were discovered not to be in the required position for  
operability. It was determined that the mispositioning of these  
valves resulted in a failure of HPCI during testing to develop a  
flow of at least 5600 gpm to the Reactor Pressure Vessel (RPV)  
at rated pressure in less than 27 seconds, as required to  
perform its safety function. HPCI was declared inoperable and  
action statement of Technical Specification 3.5.1.C was entered.  
The two valves were returned to their required position for  
operability and HPCI testing was completed satisfactory.

APPARENT CAUSE OF OCCURRENCE

The root cause of this occurrence was unauthorized repositioning  
of the two HPCI oil control valves - personnel errors.

ANALYSIS OF OCCURRENCE

The 18 month low pressure surveillance testing of HPCI was  
performed on April 14, 1988. The measured time to rated flow  
plus the valve stroke time exceeded the Technical Specification  
ECCS response time of 27 seconds. Further inspection of the  
HPCI system and review of test data determined that two oil  
control valves were mispositioned. The two valves were restored  
to required position for operability and the HPCI low pressure  
surveillance was re-performed satisfactory.

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TEXT (if more space is required, use additional NRC Form 366A's) (17)

ANALYSIS OF OCCURRENCE (CONTINUED)

The HPCI turbine governor servo oil supply manual isolation valve is required to be positioned 1/2 turn open and the handle removed. Contrary to this, the valve was found 7 1/2 turns open (full open) and with the handle from another valve installed.

The lube oil supply valve to the main HPCI pump is required to be throttled to 20 psig and the handle removed. Contrary to this, the valve was found positioned 1 - 2 psi high and without a handle. This valve is located such that inadvertent contact by workers performing maintenance or surveillance activities on the HPCI system could have changed the valve position. The effect of this mispositioning alone would have been negligible to HPCI system performance.

During the period from the first 18 month measurement of the HPCI response time to this test, quarterly surveillances of HPCI performance have demonstrated its ability to start and reach rated flow. During the outage which was in progress at the time of this event, additional major maintenance and testing was being done on the HPCI turbine to ensure its ability to meet its safety function.

PREVIOUS OCCURRENCES

A previous event in which a HPCI flow controller proportional gain was declared inoperable was reported in LER 86-082-00 (October 28, 1986). The HPCI controller had been adjusted earlier that day without a retest of the HPCI system. An Unusual Event was declared when HPCI failed to cold start within the required time since RCIC was also inoperable. The HPCI controller was returned to its original position for operation. HPCI then passed a hot start test and was declared operable.

SAFETY ASSESSMENT

It cannot be determined when the oil control valves were mispositioned. No surveillance, or operating procedures reposition them or verify their settings and no work orders or deficiency reports were issued which changed the positions of the two valves. For this reason it is conservatively assumed that they had been mispositioned since the last successful testing of the Emergency Core Cooling system (ECCS) response time during the initial power ascension test program.

The ECCS provides adequate redundancy to cool the reactor core under postulated loss-of-coolant accidents caused by ruptures in the reactor coolant pressure boundary (RCPB) piping. In the

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TEXT (if more space is required, use additional NRC Form 305A s) (17)

SAFETY ASSESSMENT (CONTINUED)

event of the failure of HPCI to reach its rated flow within the required time, the design function of the ECCS is met by four Low Pressure Coolant Injection (LPCI) loops, two core spray loops and the Automatic Depressurization System (ADS). Therefore, had HPCI been inoperable during the period from initial operation to the discovery of the mispositioned oil control valves, other ECCS components would have performed the safety function of HPCI had they had been called upon to do so.

Although HPCI was declared inoperable due to its failure to meet the response time requirement when the mispositioning of the two oil control valves was discovered, the results of the 18 month surveillance testing in progress at the time of the discovery demonstrated that HPCI was capable of injecting into the vessel within a time which would permit ECCS to perform its design function. Additionally, HPCI has injected and performed its safety function on several occasions in the 18 month test interval. For this reason, the health and safety of the public were not compromised by this event.

REPORTABILITY

Based on an interpretation of 10CFR50.72(b)(2)(iii), a four-hour report of this event was made to the NRC on April 14, 1988. However, our re-evaluation of the event resulted in an April 25, 1988 PSE&G letter to the NRC, indicating that neither the four-hour report nor an LER was required. PSE&G was informed on May 18, 1988 that the NRC does not accept this interpretation, therefore this LER describing the event of April 14, 1988 is being submitted after the thirty day period.

This report is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(v).

CORRECTIVE ACTIONS

1. As previously described, both oil control valves were restored to their required position for operability. The handle has been removed from the HPCI turbine governor servo oil supply manual isolation valve.
2. Signs were posted adjacent to each valve, cautioning that they not be repositioned without proper authorization.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

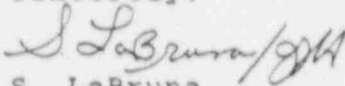
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TEXT (if more space is required, use additional NRC Form 366A's) (17)

CORRECTIVE ACTIONS (CONTINUED)

- 3. Permenant, positive mechanisms are under development to lock oil control valves which are not normally subject to repositioning.

Sincerely,  
  
 S. LaBruna  
 General Manager -  
 Hope Creek Operations

AME:

SORC Mtg. 88-076



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

May 25, 1988

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 88-010-00

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

Sincerely,

A handwritten signature in cursive script, appearing to read "S. LaBruna".

S. LaBruna  
General Manager -  
Hope Creek Operations

AME:

Attachment  
SORC Mtg. 88-076

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