

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) Hope Creek Generating Station	DOCKET NUMBER (2) 05000354	PAGE (3) 1 OF 04
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TITLE (4)
Post Accident Sample System Check Valves Installation Error

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)
1	0	4	8	6	0	7	1	0		050000
8	6	8	6	0	0	1	1	0		050000

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 50. (Check one or more of the following) (15)

OPERATING MODE (9) 4	20.402(b)	20.408(e)	60.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) 01010	20.408(a)(1)(i)	60.38(e)(1)	X 60.73(a)(2)(v)	73.71(e)
	20.408(a)(1)(ii)	60.38(e)(2)	60.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.408(a)(1)(iii)	60.73(a)(2)(i)	60.73(a)(2)(vii)(A)	
	20.408(a)(1)(iv)	60.73(a)(2)(ii)	60.73(a)(2)(vii)(B)	
	20.408(a)(1)(v)	60.73(a)(2)(iii)	60.73(a)(2)(ix)	

LICENSEE CONTACT FOR THIS LER (12)

NAME P. Mary	TELEPHONE NUMBER 61019 313191-1512139
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRRDS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

On October 4, 1986 during performance of Local Leak Rate Testing (LLRT), two Post Accident Sample System (PASS) valves failed to pass LLRT. Also, the valves had been heat traced and exceeded their design temperature of 150 degrees F. The valves were removed and reinstalled such that primary containment pressure helped seat the valve. After the reinstallation the LLRT was performed successfully. The root cause was a lack of detail on isometric drawings.

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LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
					- 0 7 1	- 0 0 2

TEXT (If more space is required, use additional NRC Form 386A's) (17)

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor (BWR/4)
Post Accident Sampling System (EISS Designator: IP)

IDENTIFICATION OF OCCURRENCE

Post Accident Sampling System Valves Installation Error
Event Date: 10/04/86
Event Time: 2100
This LER was initiated by Incident Report No. 86-219.

CONDITIONS PRIOR TO OCCURRENCE

Plant in OPERATIONAL CONDITION 4. Local Leak Rate Test in progress.

DESCRIPTION OF OCCURRENCE

On October 4, 1986, Inservice Inspection (ISI) personnel reported that two valves in the Post Accident Sampling System (PASS) had failed to pass a Local Leak Rate Test (LLRT). An investigation into the cause revealed that the valves were installed such that primary containment pressure helped unseat the valve. Further review also revealed that two other PASS valves were installed in the same manner and heat trace on the system had resulted in the valve bodies exceeding their design temperature of 150 degrees F. Due to concerns regarding the operability of other Containment isolation valves subject to the same heat tracing all similarly situated valves were declared inoperable.

ANALYSIS OF OCCURRENCE

After declaring the affected valves inoperable and making the necessary NRC notifications, a review of the occurrence was undertaken. The review of the incident entailed determining the reason for the incorrect installation, the affect of the heat tracing on valve operability, and the identification of necessary corrective action.

The PASS valves were installed by the plant constructor using isometric drawings. A review of the drawings revealed that unlike the Piping and Instrumentation Diagrams (P&ID) flow arrows were not included on the prints. The valves are spring closed, solenoid operated, and were installed such that, containment pressure tended to compress the spring and unseat the valve. It should be noted that previous LLRTs had been completed satisfactorily on these valves. In addition, the second set of valves which were found installed in the same manner had just passed the LLRT. Thus, the spring force appears to be sufficient, in some cases, to hold the valve closed under test pressure.

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TEXT (If more space is required, use additional NRC Form 388A's) (17)

ANALYSIS OF OCCURRENCE CONT'D

With regards to the installation of heat tracing on the valves, an evaluation by the vendor has concluded the temperature does not affect the qualified life of the valves, and in particular the non metallic components. This conclusion based on the following conditions which were provided to the manufacturers, VALCOR Engineering Corp.:

- o Maximum normal ambient temperature 104 degrees F.
- o Maximum accident temperature 148 degrees F.
- o Valves normally deenergized.
- o Valves energized once per 6 months for 15 minutes.
- o Valves energized once per day for 15 minutes for 100 days during a postulated DBE condition.
- o Sample process is containment air 150 degrees F (inlet) during normal conditions, and saturated gas during accident conditions.

Assuming the above conditions VALCOR calculated a qualified life of 4.8 years for the bonnet 'O' ring, as compared to an original replacement interval of 5 years. The other nonmetallics remain on a 5 year change out period. Therefore the qualified life of the subject valves is essentially unaffected by the heat tracing contribution.

CORRECTIVE ACTION

The four valves were removed and reinstalled in the proper configuration. After reinstallation the LLRT was performed successfully. In addition, valve stroking pursuant to the Inservice Testing Program was performed satisfactory. Engineering will revise the subject isometric drawings and provide the necessary detail regarding flow direction. The public health and

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

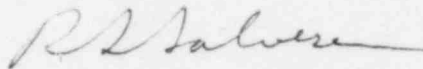
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TEXT (If more space is required, use additional NRC Form 388A's) (17)

CORRECTIVE ACTION CONT'D

safety was not comprised by this event. This LER is being submitted pursuant to 10CFR50.73(a)(2)(v).

Sincerely,



R. S. Salvesen
General Manager -
Hope Creek Operations

PM:tlb
SORC Mtg. 86-285



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

November 3, 1986

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 86-071-00

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

Sincerely yours,

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

R. S. Salvesen
General Manager -
Hope Creek Operations

RGB:tlb

Attachment
SORC Mtg. 86-285

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