NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Hope Creek Generating Station	0 5 0 0 0 3 5 4	1 OF 0 4

TITLE (4) Inadvertent "B" Channel LOCA Signals During Instrument Calibration Performance

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 5 0 0 0
0 7	0 3	8 6	8 6	0 3 3	0 0	0 7	2 5	8 6		0 5 0 0 0

OPERATING MODE (9)	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
2	20.402(b)	20.405(c)	X 50.73(a)(2)(iv)	73.71(b)
POWER LEVEL (10) < 1 %	20.405(a)(1)(i)	50.36(c)(1)	50.73(a)(2)(v)	73.71(c)
	20.405(a)(1)(ii)	50.36(c)(2)	50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	20.405(a)(1)(iii)	50.73(a)(2)(i)	50.73(a)(2)(viii)(A)	
	20.405(a)(1)(iv)	50.73(a)(2)(ii)	50.73(a)(2)(viii)(B)	
	20.405(a)(1)(v)	50.73(a)(2)(iii)	50.73(a)(2)(x)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER
R. G. Birley	AREA CODE 6 0 9 — 3 3 9 - 5 2 0 8

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)	X NO				

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

Plant in OPERATIONAL CONDITION 2. Reactor critical with power <1%. I&C calibrating Post Accident Monitoring level transmitter BB-LT-3682 B. Two similar events occurred which resulted in actuation of the "B" Channel Loss of Coolant Accident (LOCA) logic due to incorrect return of a level instrument to service. All Emergency Core Cooling Systems (ECCS) and Engineered Safety Feature (ESF) equipment initiated and performed as designed. Core Spray and RHR injected into the vessel in both instances. Following each event the operator, after verifying that the LOCA signal was invalid, reset the logic and returned the associated equipment to the normal operational condition. A Reactor scram did not occur as a result of either of the events. The root cause was personnel error on the part of the I&C Technician in the performance of valving, in conjunction with a procedural inadequacy regarding the type of procedure in use. Corrective action includes increased training for I&C Technicians and development of instrument specific procedures for use on all instruments that can affect ECCS and ESF equipment. These procedures will be in addition to existing Technical Specification surveillance procedures.

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PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor (BWR/4)
Nuclear Boiler Instrumentation - "B" Channel Loss of Coolant Accident (LOCA) Logic (EIIS Designator: JE)

IDENTIFICATION OF OCCURRENCE

Inadvertent "B" Channel LOCA Signals During Instrument Calibration Performance
Event Date: 7/3/86
Event Time: 1352 and 1509
This LER was initiated by Incident Reports 86-110 and 86-111

CONDITIONS PRIOR TO OCCURRENCE

Plant in OPERATIONAL CONDITION 2. Reactor critical with power <1%. Low power testing underway in accordance with the power ascension program. I&C Technicians calibrating Post Accident Monitoring level transmitter BB-LT-3682 B.

DESCRIPTION OF OCCURRENCE

Two similar events occurred within a short period of time when Post Accident Monitoring level transmitter BB-LT-3682 B was being returned to service following calibration by I&C Technicians. Both events consisted of actuation of the "B" Channel LOCA logic. All Emergency Core Cooling Systems (ECCS) and Engineered Safety Feature (ESF) equipment associated with this channel initiated and performed as designed except for the Reactor Core Isolation Cooling (RCIC) System which was previously manually isolated as allowed by Technical Specifications. Core Spray and RHR injected into the vessel resulting in a 30 inch (approx. 6,000 gallons) rise for the first event and a 5 inch (approx. 1,000 gallons) rise for the second. In accordance with the Event Classification Guide, an Unusual Event was declared for each actuation. Following each event the operator, after verifying that the LOCA signal was invalid, reset the "B" channel logic and returned the associated equipment to the normal operational condition. A Reactor scram did not occur as a result of either event. The power ascension program was placed on hold until an initial assessment was performed by station management.

ANALYSIS OF OCCURRENCE

In each of the events I&C Technicians were returning Post Accident Monitoring level transmitter BB-LT-3682 B to service following calibration activities. Although this transmitter is not a Technical Specification surveillance related instrument, it shares common variable and reference sensing lines with a number of ECCS

ANALYSIS OF OCCURRENCE (CON'T)

and ESF level and pressure transmitters. Any transient introduced as a result of improper valving or venting on a single transmitter, as occurred these cases, can affect all instruments sharing the common sensing lines.

I&C uses two types of procedures to perform instrument calibrations. Instruments which require surveillance in accordance with Technical Specifications have specific procedures for a particular transmitter. Other plant instruments are calibrated using general procedures written for a particular brand of transmitter. In addition to different types of procedures, the I&C Department has two distinct groups of technicians. The group responsible for completion of Technical Specification surveillance testing have received additional training on the sensitive nature of these tests and have been instructed on lessons learned from previous LOCA events. Other instruments, mainly non surveillance related, can be calibrated by other I&C Technicians with the proper qualifications.

The instrument involved in these events is not surveillance related and thus was being calibrated using a general procedure and by technicians that are not part of the surveillance group. The procedure in use did not have adequate precautions or instructions to the technicians to exercise care in returning the transmitter to service and to ensure that proper venting had been achieved.

The event occurred twice due to a problem concerning calibration data. During the initial calibration, the technician was concerned about the excessive error encountered between the required data and the as found data. Prior to contacting his immediate supervisor on the concern, he valved the transmitter into service. This action resulted in the first actuation of the logic. After conferring with his supervisor, he returned to the location of the transmitter and valved it out of service a second time. At this time, Operations determined that the work being performed by these technicians could have been responsible for the logic actuation. Upon being notified that a problem existed, the technician valved the transmitter back into service which resulted in the second event.

The root cause of these events was personnel error on the part of the I&C Technician in the performance of valving, in conjunction with a procedural inadequacy regarding the type of procedure that should be used. The public health and safety was not compromised by this event. This LER is being submitted pursuant to 10CFR50.73(a)(2)(iv).

CORRECTIVE ACTION

The following corrective actions have been recommended and/or implemented as a result of these events:

- All I&C Technicians were advised of the consequences of these events and instructed to notify the Control Room prior to valving any transmitter in or out of service.

- A review by I&C and Nuclear System Engineering has been completed to identify all non surveillance instruments which interface and can affect the ECCS and ESF instrumentation.

- All work on the above identified instruments has been terminated until instrument specific procedures are developed and approved.

- Work on the identified instruments using instrument specific procedures will only be performed by technicians with training relative to surveillance testing and lessons learned from previous LOCA events.

- The scope of the I&C training program is being reevaluated with regard to continuing hands on training of all technicians.

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Sincerely,

R. S. Salvesen
General Manager
Hope Creek Operations

SORC Mtg. 86-175

PSE&G

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

Hope Creek Operations

July 25, 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 86-033-00

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

Sincerely yours,

R. S. Salvesen
General Manager
Hope Creek Operations

KMH:bar

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Attachment

C Distribution

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