PSE&G

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

Hope Creek Generating Station

DATE Janauary 13, 1993

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 92-015-00

This Licensee Event Report is being submitted pursuant to the requirements of 10CFR 50.73(a)(2)(i).

Sincerely,

J.J. Hagan
General Manager -
Hope Creek Operations

LAA/

Attachment
SORC Mtg. 93-003
C Distribution

190070

LICENSEE EVENT REPORT

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
HOPE CREEK GENERATING STATION	0 5 0 0 0 3 5 4	1 OF 4

TITLE (4): Operation prohibited by Plant Technical Specification - Entry into Tech Spec 3.0.3 due to concurrent inoperability of Control Room Emergency Ventilation System.

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MONTH	DAY	YEAR	YEAR	NUMBER	REV	MONTH	DAY	YEAR	FACILITY NAME(S)	DOCKET NUMBER(S)
1 2	1 6	9 2	9 2	- 0 1 5	- 0 0	0 1	1 5	9 3		

OPERATING MODE (9)	POWER LEVEL %	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR: (CHECK ONE OR MORE BELOW) (11)			
1	1 0 0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)
		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)
		20.405(a)(1)(iii)	XX 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
Louis Aversa, Senior Staff Engineer - Technical	6 0 9 3 3 9 3 3 8 6

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS?	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS?

SUPPLEMENTAL REPORT EXPECTED? (14)				DATE EXPECTED (15)	MONTH	DAY	YEAR
YES		NO	X				

ABSTRACT (16)

On 12/16/92, at 0100 hours, while transferring the infeed breakers for a 4.16 KV vital bus, a breaker malfunction occurred which resulted in a bus lockout and de-energization of all "D" channel AC powered equipment. The loss of this 4.16 KV bus required entry into a 8 hour tech spec LCO for loss of onsite power distribution. The bus provides power for the "B" Control Room Ventilation System as well as other safety related equipment. At the time the bus transfer was attempted the "A" Control Room Ventilation System was inoperable as it was being returned to service from a preventive maintenance outage. The "A" ventilation train was available for service; however, the system had not been declared operable as certain retests had not yet been completed. With both Control Room Ventilation Systems inoperable, Technical Specification 3.0.3 was entered at 0100. At 0111 power was restored to the "D" channel 4.16 KV bus and at 0147 Technical Specification 3.0.3 was exited when the "B" Control Room ventilation system was returned to service. Subsequent investigation determined the cause of the breaker malfunction was due to a logic card failure. The logic card was replaced and the feeder breaker logic was retested.

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor (BWR/4)
Control Room Ventilation System
4.16KV Electrical Distribution System

IDENTIFICATION OF OCCURRENCE

TITLE: Operation prohibited by Plant Technical Specification - Entry into Tech Spec 3.0.3 due to concurrent inoperability of Control Room Emergency Ventilation System.

Event Date: 12/16/92
Event Time: 0100
This LER was initiated by Incident Report No. 92-192

CONDITIONS PRIOR TO OCCURRENCE

Plant in OPERATIONAL CONDITION 1 (Power Operation)
Reactor Power 100% of rated, 1120 MWe.

DESCRIPTION OF OCCURRENCE

On 12/16/92, at 0100 hours, while transferring the infeed breakers for a 4.16 KV vital bus, a breaker malfunction occurred which resulted in a bus lockout and de-energization of all "D" channel AC powered equipment. The loss of this 4.16 KV bus required entry into a 8 hour tech spec LCO for loss of onsite power distribution. The bus provides power for the "B" Control Room Ventilation System as well as other safety related equipment. At the time the bus transfer was attempted the "A" Control Room Ventilation System was inoperable as it was being returned to service from a preventive maintenance outage. The "A" ventilation train was available for service; however, the system had not been declared operable as certain retests had not yet been completed. With both Control Room Ventilation Systems inoperable, Technical Specification 3.0.3 was entered at 0100. At 0111 power was restored to the "D" channel 4.16 KV bus and at 0147 Technical Specification 3.0.3 was exited when the "B" Control Room ventilation system was returned to service.

ANALYSIS OF OCCURRENCE

The Hope Creek onsite 1E power 4.16 KV distribution system consists of four independent busses, with two separate infeed breakers per bus. The infeed breakers are designed to automatically transfer between offsite sources in the event the selected offsite power source is lost or degraded. In the event both breakers are inadvertently closed simultaneously, both breakers will trip and a bus lockout will occur. The breakers can also be fast transferred via operator command by initiating a close signal on the open breaker. As the open breaker begins to close a signal is generated to the open the closed breaker. Monthly testing of the undervoltage and degraded voltage relays for each infeed breaker is required by Technical Specifications and can only be performed with the breaker open and racked to the test position.

The Control Room Ventilation System consists of two independent and redundant trains which provides both normal and emergency ventilation requirements. The systems are powered from the "B" and "D" channel 4.16 KV vital busses.

On 12/16/92, control room personnel were returning the "A" Control Room Ventilation System (CRVS) to service following a planned outage for preventive maintenance and surveillance testing. The "A" CRVS breaker alignment had been completed and the equipment retest was in progress. Control room operators were also required to perform a swap of the infeeds for "D" vital bus as surveillance testing was scheduled to be performed on the inservice breaker later that morning. At 0100, operators performed the "D" bus breaker swap and when the alternate breaker was closed in the normally closed breaker failed to open. A bus lockout was generated via the breaker logic and both infeeds tripped resulting in a dead bus. As the "A" CRVS was not yet declared operable and the "B" CRVS did not have power available, the Senior Nuclear Shift Supervisor (SNSS - SRO licensed) entered Technical Specification 3.0.3. Operators were dispatched to investigate the cause of the breaker trip and found a bus lockout had been generated. The lockout device was reset and bus power restored via the alternate breaker at 0111. Initial investigation determined the alternate infeed was inoperable and tech spec 3.8.1.1.a was entered. The "B" CRVS was restored at 0147 and tech spec 3.0.3 was exited.

Subsequent investigation determined a failed chip on a logic card resulted in the failure of the normally closed breaker to open. The chip processes the signal from the breaker being closed to trip the closed breaker. A failure analysis of the chip to determine the actual cause of this failure is planned.

APPARENT CAUSE OF OCCURRENCE

The root cause of this event is equipment failure.

PREVIOUS OCCURRENCES

Four previous occurrences of entry into Tech Spec 3.0.3 due to concurrent inoperability of the Control Room Ventilation Systems have occurred (ref: LER 88-028-00, 89-007-00, 91-011-00 and 92-002-00). The previous events involved unrelated equipment failures with the CRVS and not a loss of power.

SAFETY SIGNIFICANCE

This incident posed minimal safety significance as the "A" Control Room Ventilation System was capable of performing its intended function although it was not operable. The system would have started via signals from the LOP/LOCA sequencer.

CORRECTIVE ACTIONS

1. The failed logic card was replaced and the infeed breakers were tested satisfactorily.

2. The "A" Control Room Ventilation system was tested and returned to operable status.

3. The failed logic card chip will be sent to the laboratory for failure analysis.

Sincerely,

J.J. Hagan
General Manager -
Hope Creek Operations

LLA/

SORC Mtg. 93-003