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

Hope Creek Operations

June 6, 1991

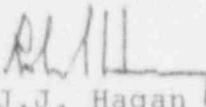
U. S. Nuclear Regulatory Commission
Document Control Desk
Washington, DC 20555

Dear Sir:

HOPE CREEK GENERATING STATION
DOCKET NO. 50-354
UNIT NO. 1
LICENSEE EVENT REPORT 91-009-00

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

Sincerely,

 J.J. Hagan
General Manager -
Hope Creek Operations

RBC/

Attachment
SORC Mtg. 91-056

C Distribution

The Energy People

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LICENSEE EVENT REPORT																				
FACILITY NAME (1) HOPE CREEK GENERATING STATION												DOCKET NUMBER (2) 0 5 0 0 0 3 5 4						PAGE (3) 1 OF 4		
TITLE (4): FULL INITIATION OF THE REACTOR PROTECTION SYSTEM DUE TO SPIKING OF THE "G" INTERMEDIATE RANGE MONITOR - EQUIPMENT MALFUNCTION																				
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)				
0	5	0	8	9	1	9	1	-	0	0	9	-	0	0	0	6	0	6	9	1
OPERATING MODE (9)		3 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR: (CHECK ONE OR MORE BELOW) (11)																		
POWER LEVEL 0 0 0		20.402(b)				20.405(c)				XX 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)				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 Richard Cowles, Senior Staff Engineer - Technical												TELEPHONE NUMBER 6 0 9 3 3 9 3 4 3 1								
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE NOTED IN THIS REPORT (13)																				
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC?	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC?											
B	IG	MON	G080	Y																
SUPPLEMENTAL REPORT EXPECTED? (14) YES NO XX										DATE EXPECTED (15) MONTH DAY YEAR										

ABSTRACT (16)

On 5/8/91 at 0758, with the reactor in Hot Shutdown (Operational Condition 3), a full Reactor Protection System (RPS) actuation occurred due to electronic spiking of the "G" Intermediate Range Monitor (IRM) (RPS Channel "A"). A 1/2 scram signal had been manually inserted to the "B" RPS channel on the previous shift due to the inoperability of various IRMs during maintenance and testing activities. When the "G" IRM spiked, both halves of the RPS logic were satisfied, and the full RPS initiation occurred. The spiking of the "G" IRM has been attributed to equipment malfunction, as a work request had been previously written (4/26/91) against IRM "G" due to intermittent electronic spiking (the IRM was scheduled to be repaired at the next forced or planned outage). Corrective actions consisted of performing repairs to the "G" IRM, as planned, prior to returning to power operation, and continuing an internal study regarding IRM reliability to identify potential future system enhancements.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION														
FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)							PAGE (3)					
		YEAR	**	NUMBER			**	REV						
HOPE CREEK GENERATING STATION	05000354	91	-	0	0	9	-	0	0	0	2	OF	0	4

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor (BWR/4)
 Neutron Monitoring System (EIIIS Designation: IG)
 Reactor Protection System (EIIIS Designation: JC)
 Intermediate Range Monitors (EIIIS Designation: MON)

IDENTIFICATION OF OCCURRENCE

Full Initiation of the Reactor Protection System due to Spiking of the "G" Intermediate Range Monitor - Equipment Malfunction

Event Date: 5/8/91

Event Time: 0758

This LER was initiated by Incident Report No. 91-069

CONDITIONS PRIOR TO OCCURRENCE

Plant in OPERATIONAL CONDITION 3 (Hot Shutdown) following a scram which occurred on 5/7/91 (Ref: LER 91-008-00).

DESCRIPTION OF OCCURRENCE

On 5/8/91 at 0758, with the reactor in Hot Shutdown, a full actuation of the Reactor Protection System (RPS) occurred. No control rod motion occurred, as the plant was shutdown, with all rods inserted. The scram discharge volume (SDV) vent and drain valves closed, and all appropriate annunciation was received. After verifying the cause of the actuation, the full scram signal was reset, SDV vents and drains were reopened, and all annunciation and alarms were returned to normal. A four hour non-emergency report was initiated in accordance with 10CFR50.72 by the Senior Nuclear Shift Supervisor (SNSS, SRO licensed) due to the full actuation of the RPS.

APPARENT CAUSE OF OCCURRENCE

This occurrence resulted from electronic spiking of the "G" Intermediate Range Monitor (IRM) on RPS Channel "A", with RPS Channel "B" already in a tripped condition due to inoperability of other IRMs for maintenance and testing.

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ANALYSIS OF OCCURRENCE

On 4/26/91, during performance of a Controls Department calibration procedure, it was determined that the "G" IRM was exhibiting indications of electronic spiking on all ranges. A work order was written to document the findings and initiate corrective maintenance. Repairs were scheduled to be performed during the next forced or planned outage.

On 5/7/91, Hope Creek scrambled while performing surveillance activities in the Feedwater Control System. During the subsequent forced outage, various IRM testing and maintenance activities required entry into Technical Specification 3.3.1.1., "Reactor Protection System Instrumentation". Entry into this specification requires that one RPS channel be placed in a tripped condition, as such, at 2249, the SNSS directed that the "B" RPS channel be placed in a tripped condition.

On 5/8/91 at 0758, an electronic spike occurred in the "G" IRM (RPS Channel "A"). This action, combined with the "B" RPS channel being in a tripped condition, satisfied both halves of the RPS logic.

PREVIOUS OCCURRENCES

Two previous full RPS initiations have occurred due to electronic spiking of IRMs (Ref: LERs 88-006 and LER 88-007) at Hope Creek. In both cases, the cause of the electronic spiking was related to outage work being performed in the area of the IRM preamplifier cabinets, rather than equipment failure as noted in this report.

SAFETY SIGNIFICANCE

This event posed no threat to the health and safety of the public or maintaining safe shutdown of the reactor. As previously noted, no control rod motion occurred (the plant was shutdown with all rods inserted at the time of this occurrence), and the RPS system functioned as designed.

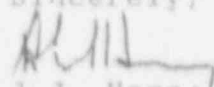
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CORRECTIVE ACTIONS

1. The "G" IRM was troubleshot, and the associated detector was replaced prior to returning to power operation.
2. An internal investigation into IRM reliability is currently being conducted to identify potential system enhancements.

Sincerely,

 for J.J.H.
 J.J. Hagan
 General Manager -
 Hope Creek Operations