



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

January 18, 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 90-033-00

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. 91-006

C Distribution

The Energy People

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PDR ADOCK 05000354
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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): ENGINEERED SAFETY FEATURES (ESF) ACTUATION (REACTOR WATER CLEANUP ISOLATION) DUE TO TRIPPING OF REACTOR PROTECTION SYSTEM CHANNEL "A" ELECTRICAL PROTECTION ASSEMBLY - 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)		
1	2	1990	9	0	033	0	0	0	1	1991					
OPERATING MODE (9) 1 THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR: (CHECK ONE OR MORE BELOW) (11)															
POWER LEVEL		1	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 NRPDS?	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS?						
B	JC	BKR	GOBO	Y											
SUPPLEMENTAL REPORT EXPECTED? (14)				YES	NO	DATE EXPECTED (15)		MONTH	DAY	YEAR					
					XX										

ABSTRACT (16)

On 12/19/90 at 0710, the control room received indication of a half scram and isolation of the inboard Reactor Water Cleanup (RWC) isolation valve. The above actions occurred as a result of a loss of power to the Channel "A" Reactor Protection System (RPS) electrical bus when the alternate power supply Electrical Protection Assembly (EPA) experienced a spurious trip (the normal power "A" RPS motor generator set was out of service for maintenance). The Channel "A" RPS bus was re-powered from its normal power source after completion of maintenance on the associated motor generator set, and the half scram and RWC isolation were reset. Followup troubleshooting by the Maintenance Department determined that a faulty logic card caused the trip of the EPA. Immediate corrective actions consisted of replacing the faulty logic card. Long term corrective actions consist of completing a design change to enhance logic card performance when logic card upgrade kits are received from the vendor.

EPA Manufacturer: General Electric
 Type: TFJ
 Part Number: 184C449P001

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	**	NUMBER		**	REV			OF				
HOPE CREEK GENERATING STATION	05000354	90	-	0	3	3	-	0	0	0	2	OF	0	4

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor (BWR/4)
 Reactor Protection System (EISS Designation: JC)
 Reactor Water Cleanup System (EISS Designation: CE)

IDENTIFICATION OF OCCURRENCE

Engineered Safety Features (ESF) Actuation (Reactor Water Cleanup Isolation) Due to Tripping Of Reactor Protection System Channel "A" Electrical Protection Assembly - Equipment Malfunction

Event Date: 12/19/91

Event Time: 0710

This LER was initiated by Incident Report No. 90-169

CONDITIONS PRIOR TO OCCURRENCE

Plant in OPERATIONAL CONDITION 1 (Power Operation), reactor power 100%, unit load 1098MWe.

DESCRIPTION OF OCCURRENCE

On 12/19/90 at 1353, control room personnel received indication of a half scram and isolation of the inboard Reactor Water Cleanup (RWCU) isolation valve (HV-F001). The Nuclear Control Operator (NCO, RO licensed) noted that an electrical protection assembly (EPA) for the Channel "A" Reactor Protection System (RPS) alternate power supply had tripped. After restoring the "A" RPS motor generator to service (previously removed from service for maintenance), Channel "A" RPS was re-energized from its normal power source, and the half scram and RWCU isolation were reset. A work request was initiated to troubleshoot the tripped EPA, and the Senior Nuclear Shift Supervisor (SNSS, SRO licensed) initiated a 4 hour non-emergency report per 10CFR50.72 due to the RWCU isolation.

APPARENT CAUSE OF OCCURRENCE

This occurrence was caused by a faulty logic card on the Channel "A" RPS bus alternate power supply EPA.

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ANALYSIS OF OCCURRENCE

Followup troubleshooting by the Maintenance Department determined that the logic card for the "A" RPS bus alternate EPA was faulty.

PREVIOUS OCCURRENCES

There have been 4 previous reportable occurrences initiated by tripping of RPS electrical protection assemblies. LERs 86-007, 87-021, and 89-022 report EPA trips due either to EPA undervoltage trip setpoint problems or valid undervoltage conditions on the alternate power supplies.

A spurious EPA trip was reported in LER 90-007 that was similar to EPA performance problems noted in GE SIL-496, Revision 1. In response to LER 90-007 and SIL-496, Revision 1, Systems Engineering initiated a design change to enhance EPA logic card performance by installing an upgrade kit as recommended by GE. This design change is scheduled to be implemented when the logic card upgrade kits are received from the vendor.

SAFETY SIGNIFICANCE

This incident had minimal potential safety significance. Technical Specifications permit operation in any operating condition for up to 72 hours with one RPS channel inoperable. Had RPS channel "B" been in a tripped (1/2 scram) condition at the time of this occurrence, the trip of RPS channel "A" would have resulted in a reactor scram. A reactor scram is bounded by UFSAR analysis.

EQUIPMENT / MANUFACTURER DATA

EPA Manufacturer: General Electric
 EPA Type: TFJ
 Part Number: 184C449P001

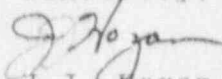
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CORRECTIVE ACTIONS

1. The faulty EPA logic card was replaced with a new card, and the "A" RPS alternate power EPA was tested satisfactorily.
2. In response to SIL-496, Revision 1 Systems Engineering initiated a design change to modify existing logic cards in all EPA's at Hope Creek with upgrade kits as recommended by GE. This design change is scheduled to be implemented when the logic card upgrade kits are received, currently scheduled for the 2nd quarter, 1991. All cards will be modified prior to the end of 1991.

Sincerely,



J.J. Hagan
 General Manager -
 Hope Creek Operations

RBC/

SORC Mtg. 91-006