



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

Hope Creek Generating Station

DATE February 19, 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 92-001

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

Sincerely,

J.J. Hagan
General Manager -
Hope Creek Operations

LLA/

Attachment
SORC Mtg. 92-015
C Distribution

9202250190 920212
PDR ADOCK 05000354
S PDR

The Energy People

240055

Handwritten initials: EJE

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 Feature Activation - Trip of Reactor Protection System Electrical Protection Assembly resulted in half scram and initiation of A & C Channels of Nuclear Steam Supply Shutoff System due to personnel error.

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	1	2 1 9 2	9	2	- 0 0 1	-	0 0	0	2	1 2 9 2		

OPERATING (9) MODE 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10CFR: (CHECK ONE OR MORE BELOW) (11)										
POWER LEVEL % 1 0 0	<input type="checkbox"/>	20.402(b)	<input type="checkbox"/>	20.405(c)	<input checked="" type="checkbox"/>	50.73(a)(2)(iv)	<input type="checkbox"/>	73.71(b)			
	<input type="checkbox"/>	20.405(a)(1)(i)	<input type="checkbox"/>	50.36(c)(1)	<input type="checkbox"/>	50.73(a)(2)(v)	<input type="checkbox"/>	73.71(c)			
	<input type="checkbox"/>	20.405(a)(1)(ii)	<input type="checkbox"/>	50.36(c)(2)	<input type="checkbox"/>	50.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text)				
	<input type="checkbox"/>	20.405(a)(1)(iii)	<input type="checkbox"/>	50.73(a)(2)(i)	<input type="checkbox"/>	50.73(a)(2)(vii)(A)					
	<input type="checkbox"/>	20.405(a)(1)(iv)	<input type="checkbox"/>	50.73(a)(2)(ii)	<input type="checkbox"/>	50.73(a)(2)(vii)(B)					
<input type="checkbox"/>	20.405(a)(1)(v)	<input type="checkbox"/>	50.73(a)(2)(iii)	<input type="checkbox"/>	50.73(a)(2)(x)						

LICENSEE CONTACT FOR THIS LER (12)											
NAME Louis Aversa, Senior Staff Engineer - Technical								TELEPHONE NUMBER 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 NRPDS?	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRPDS?
				////					////
				////					////

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

ABSTRACT (16)

On 1/21/92 at 1226, control room personnel received indications of a Reactor Protection System (RPS) loss of power, a half scram, and initiation of channel A & C Nuclear Steam Supply Shutoff System (NS4). The Nuclear Control Operator (NCO RO licensed) verified proper system response IAW system operating procedures. The RPS Bus was re-energized via the alternate power supply, the half scram and isolations reset and the Reactor Water Clean Up system was placed in service. Concurrent to this event Instrument and Controls Technicians (I&C Techs) were taking voltage readings on the output of the RPS MG set at one of the electrical protection assembly (EPA) breakers. When the Technician placed the test leads on the terminals of the breaker, the leads arced and the EPA breaker tripped as did the redundant EPA breaker and the MG Set output breaker. The Technicians terminated testing and returned to the control room and explained to the control room personnel what had occurred. The meter which was used was no longer functioning so testing was resumed with a new meter. An inspection of the failed meter was performed by the vendor (Fluke) who determined the failure was due to the leads being plugged into the wrong test connections of the meter. The technicians involved have been counseled on proper self check techniques and this incident is being reviewed with all technicians to reinforce the importance of self checking during routine evolutions.

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	9	2	-	0	0	1	-	0	0	0	2	of	0	4

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor (BWR/4)
 SYSTEM - Nuclear Steam Supply Shutoff System (EISS Designation: JE)
 Reactor Protection System (EISS Designation:)

IDENTIFICATION OF OCCURRENCE

TITLE Engineered Safety Feature Actuation - Trip of Reactor Protection System Electrical Protection Assembly resulted in half scram and initiation of A & C Channels of Nuclear Steam Supply Shutoff System.

Event Date: 1/21/92

Event Time: 1226

This LER was initiated by Incident Report No. 92-016

CONDITIONS PRIOR TO OCCURRENCE

Plant in OPERATIONAL CONDITION 1 (power operation)
 Rector power 100%, Unit Load 1115 Mwe.

DESCRIPTION OF OCCURRENCE

On 1/21/92 at 1226, control room personnel received indications of a Reactor Protection System (RPS) loss of power, a half scram, and initiation of channel A & C Nuclear Steam Supply Shutoff System (NS4). The following system responses and indications were noted:

- A RPS Bus de-energized and half scram
- A & C Channels NS4 activated
- Inboard Reactor Water Clean up Isolation Valve BG-HV-F001 closed
- Inboard Main Steam Line Drain Valve AB-HV-F016 closed
- RPS A Normal Power Supply lamp extinguished

The Nuclear Control Operator (NCO RO license#) verified proper system response IAW system operating procedures. The RPS Bus was re-energized via the alternate power supply, the half scram and isolations reset and the Reactor Water Clean Up system was placed in service. Concurrent to this event Instrument and Controls Technicians (I&C Techs) were taking voltage readings on the output of the RPS MG set at one of the electrical protection assembly (EPA) breakers. The Technicians were using a model 8600 A Fluke test device to monitor the output voltage. When the Technician placed the test leads on the terminals of the breaker, the leads arced and the EPA breaker tripped as did the redundant EPA breaker and the MG Set output breaker. The Technicians terminated testing and returned to the control room and explained to the control room personnel what had occurred. The Fluke which was used was no longer functioning so testing was resumed with a new meter.

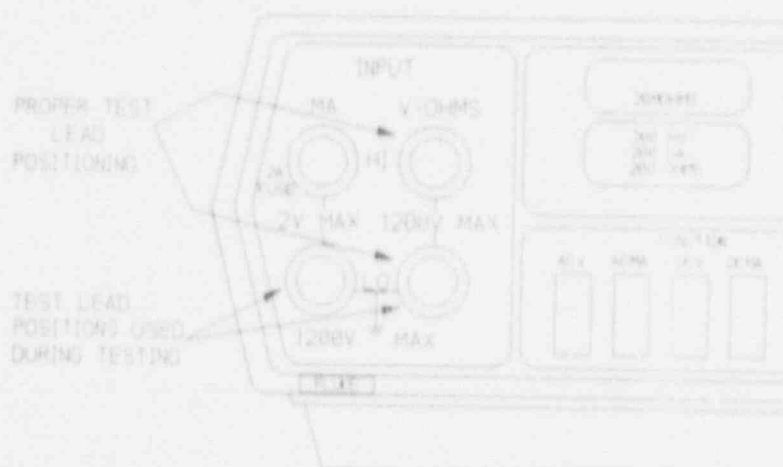
LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)						PAGE (3)						
		YEAR	*	NUMBER	*	REV								
HOPE CREEK GENERATING STATION	05000354	9	-	0	0	1	-	0	0	0	3	17	0	4

ANALYSIS OF OCCURRENCE

The RPS Motor Generator Set supplies power to the Reactor Protection System and the Nuclear Steam Supply Shutoff System logics through a normal output breaker and two Electrical Protection Assembly breakers. In the event abnormal voltage conditions occur in the MG Set output the EPA breaker will open the circuit to prevent failures in the RPS or NSSSS Systems. The EPA breakers are redundant to ensure failure of one breaker to open will not result in a system failure.

Technicians had been scheduled to collect voltage output readings of the RPS MG sets IAW the performance trending program. The data acquisition is performed quarterly IAW an approved functional test which designates specific locations for data acquisition. The technicians performing the test obtained a meter (Fluke model 8600A) from the calibration room and set it up for the test verifying that the Fluke was on the proper range and function setting for the required readings. When the leads of the meter arced the Technicians suspected that the meter was faulty and immediately sent it to the calibration lab to determine the cause of the failure. The calibration lab could not determine the cause of the failure and in turn forwarded the Fluke to the vendor for root cause determination. A report from Fluke determined that the meter failed due to a short circuit created by the test leads being plugged into the wrong terminals of the meter. The incorrect lead placement resulted in a short circuit path through the meter.



APPARENT CAUSE OF OCCURRENCE

The direct cause of this event was concluded to be personnel error on the part of the technicians who set up and used the meter without adequate self checking. The leads were installed by one of the technicians before the second technician used the meter to obtain the voltage readings. Failure to correctly place the leads in the meter by the first technician and failure to verify proper lead placement by the second technician prior to its use are considered to be the primary causes of this event.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)						PAGE (3)			
HOPE CREEK GENERATING STATION	05000354	YEAR	*	NUMBER	*	REV					
		92	-	001	-	00					0

PREVIOUS OCCURRENCES

Although there has been no instances of an ESF actuation attributed to incorrect placement of leads in the test meter, an event due to a test meter being placed on the wrong scale did cause an ESF actuation as reported in LER 87-006-00.

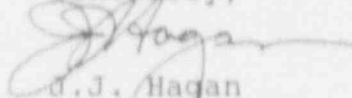
SAFETY SIGNIFICANCE

This incident posed minimal safety significance as all systems functioned per design. The systems which are powered from the RPS power supply will actuate and perform their intended functions when AC power is lost.

CORRECTIVE ACTIONS

1. The technicians involved in this test have been counseled on the need for self checking and attention to detail when performing routine activities during testing.
2. This incident will be reviewed with all technicians to reinforce the importance of proper self check procedures when performing routine tasks.
3. A Performance Enhancement Panel will review this event with the technicians involved to determine adequacy of corrective actions.

Sincerely,



J.J. Hagan
 General Manager -
 Hope Creek Operations

LLA/

SORC Mtg. 92-015