

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)
Hope Creek Generating Station

DOCKET NUMBER (2)
0 5 0 0 0 3 5 4 1 OF 0 3

PAGE (3)
1 OF 0 3

TITLE (4)
Inadvertent Isolation of Reactor Water Cleanup System

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)		
1	0	8	6	0	7	1	1	0		0 5 0 0 0		
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OPERATING MODE (9) 2

POWER LEVEL (10) 01.15

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)

20.402(b)	20.406(e)	<input checked="" type="checkbox"/>	80.73(a)(2)(iv)	73.71(b)
20.406(a)(1)(i)	80.38(e)(1)		80.73(a)(2)(v)	73.71(e)
20.406(a)(1)(ii)	80.38(e)(2)		80.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
20.406(a)(1)(iii)	80.73(a)(2)(i)		80.73(a)(2)(vii)(A)	
20.406(a)(1)(iv)	80.73(a)(2)(ii)		80.73(a)(2)(vii)(B)	
20.406(a)(1)(v)	80.73(a)(2)(iii)		80.73(a)(2)(viii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME: R. G. Birley

TELEPHONE NUMBER: 610 9 31 31 91-15 12 13 18

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

This event consisted of an automatic isolation of the Reactor Water Cleanup (RWCU) System from an invalid high differential flow signal. Investigation by System Engineering revealed that the differential flow indication was in error apparently due to entrapped air in the system and sensing lines. Air entered the system during inadvertent partial draining of the inventory while the system was out of service. The Blowdown Line Isolation Valve was found to be partially open even though it indicated full closed which resulted in a drain path to the Main Condenser. Corrective action was to repair the valve and initiate evaluations with regard to filling and venting of the system following prolonged shutdown.

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

PLANT AND SYSTEM IDENTIFICATION

General Electric - Boiling Water Reactor (BWR/4)
Reactor Water Cleanup System (EIIIS Designator: CE)

IDENTIFICATION OF OCCURRENCE

Inadvertent Isolation of Reactor Water Cleanup System
Event Date: 10/10/86
Event Time: 0130
This LER was initiated by Incident Report No. 86-226.

CONDITIONS PRIOR TO OCCURRENCE

Plant in OPERATIONAL CONDITION 2 with a Reactor power of 0.5%. Startup in progress to allow continuence of power ascension program. Reactor Water Cleanup (RWCU) System in service in the blowdown mode to control Reactor water level.

DESCRIPTION OF OCCURRENCE

On October 10, 1986 at 0130 hours, while in the process of varying the blowdown flow rate of the RWCU System, both differential flow indicators increased to the fullscale value and initiated the system isolation time delay relays. The blowdown flowrate was reduced in an attempt to lower the indicated differential flow and prevent closure of the isolation valves. Before the flow could be reduced to below the trip setpoint, the time delay relays timed out and a system isolation occurred. Both isolation valves closed as designed which resulted in a trip of the running RWCU Recirculation Pump. Following an initial investigation of this incident, the RWCU System was returned to service without recurrence of the isolation.

ANALYSIS OF OCCURRENCE

The RWCU System utilizes differential flow instrumentation to compare flow rates within the various system pathways which provides a means of determining if gross leakage out of the system has occurred. Upon high differential flow being sensed, valves are closed to isolate the system from the Reactor. Investigation of this incident revealed that the high differential flow indication was in error and apparently the result of air entrapped in the system. The air was caused by partial draining of the system during an out of service period.

A review, as to how air became entrapped in the system revealed that the Blowdown Line Isolation Valve was partially open even though it indicated full closed in the Control Room. Prior to this event, the system had been isolated for a lengthy period of time to

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TEXT (If more space is required, use additional NRC Form 366A's) (17)

ANALYSIS OF OCCURRENCE CONT'D

accommodate the Site Loss of Power (LOP) Test. During this isolated period, part of the inventory inadvertently drained to the Main Condenser through the partially open Blowdown Line Isolation Valve. Subsequent to the LOP Test, the system was returned to service without the piping being completely filled which caused the air in the system to enter the differential flow transmitters. Varying of the flow rate in the blowdown mode magnified the differential flow indication error caused by the entrapped air and resulted in the inadvertent isolation. The root cause of this incident was equipment malfunction in that the Blowdown Line Isolation Valve would not fully close due to improper limit switch adjustment. This LER is being submitted pursuant to 10CFR 50.73(a)(2)(iv).

CORRECTIVE ACTION

The Blowdown Line Isolation Valve limit switches were adjusted to allow full closure of the valve to preclude inadvertent draining. Additional corrective actions will be for the Operations Department to evaluate the need to fill and vent the RWCU System prior to placing in service following prolonged isolation.

Sincerely,



R. S. Salvesen
General Manager -
Hope Creek Operations

RGB:tlb

SORC Mtg. 86-292



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

Hope Creek Operations

November 10, 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 86-077-00

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

Sincerely yours,

A handwritten signature in cursive script, appearing to read "R. S. Salvesen".

R. S. Salvesen
General Manager -
Hope Creek Operations

RGB:tlb

Attachment
SORC Mtg. 86-292

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