

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)  
DISTRIBUTION FOR INCOMING MATERIAL

50-269

REC: O'REILLY J P  
NRC

ORG: PARKER W O  
DUKE PWR

DOCDATE: 01/26/78  
DATE RCVD: 01/26/78

DOCTYPE: LETTER NOTARIZED: NO  
SUBJECT:

COPIES RECEIVED  
LTR 0 ENCL 1

LICENSEE EVENT REPT (RO 50-269/77-31) ON 12/29/77 CONCERNING RCS PRESSURE  
CHANNEL INOPERABLE DUE TO DIAPHRAGM OF PRESSURE SWITCH 1PS-364 FAILING.

PLANT NAME: OCONEE - UNIT 1

REVIEWER INITIAL: XJM  
DISTRIBUTOR INITIAL:

\*\*\*\*\* DISTRIBUTION OF THIS MATERIAL IS AS FOLLOWS \*\*\*\*\*

NOTES:

1. M. CUNNINGHAM - ALL AMENDMENTS TO FSAR AND CHANGES TO TECH SPECS

INCIDENT REPORTS  
(DISTRIBUTION CODE A002)

FOR ACTION: BRANCH CHIEF SCHWENCER\*\*W/4 ENC

INTERNAL:	REG FILE**W/ENCL	NRC PDR**W/ENCL
	I & E**W/2 ENCL	MIPC**W/3 ENCL
	SCHROEDER/IPPOLITO**W/ENCL	HOUSTON**W/ENCL
	NOVAK/CHECK**W/ENCL	GRIMES**W/ENCL
	KNIGHT**W/ENCL	BUTLER**W/ENCL
	HANAUER**W/ENCL	TEDESCO**W/ENCL
	EISENHUT**W/ENCL	BAER**W/ENCL
	SHAO**W/ENCL	VOLLMER/BUNCH**W/ENCL
	KREGER/J. COLLINS**W/ENCL	ROSA**W/ENCL
	L. CROCKER**W/ENCL	

EXTERNAL: LPDR'S  
WALHALLA, SC\*\*W/ENCL  
TIC\*\*W/ENCL  
NSIC\*\*W/ENCL  
ACRS CAT B\*\*W/16 ENCL

DISTRIBUTION: LTR 45 ENCL 45  
SIZE: 1P+2P+1P

CONTROL NBR: 780310003

\*\*\*\*\* THE END \*\*\*\*\*

*Handwritten signature and initials*  
004

DUKE POWER COMPANY

POWER BUILDING  
422 SOUTH CHURCH STREET, CHARLOTTE, N. C. 28242

WPSM DOCKET FILE COPY

WILLIAM O. PARKER, JR.  
VICE PRESIDENT  
STEAM PRODUCTION

January 26, 1978

TELEPHONE: AREA 704  
373-4083

Mr. James P. O'Reilly, Director  
U. S. Nuclear Regulatory Commission  
Suite 1217  
230 Peachtree Street, Northwest  
Atlanta, Georgia 30303



RE: Oconee Unit 1  
Docket No. 50-269

Dear Mr. O'Reilly:

Pursuant to Sections 6.2 and 6.6.2 of the Oconee Nuclear Station  
Technical Specifications, please find attached Reportable Occurrence  
Report RO-269/77-31.

Very truly yours,

Handwritten signature of William O. Parker, Jr. in cursive, written in dark ink. The signature is fluid and extends across the width of the letter.

William O. Parker, Jr.

KRW:ge  
Attachment

cc: Director, Office of Management Information  
and Program Control

780310003

A002/S  
0/1

DUKE POWER COMPANY  
OCONEE UNIT 1

Report No.: RO-269/77-31

Report Date: January 26, 1978

Occurrence Date: December 29, 1977

Facility: Oconee Unit 1, Seneca, South Carolina

Identification of Occurrence: RCS Pressure Channel Inoperable

Conditions Prior to Occurrence: 90 percent full power

Description of Occurrence:

On December 27, 1977, unidentified Reactor Coolant System leakage of less than 1 gpm was detected. At 2131 RPS Channel A tripped on low pressure/temperature and was placed in manual bypass. At 0200 on December 28 the previously detected leak was determined to be coming from the area of Engineered Safeguard Channel 1 and RPS Channel A Pressure Transmitter. A reactor shutdown was initiated at 0209 due to high Reactor Building (RB) activity. At 0600 personnel entered the RB and determined that pressure switch 1 PS-364 was leaking and valved it out. Reactor power reduction was stopped at 39 percent full power and with the isolation of 1PS-364, RPS Channel A was returned to service..

At 2400 during PT/1&2/0600/01, it was determined that RC Loop A wide range (WR) pressure was indicating high. Further investigation determined that ES Analog Channel 1 WR pressure was indicating high and would not trip at required setpoints. ES Analog Channel 1 was placed in trip condition. Pressure transmitter 1PT-21P, which is located approximately 5 feet from and slightly below 1PS-364 was recalibrated and ES Analog Channel 1 was returned to service.

Apparent Cause of Occurrence:

The diaphragm of pressure switch 1PS-364 evidently failed as steam was seen blowing from the switch. This failure caused RPS Channel A to trip. The steam from the switch failure evidently impacted on and shifted the zero setting of pressure transmitter 1PT-21P. The zero shift caused the high reading on ES Analog Channel 1.

Analysis of Occurrence:

Pressure switch 1PS-364 provides a signal to prevent valves LP-1, -2 from opening with RCS pressure greater than 400 psig. The failed diaphragm caused RPS Channel A to trip. RPS Channels B, C & D remained fully operational during the incident as required by Technical Specifications 3.5.1. Valves LP-1, -2 had been tagged shut prior to this incident.

The zero setpoint of pressure transmitter 1PT-21P shifted when it was heated by steam from the switch failure. ES Analog Channel 1 which provides a signal for LPI and HPI initiation became inoperable, however, channels 2 and 3 remained fully operational as required by Technical Specification 3.5.1. The health and safety of the public were not endangered by this incident.

Corrective Action:

Pressure switch 1PS-364 is presently valved out and will be replaced during a future outage. Pressure transmitter 1PT-21P was recalibrated and returned to service.

LICENSEE EVENT REPORT

EXHIBIT A

CONTROL BLOCK: [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] [ ] (1)

(PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60  
SC N E E 1 0 0 - 0 0 0 0 0 0 - 0 0 3 4 1 1 1 1 (4) (5)

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40  
CONT  
0 1 REPORT SOURCE L 6 0 5 0 0 0 0 2 7 0 7 1 2 2 9 7 1 7 8 0 1 2 6 7 8 9  
60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80  
DOCKET NUMBER EVENT DATE REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 | On December 27 an increase in reactor coolant leakage was noted. At 2131  
0 3 | RPS channel A tripped on press/temp. It was determined that a pressure  
0 4 | switch had blown. Reactor shutdown was initiated but was terminated when  
0 5 | switch was valved out. On December 29 it was noted that Channel 1 WR  
0 6 | pressure was reading high so the channel was tripped. At 1545 recalibration  
0 7 | was complete so channel was returned to service. At no time was the ability  
0 8 | of the reactor to operate safely impaired.  
7 8 9

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
SYSTEM CODE CAUSE CODE CAUSE SUBCODE COMPONENT CODE COMP. SUBCODE VALVE SUBCODE  
I B 11 E 12 G 13 I N S T R U 14 T 15 Z 18

17 LER/RO REPORT NUMBER 7 7 7 21 22  
18 ACTION TAKEN E 18 19 Z 19 20 Z 20 21 Z 21 22 23  
19 EFFECT ON PLANT Z 20 21 Z 21 22 23  
20 SHUTDOWN METHODG Z 21 22 23  
21 HOURS 0 1 0 0 0 0 22  
22 ATTACHMENT SUBMITTED Y 23 24 Y 24 25 L 25  
23 REPORT TYPE L 25 26  
24 NPRO-4 FORM SUB. Y 24 25  
25 PRIME COMP. SUPPLIER L 25 26  
26 COMPONENT MANUFACTURER M 4 5 5 26 27  
27 CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)  
28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50

1 0 | The ES Analog Channel 1 WR pressure transmitter is located about five feet  
1 1 | from and slightly below the blown pressure switch. It is likely that steam  
1 2 | from the switch struck the transmitter thus throwing it out of calibration.  
1 3 | Recalibration corrected the transmitter error. Temporarily valving out the  
1 4 | switch has eliminated the leak. The transmitter was a model 56PH.  
7 8 9

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
FACILITY STATUS F 28 29 30 NA 31 32  
% POWER 0 9 0 29  
OTHER STATUS NA 30  
METHOD OF DISCOVERY B 31 32  
DISCOVERY DESCRIPTION B 31 During performance test PT/1&2/600/1

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
ACTIVITY CONTENT Z 33 34 NA 35  
RELEASED OF RELEASE Z 33 34  
AMOUNT OF ACTIVITY NA 35  
LOCATION OF RELEASE NA 36

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
PERSONNEL EXPOSURES NUMBER 0 0 0 37 TYPE Z 38 DESCRIPTION NA 39

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
PERSONNEL INJURIES NUMBER 0 0 0 40 DESCRIPTION NA 41

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
LOSS OF OR DAMAGE TO FACILITY TYPE Z 42 DESCRIPTION NA 43

7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50  
PUBLICITY ISSUED N 44 DESCRIPTION NA 45