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FACIL:50-287 OCONEE NUCLEAR STATION, UNIT 3, DUKE POWER CO. 05000287
AUTH.NAME AUTHOR AFFILIATION
LEWIS,S.R. DUKE POWER CO.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 79-004/01T-0 ON 790125:REACTOR BUILDING NARROW RANGE PRESSURE TRANSMITTER ENGINEERED SAFEGUARDS CHANNELS A,B & C DISCOVERED OUT OF CALIBRATION IN NON-CONSERVATIVE DIRECTION. CAUSED NOT DETERMINED.

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DUKE POWER COMPANY
OCONEE UNIT 3

Report Number: RO-287/79-4

Report Date: February 8, 1979

Occurrence Date: January 25, 1979

Facility: Oconee Unit 3, Seneca, South Carolina

Identification of Occurrence: Reactor Building Pressure Transmitters Out of Calibration in Non-Conservative Direction

Conditions Prior to Occurrence: 99% Full Power

Description of Occurrence:

At 0130 on January 25, 1979, routine instrument surveillance revealed that the Engineered Safeguards (ES) Channel B Reactor Building Narrow Range Pressure Transmitter reading was different from redundant channels A and C by 0.6 PSIG. During the subsequent calibration of the three channels it was discovered that all had been out of calibration in the non-conservative direction. Prior to calibration, channels A, B, and C would have tripped at 4.735, 4.121, and 4.450 PSIG, respectively. In addition, Table 3.5.1-1 of the Technical Specifications requires a minimum of two operable channels. However, the three transmitters were calibrated for a trip setpoint of 3.4 PSIG by 0700 January 25, 1979, well within the specified time.

Apparent Cause of Occurrence:

The exact cause of the setpoint drift has not been determined. Pressure transmitter setpoint drift has been a recurring problem and was previously attributed to high temperature and humidity in the penetration rooms, but this was not the case in the most recent failures.

Analysis of Occurrence:

The engineered safety features protective actuation setpoint was 4.450 PSIG, rather than the 4.0 PSIG trip setpoint specified. It is considered that the difference would have had no significant effect in the event of a postulated accident. In addition, the High Pressure Injection, Low Pressure Injection, and Reactor Building Spray systems were operable and would have actuated if required. Therefore, safe operation of the unit was not affected, and the health and safety of the public were not endangered.

Corrective Action:

The immediate corrective action was to calibrate the three pressure transmitters. In order to isolate the failure mechanism and preclude future incidents, the following actions have been initiated:

Corrective Action:

1. Three new transmitters have been ordered. These transmitters will be available for use as replacements.

2. The transmitter calibration technique will be reviewed for possible improvements and to assure that proper methods are followed.

3. The pressure indications of all three narrow range pressure transmitters and the wide range Reactor Building pressure transmitter, as well as the penetration room temperature, are being printed out every 15 minutes in order to monitor temperature-related drifts.

4. The instrument surveillance procedure has been revised so that the pressure transmitters will be calibrated if their readings disagree by more than 0.4 PSIG.

NRC FORM 366
(7-77)

U. S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

EXHIBIT A

CONTROL BLOCK: (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

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CON'T 0 1 REPORT SOURCE L (6) | 0 5 0 0 0 2 8 7 (7) | 0 1 2 5 7 9 (8) | 0 2 0 8 7 9 (9)
DOCKET NUMBER | EVENT DATE | REPORT DATE

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 On January 25, 1979, after observation that Channel B E.S. Reactor Building
0 3 Narrow Range Pressure Transmitter differed by as much as .6 PSIG from channels
0 4 A and C, it was discovered that all three channels were out of calibration in
0 5 the non-conservative direction. Initiation of E.S. systems would have occurred
0 6 at 4.450 PSIG rather than 4.0 PSIG as specified. This would have had no
0 7 significant effect in the event of a postulated accident. Therefore, the
0 8 health and safety of the public were not endangered.

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	I B (11)	E (12)	E (13)	I N S T R U (14)	T (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	7 9	—	0 0 4	/	0 1	T	—	0

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER
E (18)	G (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	Y (24)	L (25)	M 4 5 5 (26)

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The exact cause has not been determined. The transmitters were recalibrated.
1 1 Since this is a recurring problem, replacement transmitters have been ordered.
1 2 The transmitters will be more closely monitored in order to observe tempera-
1 3 ture or age-related drift.
1 4

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	E (28)	0 9 9 (29)	NA	A (31)	Operator Observation

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
1 6	Z (33)	Z (34)	NA	NA

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	NA

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	NA

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	NA

PUBLICITY

	ISSUED	DESCRIPTION (45)	NRC USE ONLY
2 0	N (44)	NA	

NAME OF PREPARER S. R. Lewis PHONE: (704) 373-8285