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FACIL:50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co. 05000389
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RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 89-004-00:on 890605,containment local leak rate exceeds TS due to valve closure stop out of adjustment.

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P.O. Box 14000, Juno Beach, FL 33408-0420

JULY - 5 1989

L-89-238
10 CFR 50.73

U. S. Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

Gentlemen:

Re: St. Lucie Unit 2
Docket No. 50-389
Reportable Event: 89-04
Date of Event: June 5, 1989
Containment Local Leak Rate Exceeds
Technical Specifications Due to Valve Closure
Stop Out of Adjustment Due to Personnel Error

The attached Licensee Event Report is being submitted pursuant to the requirements of 10 CFR 50.73 to provide notification of the subject event.

Very truly yours,

C. O. Woody
Acting Senior Vice President - Nuclear

COW/JRH/cm

Attachment

cc: Stewart D. Ebneter, Regional Administrator, Region II, USNRC
Senior Resident Inspector, USNRC, St. Lucie Plant

IE22
1/1

NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION
APPROVED OMB NO. 3150-0104
EXPIRES: 8/31/88

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
St. Lucie, Unit 2	0 5 0 0 0 3 8 9	1 OF 0 3

TITLE (4) Containment Local Leak Rate Exceeds Technical Specifications Due to Valve Closure Stop Out of Adjustment Due to Personnel Error

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)
0 6	0 5	8 9	8 9	0 0 4	0 0	0 7	0 5	8 9	N/A	0 5 0 0 0
										0 5 0 0 0

OPERATING MODE (9)	1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)			
POWER LEVEL (10)	1 0 0	20.402(b)	20.405(c)	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, NRC Form 366A)
		20.405(a)(1)(iii)	X 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	TELEPHONE NUMBER
Charles D. Holifield, Shift Technical Advisor	AREA CODE 4 0 7 — 4 6 5 - 3 5 5 0

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	

SUPPLEMENTAL REPORT EXPECTED (14)		EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE)	X NO				

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

On June 5, 1989, at 1220, with Unit 2 in Mode 1 at 100% power, a routine local leak rate surveillance test was performed on Containment Penetration 10. This penetration, which contains the exhaust line for the Containment Purge System, is subject to Type C testing and revealed an "as-found" leakage rate across FCV-25-5 in excess of 3,171,840 standard cubic centimeters per minute (SCCM). This leakage rate is in excess of the allowable leakage of .05 La, or 48,500 SCCM, as per Technical Specification 4.6.1.7.3.

The root cause of the high measured leakage was personnel error in that the valve adjustment stop was not properly locked down by contractor personnel when the valve was previously adjusted. A contributing factor was lack of guidance in the technical manual on how to tighten the adjustment screw locknut.

Corrective actions included confirming that the fuses for FCV-25-6 (a second valve in the containment purge exhaust line) were pulled, leak testing FCV-25-6, adjusting and locking down the stop for closing of FCV-25-5, and re-testing FCV-25-5, with satisfactory results. A technical manual change request will also be submitted.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
St. Lucie, Unit 2	0 5 0 0 0 3 8 9	8 9	— 0 0 4	— 0 0	0 2 OF 0 3

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

DESCRIPTION OF THE EVENT

On June 5, 1989, at 1220, with Unit 2 in Mode 1 at 100% power, a routine local leak rate surveillance test on Containment Penetration 10 revealed a leakage rate across FCV-25-5 (EIIS:ISV) in excess of 3,171,840 Standard Cubic Centimeters per Minute (SCCM) which is the capacity of the test equipment. Penetration 10 contains a 48 inch exhaust line for the Containment Purge System, with three butterfly valves, two of which (FCV-25-4 and FCV-25-5) are subject to Type C testing, as per Unit 2 Technical Specification 3.6.1.2.b, Table 3.6.-1 and Surveillance 4.6.1.7.3. Local leak rate testing is performed by pressurizing the piping between FCV-25-4 and FCV-25-5. Test instrumentation is connected to a test tap between the two valves, and the change in pressure over time is recorded and used to calculate the leakage rate. The as-found leakage of the penetration was in excess of the allowable leakage of .05 La, or 48,500 SCCM. In accordance with Technical Specification 3.6.1.1.7, action was undertaken to restore the leakage rate to within the specified limit within 24 hours. Also in accordance with Technical Specification 3.6.3., the fuses on FCV-25-6, an additional valve in series with FCV-25-5, were verified to be pulled and this valve was leak tested. Following an adjustment, the valve seat stop adjustment screw was locked down, and the leakage rate across FCV-25-5 was reduced to 200 SCCM.

CAUSE OF THE EVENT

The root cause of this event was personnel error by contractor maintenance personnel in that the valve travel adjustment screw locknut was only hand tightened the last time the valve travel was adjusted. A contributing factor to this event is the lack of guidance in the Technical Manual on how to tighten the adjustment screw locknut. The hand tight locknut allowed the valve travel to drift and resulted in the excessive leakage across FCV-25-5. There were no unusual characteristics of the work location that directly contributed to the personnel error.

ANALYSIS OF THE EVENT

This event has been deemed reportable as per the requirements of 10 CFR 50.73(a) (2) (i) (B), any operation or condition prohibited by the plant's Technical Specifications. The previous local leak rate testing on Penetration 10 was performed with satisfactory results during the normally scheduled refueling outage which ran from early February through April of 1989. Unit 2 Technical Specification Surveillance Requirement 4.6.1.7.3 requires testing of the Purge Valves to be conducted at intervals of at least once per 6 months on a staggered test basis. Therefore, the containment leakage rates, according to the requirements of this Technical Specification, were tested well within the bounds of the specified surveillance interval.

The limits for containment leakage rates in the Unit 2 Technical Specifications are derived from the requirements of Appendix J to 10 CFR 50. Since the other two valves in the Containment Purge exhaust lines (FCV-25-4 and FCV-25-6) were operable, the containment isolation safety function was maintained and the health and safety of the public was not threatened.

CORRECTIVE ACTIONS

1) Operations personnel confirmed that the fuses were pulled on FCV-25-6.
2) The Technical Staff Test Group leak tested FCV-25-6.
3) I & C adjusted and locked down the stop for closing of FCV-25-5.
4) The Technical Staff Test Group re-tested FCV-25-5.
5) The Instrument & Control department will submit a change request to vendor Tech Manual 2998-4508 to provide more guidance on adjusting the valve travel and locking down the adjustment screw.

ADDITIONAL INFORMATION

1. Component Identification
   This event did not involve an NPRDS reportable component failure.
2. Previous Similar Events
   For a similar event, see LER #335-87-005, which pertains to excessive leakage past a containment purge valve on Unit #1.