Florida Power & Light Company, 6501 South Ocean Drive, Jensen Beach, FL 34957

July 3, 2002

L-2002-122
10 CFR § 50.73

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

Re: St. Lucie Unit 2
Docket No. 50-389
Reportable Event: 2002-001
Date of Event: May 13, 2002
Control Room Envelope Degraded During
Door Seal Maintenance Activities

The attached Licensee Event Report 2002-001 is being submitted pursuant to the requirements of 10 CFR § 50.73 to provide notification of the subject event.

Very truly yours,

for DEJ

Donald E. Jernigan
Vice President
St. Lucie Nuclear Plant

DEJ/KWF

Attachment

IE22

NRC FORM 366 (1-2001) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104 EXPIRES 6-30-2001

Estimated burden per response to comply with this mandatory information collection request: 50 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
St. Lucie Unit 2	05000389	Page 1 of 3

TITLE (4)

Control Room Envelope Degraded During Door Seal Maintenance Activities

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 NAME	DOCKET NUMBER
05	13	2002	2002	- 001 -	00	07	03	2002		05000389
									FACILITY NAME	DOCKET NUMBER

OPERATING MODE (9)	1
POWER LEVEL (10)	100

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

	20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)
	20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)		50.73(a)(2)(x)
	20.2203(a)(1)		50.36(c)(1)(i)(A)		50.73(a)(2)(iv)(A)		73.71(a)(4)
	20.2203(a)(2)(i)		50.36(c)(1)(ii)(A)		50.73(a)(2)(v)(A)		73.71(a)(5)
	20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)		OTHER
	20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)		Specify in Abstract below or in NRC Form 366A
	20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)		
	20.2203(a)(2)(v)	X	50.73(a)(2)(i)(B)		50.73(a)(2)(vii)		
	20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)		
	20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(B)		

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Kenneth W. Frehafer, Licensing Engineer	(772) 467 - 7748

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

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX
A	VI	n/a	n/a	n/a	-	-	-	-	-

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 15 single-spaced typewritten lines)* (16)

On May 13, 2002, St. Lucie Unit 2 was in Mode 1 operation at 100 percent reactor power. St. Lucie started repair activities on control room door RA-114, an external door of a two-door vestibule. On May 16, 2002, the control room failed a Technical Specification pressurization surveillance test, and St. Lucie determined that the test failure was due to the inability of RA-108, the vestibule inner door counterpart to RA-114, to maintain the control room boundary during RA-114 maintenance activities. Although this condition existed for longer than 24 hours, the Technical Specification allowed outage time for an inoperable control room ventilation system, the effect of the door seal maintenance on the control room envelope was not realized prior to the test failure.

This event was caused by personnel error because degraded door seal conditions were not adequately evaluated. Although a pre-maintenance check was performed, the control room ventilation system was in its normal, not emergency, system lineup and the check was therefore unable to correctly determine the status of the control room boundary.

Door seals were installed on RA-108, and the control room passed its pressurization surveillance test on May 16, 2002. This event is being considered for inclusion in the continuing training program.

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
St. Lucie Unit 2	05000389	2002	- 001	- 00	Page 2 of 3

TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

Description of the Event

On May 13, 2002, St. Lucie Unit 2 was in Mode 1 operation at 100 percent reactor power. St. Lucie was preparing to repair identified seal discrepancies on doors [EIIS:VI:DR:SEAL] that provide access through the control room (CR) ventilation boundary. At 0800 hours, maintenance requested permission to repair CR door RA-114. CR door RA-114 is the external door of a two-door vestibule. RA-114 was fully opened to determine if the inner door of the two-door vestibule, RA-108, was capable of maintaining the CR pressure boundary for an extended time period. With RA-114 fully open, the CR pressure was not affected and no CR low pressure alarms were received. Maintenance was then given permission to work on CR door RA-114. No Technical Specification (TS) Limiting Condition of Operation (LCO) Action was entered because it was determined that door RA-114 did not affect the CR pressure boundary. Repair activities on door RA-114 were suspended on May 14, 2002 when Engineering was contacted to resolve door seal design issues.

On May 16, 2002, at 0824 hours, St. Lucie Unit 2 voluntarily entered TS 3.7.7 Action b for an inoperable control room emergency air cleanup system (CREACS) during restoration of an unrelated ventilation system temporary system alteration (TSA). The TSA restoration scope was completed when blank plates were removed and registers re-installed in ductwork located in the cable spreading room (CSR). At approximately 1115 hours, a CREACS TS surveillance was performed to ensure that the TSA restoration had no adverse effect on the CR envelope. However, the test results were unsatisfactory, and TS 3.7.7 Action b continued during the re-installation of the TSA. At 1450 hours, after the TSA was re-installed, the effect of the degraded RA-114 door seals on the surveillance was questioned. The TS surveillance was performed again with unsatisfactory results. Troubleshooting efforts were focused on the CR boundary doors, and results indicated that the CR envelope could be established if door seals were installed on RA-108, the inner door vestibule counterpart to RA-114.

All St. Lucie Unit 2 TS 3.7.7 action statements were exited at 2255 hours when the TS surveillance was performed satisfactorily subsequent to RA-108 door seal installation.

Cause of the Event

This event was caused by personnel error because the degraded seal condition of doors RA-108 and RA-114 was not adequately evaluated during the door seal maintenance. Although door RA-108, the inner door of the vestibule, was previously identified as having no door seals, this condition was not considered an issue because the CR pressure remained greater than 1/8 inch water gage (wg) when the outer vestibule door (RA-114) was opened. However, St. Lucie personnel failed to realize that this pre-maintenance check was inappropriate with CREACS in its normal operating lineup because the outside air make up flow was much greater (~1000 cfm) than the flow allowed during accident conditions (450 cfm). Opening door RA-114 would have little effect on CR pressure with outside air make up flow approaching 1000 CFM. The pre-maintenance check gave CR personnel false assurance that the seal condition of doors RA-114 and RA-108 had no effect on the CR pressure boundary because the CR pressure remained at greater than 1/8 inch wg above its surroundings.

Analysis of the Event

This event is reportable in accordance with 10 CFR 50.73(a)(2)(i)(B) as "any operation or condition prohibited by the plant's Technical Specifications," and NUREG-1022, Revision 2 guidance. There is firm evidence that both CREACS trains were unable to pass a TS surveillance from May 13, 2002, when work commenced on door RA-114, until May 16, 2002 when seals were installed on door RA-108 and a successful TS surveillance performed.

Analysis of Safety Significance

CREACS assures CR habitability by controlling the environment in the CR envelope during normal plant operation, anticipated operational occurrences, or abnormal occurrences. CREACS maintains the CR envelope at an average positive pressure of 1/8 inch wg above that of the surroundings during normal plant operation and following a loss of coolant accident (LOCA). The system design assures that no single active failure coincident with a loss of off-site power could result in loss of functional performance. The CREACS design bases is to prevent post-accident operator dose from exceeding the limits of General Design Criterion (GDC) 19. The subject CR door seals are necessary to maintain the CR pressure boundary during normal and post-accident conditions.

Although the CR pressure boundary TS surveillance could not be successfully completed, FPL concludes that CREACS was able to maintain sufficient positive CR pressure with respect to its surroundings during the time period between May 13, 2002 and May 16, 2002. The safety function, though degraded, was satisfied based on a review of the available surveillance test data and the CR envelope remained operable with respect to its design bases function of maintaining operator dose within GDC 19 criteria. Therefore, this event had no adverse effect on the health and safety of the public.

Corrective Actions

1. The door seals on RA-108 were installed on May 16, 2002.
2. The CR envelope was restored and both trains of CREACS satisfactorily passed the TS surveillance on May 16, 2002.
3. Door repairs are being performed under plant work order (PWO) 31023087.
4. St. Lucie is considering this event for inclusion in the continuing training program.

Additional Information

Failed Components Identified

None

Similar Events

LER 50-335/389 2001-001 and its supplements, "Control Room Ventilation Emergency Recirculation Procedures Inadequate."