

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8908220121      DOC. DATE: 89/08/14      NOTARIZED: NO      DOCKET #  
 FACIL: 50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co.      05000335  
 AUTH. NAME      AUTHOR AFFILIATION  
 SNYDER, M.J.      Florida Power & Light Co.  
 WOODY, C.O.      Florida Power & Light Co.  
 RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 89-004-00: on 890715, containment fan cooler filters left in place during unit power operation due to IP.

W/8      ltr.

DISTRIBUTION CODE: IE22T      COPIES RECEIVED: LTR 1 ENCL 1 SIZE: S  
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AUGUST 14 1989

L-89-299

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

Gentlemen:

Re: St. Lucie Unit 1  
Docket No. 50-335  
Reportable Event: 89-04  
Date of Event: July 15, 1989  
Containment Fan Cooler Filters Left in Place During  
Unit Power Operation Due to Inadequate Procedures

The attached voluntary Licensee Event Report is being submitted to provide notification of the subject event.

Very truly yours,

*R. J. Acosta*  
C. O. Woody  
Acting Senior Vice President - Nuclear

COW/JRH/cm

Attachments

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

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) <b>St. Lucie, Unit One</b>	DOCKET NUMBER (2) <b>0 5 0 0 0 3 3 5</b>	PAGE (3) <b>1 OF 0 4</b>
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TITLE (4) **CONTAINMENT FAN COOLER FILTERS LEFT IN PLACE DURING UNIT POWER OPERATION DUE TO INADEQUATE PROCEDURES**

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		
									N/A		
<b>0</b>	<b>7</b>	<b>15</b>	<b>8</b>	<b>9</b>	<b>0</b>	<b>0</b>	<b>4</b>	<b>0</b>	N/A		
									DOCKET NUMBER(S)		
									<b>0 5 0 0 0</b>		

OPERATING MODE (8) <b>5</b>	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more of the following) (11)									
POWER LEVEL (10) <b>0 0 0</b>	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.38(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.38(c)(2)	<input checked="" type="checkbox"/> 50.73(a)(2)(vii)	<input checked="" type="checkbox"/> OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)	<b>Voluntary</b>						
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)							
	<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)							

LICENSEE CONTACT FOR THIS LER (12)		TELEPHONE NUMBER	
NAME <b>Michael J. Snyder, Shift Technical Advisor</b>		AREA CODE <b>4 0 7</b>	<b>4 6 5 - 3 5 5 0</b>

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)									
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPPDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPPDS

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO					

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

On 15 July, 1989, while St. Lucie Unit One was shutdown, it was discovered that the Reactor Containment Fan Coolers (RCFC) had filter media in place during power operations. The RCFC filters reduce fouling of the system's cooling coils when the unit is shutdown. Filters were installed during the February 1987 refueling outage, were replaced during the July 1988 refueling outage and left installed until July, 1989. The cause of this event was due to inadequate maintenance instructions. The filters were removed, and an Engineering evaluation is being prepared to verify filter performance under accident conditions. St. Lucie Unit Two RCFC were verified to have filters removed, maintenance instructions will be revised, and other safety related components were checked for improperly installed filters. This event was determined not to be reportable under 10CFR50.72 or 50.73 and is being submitted for informational purposes.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR 8 9	SEQUENTIAL NUMBER - 0 0   4	REVISION NUMBER - 0 0			
							0 2 OF 0 4

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

DESCRIPTION OF EVENT:

On 15 July, 1989, while St. Lucie Unit One (PSL1) was shutdown for a Steam Generator (EIIS:AB) tube plug replacement outage, an inspection of the Reactor Containment Fan Coolers (EIIS:BK) (RCFC) showed that the prefilter media for these coolers was excessively discolored. The system Technical Manual for the RCFC implies that the prefilter media should only be used during shutdown modes of operation to reduce fouling of the cooling coils during construction or maintenance.

The prefilters were installed during the February 1987 refueling outage and remained in place until the next refueling outage of July, 1988. New filters installed during the July 1988 outage were left in place until July 1989. The length of time these filters were installed prompted utility personnel to initiate an operability assessment on past system performance.

CAUSE OF THE EVENT:

The cause of allowing prefilter media to remain in place during power operation was due to maintenance instructions not stating that the filter should be used only during outage periods.

ANALYSIS OF EVENT:

Technical Specification 3/4.6.2.3 addresses the surveillance requirements and the bases for the containment cooling system. The operability of the RCFC ensures that 1) the containment air temperature will be maintained within limits during normal operation, and 2) adequate heat removal capacity is available when operated in conjunction with the Containment Spray Systems during postulated loss of coolant accident conditions. The surveillance requirements for the RCFC were met under past system performance. The bases of system operation were satisfied as follows:

- 1) Normal containment air temperature was maintained within the limits set by PSL1 Technical Specification 3/4.6.1.5. Also, the RCFC manufacturer, Westinghouse, analyzed the results of differential pressure (dp) measurements taken on each of the four cooling fans and determined that the as found filter resistance was not a problem during normal and postulated accident mode operation. The measured dp was less than the maximum dp for the recommended filters. Therefore, the minimum airflow requirement for the RCFC was never violated under past system performance.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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TEXT (If more space is required, use additional NRC Form 368A's) (17)

2) Section 6.2 of the PSL1 FUSAR describes the design bases and minimum requirements for containment heat removal systems. Any one of the following three subsystems will provide at least minimum heat removal capability necessary to limit and reduce the post accident containment pressure and temperature: all four containment fan coolers (100 percent capacity), either of the two containment spray trains (EIIIS:BE) (100 percent capacity for each subsystem). Even assuming the worst case, no RCFC available and a single active failure in one of the two containment spray trains, the safety function of containment heat removal would have been met with the remaining operable containment spray subsystem.

Based on the above, it can be concluded that the health and safety of the public were not affected at any time with the continuous installation of prefilters in the RCFC.

This event is not deemed reportable as per the requirements of 10 CFR 50.73, or of any operation or condition prohibited by St. Lucie Plant's Technical Specifications. However, this report is being submitted for informational purposes.

CORRECTIVE ACTIONS:

1. St. Lucie Unit Two's RCFC system Technical Manual explicitly states that the prefilter media should be removed prior to power operation. An inspection of Unit Two's RCFC on 15 July confirmed that all of the RCFC prefilter media was removed before the unit began power operations.
2. Tests were run to measure the dp across each filter and cooling unit for PSL1. These test runs were made to address possible operability concerns over a potentially high filter dp. A preliminary Engineering evaluation determined that the RCFC were operable with prefilters installed during power operation.
3. The prefilters were removed from the PSL1 RCFC and will not be used during power operations.
4. An Engineering safety evaluation is being performed to determine the environmental qualification of the filter media and the performance of these filters under postulated accident conditions. Contact with Westinghouse, Florida Filters (supplier of the filter media last used), and other material manufacturers has been established in order to assess past performance capabilities of the RCFC.

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		8   9	-   0   0   4	-   0   0	0   4	OF 0

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

5. PSL 1's Technical Manual on RCFC will be changed to explicitly prohibit leaving filter media on the fans during power operation.
6. Other safety-related components were checked to verify that no other components have unanalyzed filters installed.

ADDITIONAL INFORMATION:

COMPONENT FAILURES

None

PREVIOUS SIMILAR EVENTS

None

