

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8904260083      DOC. DATE: 89/04/21      NOTARIZED: NO      DOCKET #  
 FACIL: 50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co.      05000389  
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 CONWAY, W.F.      Florida Power & Light Co.  
 RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 89-003-00: on 890321, inadvertent containment isolation actuation signal due to personnel error.

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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) <b>St. Lucie Unit 2</b>	DOCKET NUMBER (2) <b>0 5 0 0 0 3 8 9</b>	PAGE (3) <b>1 OF 0 3</b>
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TITLE (4) **INADVERTENT CONTAINMENT ISOLATION ACTUATION SIGNAL 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)
03	21	89	89	003	0	04	21	89		0 5 0 0 0

OPERATING MODE (9) <b>6</b>	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)				
POWER LEVEL (10) <b>0 1 0</b>	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input checked="" type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)
	<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 type="checkbox"/> 50.73(a)(2)(vii)		
	<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)		
	<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)(x)		

LICENSEE CONTACT FOR THIS LER (12)

NAME <b>A. B. Johnson, Shift Technical Advisor</b>	TELEPHONE NUMBER
	AREA CODE: <b>4 0 7</b>   TELEPHONE NUMBER: <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 NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
X	I, K, R, J, X		G, O, 6, 3	Y					

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE) |  NO

EXPECTED SUBMISSION DATE (15)

MONTH	DAY	YEAR

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

On March 21, 1989 with St. Lucie Unit 2 in Mode 6 and the reactor vessel head installed but untorqued, the Unit received a Containment Isolation Actuation Signal (CIAS). This inadvertent actuation of the CIAS was the result of completing the 2 out of 4 channel logic of the CIAS monitors.

The root cause of the event was a cognitive personnel error by a utility licensed operator who depressed the check source on the "D" channel CIAS monitor while the "A" channel CIAS monitor was in the tripped condition.

The personnel involved have been counselled regarding their misunderstanding of the status of the "A" channel CIAS monitor and the importance of double-checking the status of such equipment prior to working on redundant channels.

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PDR ADOCK 05000389  
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*Handwritten signature/initials*

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

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

DESCRIPTION OF EVENT

At 0729 on March 21, 1989, with the Unit in Mode 6 and the reactor vessel head installed but untorqued, a Containment Isolation Actuation Signal (CIAS) (EIIS:JE) was inadvertently actuated from the control room by a licensed operator. The inadvertent actuation of CIAS was the result of completing the 2 out of 4 logic. The "A" channel CIAS was in the tripped condition due to the class 1E 120 volt MA Instrument Bus (EIIS:EF) being de-energized for maintenance. On depressing the check source selector on the "D" channel CIAS digital monitor to regain the signal after the instrument's digital display lost indication and the instrument status display console indicated "NO PULSE RECEIVED", a CIAS actuation resulted. The CIAS isolated all containment penetrations (EIIS:BD) and initiated a start signal for the 2B Diesel Generator (EIIS:EK). The 2A Diesel Generator did not start because it was out of service for maintenance. The 2B Diesel Generator did start. At 0735, CIAS was reset and the 2B Diesel Generator tripped on high crankcase pressure. The high crankcase pressure trip for the diesel generator is bypassed by design on an Engineered Safeguard Feature Actuation Signal (ESFAS). The Unit entered an ACTION STATEMENT with less than the minimum required operable AC power sources, per the plant's Technical Specification. The cause of the high crankcase pressure trip on the diesel generator had been previously identified and the modification to prevent spurious trips was awaiting implementation. At 1330, the 2B Diesel Generator surveillance was completed, and the 2B diesel was returned to service after its modification to prevent spurious high crankcase pressure trips was completed. The Instrument & Control Department investigated the cause of the instrument failure and determined that the power supply to the digital monitor failed. The "D" channel CIAS digital monitor was returned to service on March 23 at 0700.

CAUSE OF EVENT

The root cause of the event was a cognitive personnel error by a utility licensed operator. The licensed operator believed that the "A" channel CIAS was in bypass prior to pressing the check source on the "D" channel CIAS digital monitor which resulted in a CIAS. The cause for the "D" channel CIAS monitor to lose indication on the digital display was a failed power supply. There were no unusual characteristics of the work location that directly contributed to the personnel error.

The 2B Diesel tripped because, under certain conditions, (e.g., fast starts and/or lower lube oil temperatures), the lube oil relief valve will relieve lube oil in close proximity to the crankcase pressure detector, thus causing a high crankcase pressure trip. Splash guards were installed on the 2B Diesel Generator prior to returning the diesel to service. This modification has also been completed on the 2A Diesel Generator.



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

ANALYSIS OF EVENT

This event is reportable under 10 CFR 50.73 (a)(2)(iv) because it resulted in an automatic actuation of an Engineered Safety Feature that was not part of a preplanned sequence during testing or reactor operations. This event was evaluated and determined to be of no consequence because no abnormal plant conditions existed and all core alterations were completed at the time of the event; therefore, the probability of a radiological event was determined to be negligible. At no time during the event were the health and safety of the public endangered.

CORRECTIVE ACTION

1. The CIAS was reset and the containment isolation valves were returned to their normal positions.
2. The splash guard was installed on the 2B Diesel Generator to prevent spurious high crankcase pressure trips.
3. The power supply was replaced on the "D" channel CIAS digital monitor and returned to service.
4. The personnel involved were counselled regarding their understanding of the status of the "A" channel CIAS monitor and the importance of double checking the status of such equipment, prior to permitting work on redundant channels.

ADDITIONAL INFORMATION

Failed Component Information

Component: Power Supply Assembly, 1800 volts

Manufacturer: G A Technologies

Part #1: 02810819-001

PREVIOUS SIMILAR EVENTS:

For similar events involving inadvertent actuation of the Containment Isolation Actuation Signal (CIAS), see Licensee Event Reports:

- 335-86-001
- 335-84-008
- 389-84-007
- 389-84-009



APRIL 21 1989

L-89-156  
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: 89-03  
Date of Event: March 21, 1989  
Inadvertent Containment  
Isolation Actuation Signal 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,

  
W. F. Conway  
Senior Vice President - Nuclear

WFC/JRH/cm

Attachment

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