

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9103050506      DOC. DATE: 91/02/26      NOTARIZED: NO      DOCKET #  
 FACIL: 50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co.      05000335  
 AUTH. NAME      AUTHOR AFFILIATION  
 TREADWELL, J.      Florida Power & Light Co.  
 SAGER, D.A.      Florida Power & Light Co.  
 RECIPIENT NAME      RECIPIENT AFFILIATION

SUBJECT: LER 91-001-00: on 910128, inadvertent actuation of reactor protection sys occurred during testing. Caused by personnel error. Operator counselled. W/910226 ltr.

DISTRIBUTION CODE: IE22T      COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 4  
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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NRR/DLPQ/LPEB10	1 1	NRR/DOEA/OEAB	1 1
NRR/DREP/PRPB11	2 2	NRR/DST/SELB 8D	1 1
NRR/DST/SICB 7E	1 1	NRR/DST/SPLB8D1	1 1
NRR/DST/SRXB 8E	1 1	REG FILE 02	1 1
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FPL

P.O. Box 128, Ft. Pierce, FL 34954-0128

February 26, 1991

L-91-56  
10 CFR 50.73

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: 91-01  
Date of Event: January 28, 1991  
Inadvertent Actuation of Reactor Protection System  
During Mode 3 Testing 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,

D. A. Sager  
Vice President  
St. Lucie Plant

DAS:GRM:kw

Attachment

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

DAS/PSL #361

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# LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) St. Lucie Unit 1	DOCKET NUMBER (2) 0 5 0 0 0 3 3 5 1	PAGE (3) OF 0 3
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TITLE (4) INADVERTENT ACTUATION OF REACTOR PROTECTION SYSTEM DURING MODE 3 TESTING  
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 N/A		DOCKET NUMBER(S)
0 1	2 8	9 1	9 1	0 0 1	0 0	0 2	2 6	9 1			0 5 0 0 0 1

OPERATING MODE (9) 3	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR : (Check one or more of the following) (11)					
POWER LEVEL (10) 0 0 0	20.402(b)		20.405(c)	X	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)		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 J. Treadwell, Shift Technical Advisor	TELEPHONE NUMBER 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) <input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
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ABSTRACT (Limit to 1400 spaces. I.e. approximately fifteen single-space typewritten lines)(16)

On January 28, 1991, at 1136, with Unit 1 in mode 3 for scheduled Control Element Assembly testing, an inadvertent actuation of the Reactor Protection System occurred during Reactor Protection System testing. The actuation occurred on High Startup Rate, channels A and B. The Trip Circuit Breakers opened, and one Control Element Assembly inserted. The reactor was already subcritical, and the event had no effect on plant operation.

The root cause of the event was cognitive personnel error. A utility licensed operator inadvertently adjusted the wrong trip test potentiometer during Reactor Protection System Loss of Turbine testing.

Corrective actions: Utility licensed operators restored the incorrectly positioned potentiometer to its correct position and closed the Trip Circuit Breakers. Scheduled testing was resumed. An INPO Human Performance Enhancement System review was performed on this event. The operator was counseled. An Operator Self Verification program had recently been introduced in order to reduce personnel error. As this policy is fully implemented and all operators become familiar with it, the frequency of such errors should be reduced.



LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)  St. Lucie Unit 1	DOCKET NUMBER (2)  05000335	LER NUMBER (6)						PAGE (3)		
		YEAR	SEQUENTIAL NUMBER		REVISION NUMBER					
		91	00	1	00	02	OF	03		

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

**DESCRIPTION OF THE EVENT**

On January 28, 1991, Unit 1 was in Mode 3 for scheduled Control Element Assembly (CEA) (EIS:AA) testing. Reactor Protection System (RPS) (EIS:JC) channel A High Startup Rate had previously been placed in a tripped condition, due to Wide Range Safety Channel A Nuclear Instrument (NI) (EIS:IG) being out of service.

CEA testing was in progress with one CEA partially withdrawn. All other CEA's were fully inserted. In preparation for startup, RPS testing was being performed in accordance with Operations procedure 1-1400054, REACTOR PROTECTION SYSTEM - LOSS OF TURBINE - HYDRAULIC FLUID PRESSURE LOW. Per procedure, a trip test potentiometer is adjusted on the linear range power NI drawer. At 1136, while testing channel B, the operator inadvertently adjusted a similarly labeled trip test potentiometer on the adjacent wide range power NI drawer. This was seen by RPS as a High Startup Rate on channel B. With channel A already in a tripped condition, this satisfied the RPS 2/4 logic. The Trip Circuit Breakers (TCB's) opened and one CEA inserted. This was the only CEA not already fully inserted. The reactor was subcritical.

**CAUSE OF THE EVENT**

The root cause of this event was cognitive personnel error. An INPO Human Performance Enhancement System (HPES) review was performed. There were no adverse environmental conditions with respect to lighting, noise or equipment labeling. A utility licensed operator did not adequately follow an approved procedure. The wrong trip test potentiometer was adjusted on the RPS cabinet. Self-checking was not applied to ensure location of the correct component before it was operated. A contributing factor was the channel A High Startup Rate already being in a tripped condition. This changed the RPS logic from 2/4 to 1/3, thus eliminating the normal single-failure tolerance for actuation on a spurious signal.

**ANALYSIS OF THE EVENT**

This event is reportable under the requirements of 10CFR50.73.a.2.iv as an event that resulted in manual or automatic action of any Engineered Safety Feature.

The portion of the testing being performed involved simulating a turbine trip on one RPS channel at a time. With channel A High Startup Rate already in a tripped condition, the error resulted in a false High Startup Rate on 2 out of 4 RPS channels, satisfying the RPS actuation logic. The TCB's opened and one CEA inserted. The reactor was already subcritical and in Mode 3, thus the event had no effect on plant operation. The RPS actuated correctly and properly as called upon. All TCB's were open within 40 milliseconds. Therefore, there were no equipment operability concerns. If the same test were run with the unit above 15% power, this event would not have occurred, as adjustment of the trip test potentiometer would not have been necessary. If this test had been done with the reactor critical but less than 15% power, the event would have resulted in a reactor trip.

The health and safety of the public were not at risk at any time during this event.





LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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

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

**CORRECTIVE ACTIONS**

1. A post trip review was conducted to verify proper equipment response and determine the specific cause of this event. Scheduled testing was resumed.
2. An INPO HPES review was performed on this event.
3. The requirements of the operator self verification program were reviewed with the operator involved.
4. Introduction of an Operator Self Verification program had begun just prior to this event in order to reduce personnel errors. As this program is fully implemented and operators become familiar with it, the frequency of such errors will be reduced.
5. Training of all licensed operators on the importance of self verification in reducing this type of error will be conducted.
6. The Wide Range Channel A NI will be repaired by the end of the next refueling outage.

**ADDITIONAL INFORMATION**

Failed Component Identification:

NONE

Previous Similar Events:

LER 389-89-003 describes an inadvertent Containment Isolation actuation due to a Licensed Operator mistakenly resetting one channel while a second channel was in the tripped condition.

LER 389-90-004 describes an inadvertent actuation of Engineered Safeguards Equipment during Engineered Safeguards testing due to Instrument and Control personnel depressing the wrong pushbutton.



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