CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9604020315 DOC.DATE: 96/03/27 NOTARIZED: NO DOCKET #
FACIL:50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co. 05000335
AUTH.NAME AUTHOR AFFILIATION
VAN NOY,M. Florida Power & Light Co.
BOHLKE,W.H. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 96-004-00:on 960227,inadvertent manual start of 1A EDG due to personnel error.Initiated procedure change for Administrative Procedure No 0010142 to include EDG control cabinet.W/960327 ltr.

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CATEGORY 1 DOCUMENT

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Florida Power & Light Company, P.O. Box 128, Fort Pierce, FL 34954-0128

FPL

MAR 27 1996

L-96-058
10 CFR 50.73

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

Re: St. Lucie Unit 1
Docket No. 50-335
Reportable Event: 96-004
Date of Event: February 27, 1996
Inadvertent Manual Start of the 1A Emergency
Diesel Generator 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. H. Bohlke
Vice President
St. Lucie Plant

WHB/MTVN

Attachment

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

IE22

NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 50.0 HRS. REPORTED LESSONS LEARNED ARE INCORPORATED INTO THE LICENSING PROCESS AND FED BACK TO INDUSTRY. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND 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.

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 1	05000335	1 OF 4

TITLE (4)

Inadvertent Manual Start of the 1A Emergency Diesel Generator 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 NAME	DOCKET NUMBER
2	27	96	96	-- 004 --	0	3	27	96	N/A	N/A
									FACILITY NAME: N/A	DOCKET NUMBER: N/A

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)(2)(v)	50.73(a)(2)(i)	50.73(a)(2)(viii)
20.2203(a)(1)	20.2203(a)(3)(i)	50.73(a)(2)(ii)	50.73(a)(2)(x)
20.2203(a)(2)(i)	20.2203(a)(3)(ii)	50.73(a)(2)(iii)	73.71
20.2203(a)(2)(ii)	20.2203(a)(4)	X 50.73(a)(2)(iv)	OTHER
20.2203(a)(2)(iii)	50.36(c)(1)	50.73(a)(2)(v)	Specify in Abstract below or in NRC Form 366A
20.2203(a)(2)(iv)	50.36(c)(2)	50.73(a)(2)(vii)	

LICENSEE CONTACT FOR THIS LER (12)

NAME	TELEPHONE NUMBER (Include Area Code)
Mark Van Noy, Licensing Engineer	(407) 467-7162

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 15 single-spaced typewritten lines) (16)

On 2/27/96 at 0918, an inadvertent manual start of the 1A Emergency Diesel Generator (EDG) was initiated when an Instrumentation & Control (I&C) technician, working inside the 1A EDG control cabinet, accidentally bumped the actuating stem on a relay mounted on the inside of the cabinet. The EDG was secured in an orderly manner. The plant remained in a stable condition throughout the event, and there were no unexpected consequences.

A technical review of the incident determined the root cause to be personnel error, in that a clearance on the affected equipment was prudent due to the proximity of the work to Engineered Safety Feature (ESF) control equipment and a clearance was not used.

Corrective actions were inclusion of the EDG control cabinet under requirements of a special procedure for "manipulation of sensitive systems", personal discussion of the incident and its importance with the responsible parties by FPL management and a special training bulletin to all maintenance and operations personnel that reinforces the importance of using clearances to avoid inadvertent actuation of plant equipment.

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
St. Lucie Unit 1	05000335	96	-- 004 --	0	2 OF 4

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

DESCRIPTION OF THE EVENT

On 2/27/96 at 0918, two Instrument and Control (I&C) technicians were performing Plant Change/Modification (PC/M) 180-195 to annunciator wiring on the 1A Emergency Diesel Generator (EDG) (EIIS:EK) fire control panel (EIIS:IC), when one of the technicians accidentally bumped a relay with his elbow initiating an inadvertent manual start of the 1A EDG. Also present during the event were a utility non-licensed operator and a Quality Control (QC) inspector.

PC/M 180-195, which did not involve circuitry related to control of the EDG, moved the termination of a signal cable in the EDG alarm annunciator (EIIS:IB) logic so that other alarms from the EDG control panel (EIIS:EK) to the control room EDG annunciator would not be blocked when the fire control panel alarm is active. Both the original signal cable termination point and the new termination point are inside the 1A EDG control cabinet (EIIS:EK). The new termination point is approximately six inches below the original termination point. Work space in this cabinet is limited because the cabinet door is obstructed from opening past an approximate ninety degree angle and various EDG relays and associated equipment are mounted on the inside of the door.

One of the I&C technicians was holding the door open while the other performed the work. The technician performing the work removed the ties used to dress the cable run and disconnected the leads from their original location. While pulling cable slack into the cabinet to allow sufficient length to reach the new termination location, the technician's elbow bumped the actuation stem of the K-16 "Idle Start" relay located in the cabinet. Closure of the K-16 relay caused the start circuit to be completed, resulting in the 1A EDG start. The EDG started and came to the mechanically governed idle speed of approximately 450 revolutions per minute. Since the start was initiated down stream of other system logic, no other actuation occurred.

The utility non-licensed operator immediately contacted the Unit 1 control room to report the inadvertent start. The utility licensed operator acting as control room supervisor directed a utility licensed operator to secure the 1A EDG. The plant remained in a stable condition throughout the event, and there were no unexpected consequences.

CAUSE OF THE EVENT

The cause of the 1A EDG inadvertent manual start was personnel error. The Nuclear Plant Work Order (NPWO) recommended that a clearance be used. A sign is posted on the front of the EDG control cabinet door warning that there is equipment inside the cabinet which can cause an EDG start. The I&C Supervisor did not request a clearance before scheduling work to commence in the EDG control cabinet. The utility licensed operator acting as control room supervisor authorized work to commence in the 1A EDG control cabinet without a clearance.

The circuitry to be modified was not related electrically to the EDG start circuitry, and work on it represented no hazard to personnel or equipment. However, its physical location is in close proximity to relays which can initiate an EDG start. This proximity, combined with the confined work space, creates a coincident threat for unplanned actuation of an Engineered Safety Feature (ESF). The technician performing the work inadvertently bumped the K-16 relay, which in turn started the 1A EDG.

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
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TEXT *(If more space is required, use additional copies of NRC Form 366A)* (17)

ANALYSIS OF EVENT

This event is reportable under 10CFR50.73(a)(2)(iv), which says in part, "The licensee shall report: Any event or condition that resulted in a manual or automatic actuation of any engineered safety feature (ESF),..." The 1A EDG started and stabilized at idle speed, as designed. The 1A EDG was available for emergency use at all times during this event. The redundant safety related equipment was also available for use and the plant remained stable throughout the event. The health and safety of the public were not affected at any time during the event.

The cause of the 1A EDG inadvertent start was an accidental physical contact by the I&C technician's elbow with the actuation stem of the K-16 Idle Start relay, completing the permissive circuit, and subsequently starting the 1A EDG.

A clearance can be established for the EDG control cabinet by opening and tagging a single manual switch. Because the PC/M being implemented did not involve circuitry related to control of the EDG, the Instrument and Control supervisor did not request a clearance, nor did the control room supervisor require one prior to approving the work.

CORRECTIVE ACTIONS

1) A procedure change was initiated for Administrative Procedure No. 0010142, "Unit Reliability - Manipulation of Sensitive Systems," to include the EDG control cabinet. This procedure imposes multiple levels of review and other controls on applicable work.

2) The I&C supervisor, the utility licensed operator acting as control room supervisor, the I&C technicians, the utility non-licensed operator, and the QC inspector involved in this event have been personally counseled by FPL management regarding the need to take proper precautions to prevent a situation which could result in an inadvertent actuation of plant equipment.

3) Operations, maintenance and technical department heads have been instructed to meet with their staffs to reinforce the fact that unnecessarily performing work in a manner or under circumstances which threaten to cause an inadvertent actuation of an ESF is not an acceptable work practice.

4) This event has been included in the maintenance and operations continuing training program via St. Lucie Training Bulletin # 266.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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

ADDITIONAL INFORMATION

Failed Components Identified

None

Previous Similar Events

LER 93-003 PSL 1 "Inadvertent Start of the 1B Emergency Diesel Generator due to Personnel Error" - Root cause: "... personnel error. Utility personnel inadvertently bumped an undervoltage relay during the installation of test equipment for the Integrated Safeguards Test."