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FACIL:50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co. 05000335
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STALL,J.A. Florida Power & Light Co.
RECIP.NAME RECIPIENT AFFILIATION

SUBJECT: LER 96-005-00:on 960514,wide range nuclear instrumentation channel rendered inoperable when required to be in svc for fuel movement.Caused by personnel error.Applicable personnel counseled & surveillance procedure revised.W/960613 ltr.

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CATEGORY 1 DOCUMENT

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FPL

JUN 13 1996

L-96-144
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: 96-005
Date of Event: May 14, 1996
Wide Range Nuclear Instrumentation Channel Inoperable when Required to be in Service for Fuel Movement

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,

J. A. Stall
Vice President
St. Lucie Plant

JAS/SL

Attachment

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

200081

IE22
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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 3

TITLE (4)

Wide Range Nuclear Instrumentation Channel Inoperable when Required to be in Service for Fuel Movement

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
									NA	NA
5	14	96	96	005	0	6	13	96	FACILITY NAME: NA	DOCKET NUMBER: NA

OPERATING MODE (9)	6
POWER LEVEL (10)	0.00

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

	20.2201(b)		20.2203(a)(2)(v)	X	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)		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)
Sean Lavelle, Licensing	(561) 467-7160

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 May 14, 1996 at 0202, with St. Lucie Unit 1 in Mode 6 and the reactor being defueled, Operations personnel began the channel functional surveillance test of the nuclear instrumentation used for monitoring count rate during fuel movement. This test is performed to satisfy Technical Specification requirements. During the performance of the test, an artificial signal is injected which could mask the actual signal coming from that particular nuclear instrumentation channel, thus rendering it inoperable. This test, conducted in parallel with fuel movement, caused a condition in which only one channel was operable. Pursuant to Technical Specifications, a minimum of two channels are required to be operating during CORE ALTERATIONS. At 0220, the Reactor Engineering Supervisor suspended the removal of fuel assembly R-54 when the recorder used to monitor neutron flux showed an increase in counts. There were no further CORE ALTERATIONS until it was determined the count increase had been caused by the surveillance in progress.

Personnel error on behalf of the utility licensed operators performing this surveillance while fuel movement was in progress is the primary cause of the event. The channel functional test was in progress as fuel removal began, therefore the requirements of Tech. Spec. 3.9.2 were not met. The removal of a fuel bundle reduces the positive reactivity in the core.

Corrective Actions are: 1) The utility licensed operator, unit supervisor and the shift supervisor were disciplined and counseled. 2) The surveillance procedure was revised to ensure the channel being surveilled is declared out of service. 3) Policy has been developed that requires a declaration of inoperability, if required, when conducting a surveillance test. 4) The refueling procedure was changed to include the addition of caution tags which require notification of the Refueling Supervisor prior to performing any work or surveillances on the operating nuclear instrumentation channels. 5) The count rate recorder will be monitored prior to the removal of fuel. 6) A Training memo was issued stating the plant's policy on Technical Specification equipment operability when surveillances are being performed.

CORRECTIVE ACTIONS

1. The utility licensed operator, unit supervisor, and shift supervisor were disciplined and counseled on the need to maintain better communications, awareness, and control of the refueling evolutions and testing in progress.

2. Operating procedure 1-1210051 and 2-1210051"Wide Range Nuclear Instrumentation Channel Functional Test", for both units, had a caution step added which requires that the channel being tested be declared out of service and the Technical Specification Action Statement be entered.

3. A policy has been developed and proceduralized that requires a declaration of inoperability, if required, when conducting a surveillance test.

4. Pre-operational procedure 3200090 "Refueling Operation" was revised to include a step to place caution tags on the nuclear instrumentation channels used for meeting Technical Specification 3.9.2 to require notification of the Refueling Supervisor prior to performing any work or surveillances.

5. Pre-operational procedure 3200090 "Refueling Operation" will be revised to ensure the Refueling Supervisor will monitor the count rate recorder prior to off- loading fuel.

6. The Operations Manager issued a Training memo explaining the expectations of operations policy on Technical Specification operability when surveillances are being performed.

ADDITIONAL INFORMATION

1) **Component Failure**

NONE

2) **Previous Similar Events**

LER 335-96-003 " Containment Atmosphere Particulate and Gaseous Monitors Out of Service Resulting in a Condition Prohibited by Technical Specifications Due to Personnel Error"

This event was attributed to a Health Physics technician leaving a valve mispositioned after taking a sample.

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL	REVISION	
ST. LUCIE UNIT 1	05000335	96	-- 005 --	0	2 OF 3

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

DESCRIPTION OF THE EVENT

On May 14, 1996 at approximately 0202, with St. Lucie Unit 1 in Mode 6, a licensed utility operator began to perform Operating Procedure 1-1210051, "Wide Range Nuclear Instrumentation Channels Functional Test" on each of the two operating channels. This surveillance is performed to meet Technical Specification Surveillance Requirement 4.9.2.a which states: "Each wide range logarithmic neutron flux monitor (EIIS:IG) shall be demonstrated OPERABLE by performance of: A CHANNEL FUNCTIONAL TEST at least once per 7 days". During the performance of the second channel surveillance, fuel was being removed from the reactor core in preparation for a core barrel and reactor vessel (EIIS:AC) inspection. In the surveillance, an artificial signal is injected which could mask the actual signal coming from that particular channel's nuclear instrumentation, rendering that channel inoperable. Technical Specification 3.9.2 LIMITING CONDITION FOR OPERATION requires a minimum of two wide range logarithmic neutron flux monitors shall be operating during CORE ALTERATIONS.

At 0220, the Reactor Engineering Supervisor suspended the removal of fuel assembly R-54 when the recorder used to monitor neutron flux showed an increase in counts greater than what had been seen during previous fuel assembly removal. Fuel assembly R-54 was approximately one foot out of the core. The wide range functional test was completed at 0222 with satisfactory results and counts had returned to the previously seen values. Fuel movement resumed at 0318 after it was determined the increased counts was the result of the functional test that had been in progress when the fuel assembly was being removed.

CAUSE OF THE EVENT

Removing the channel from the "operate" position to functionally test the instrumentation renders the channel inoperable. The licensed operators on shift were not alerted to the fact and did not recognize that performing this surveillance would render the channel inoperable. Policy at St. Lucie had recently been strengthened, prior to this event, to declare Technical Specification equipment being surveilled out of service when the equipment is rendered inoperable due to manual manipulation of components and the equipment is not able to automatically perform its design function. Procedures which would guide the operators to ensure compliance with the new requirements had not been implemented.

ANALYSIS OF THE EVENT

This event is reportable under 10 CFR 50.73 (a) (2) (i) (B), as "any operation or condition prohibited by the plant Technical Specifications". The wide range nuclear instrumentation channel was inoperable during the time the surveillance was being performed and fuel movement was in progress. Technical Specification 3.9.2, requires that, with less than two operating channels, CORE ALTERATIONS or positive reactivity changes be suspended. When the Reactor Engineering Supervisor became aware of the increased count rate, fuel movement was immediately stopped in compliance with the Technical Specification. The channel functional test was in progress as fuel removal began; therefore, the requirements of Technical Specification 3.9.2 were not met.

The removal of all fuel bundles from the core was in preparation for the core barrel and reactor vessel inspection. At the time the wide range nuclear instrument channel was inoperable due to the surveillance being performed, fuel bundle R-54, which did not have a control element assembly, was being removed, thus reducing positive reactivity. The removal of fuel bundle R-54 added negative reactivity to the core. In accordance with procedure, refueling operators are directed to withdraw the assembly if there was an actual increase in count rate on any individual channel. The BASES for Technical Specification 3.9.2 states, that redundant monitoring capability is available to detect changes in the reactivity condition of the core. At the time of this event, one wide range channel was being surveilled and thus inoperable; however, the other operable channel was in service. At no time was the health and safety of the public affected.