

# ACCELERATED DISTRIBUTION DEMONSTRATION SYSTEM

## REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9105220106      DOC. DATE: 91/05/14      NOTARIZED: NO      DOCKET #  
 FACIL: 50-389 St. Lucie Plant, Unit 2, Florida Power & Light Co.      05000389  
 AUTH. NAME      AUTHOR AFFILIATION  
 WACHTEL, P.K.      Florida Power & Light Co.  
 SAGER, D.A.      Florida Power & Light Co.  
 RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 91-002-00: on 910415, missed Tech Spec surveillance. Caused by procedural error. Revising surveillance Procedure to require testing equipment relays for Boric Acid Gravity Feed Valves & Reactor Cavity Cooling Fans. W/910514 ltr.

DISTRIBUTION CODE: IE22T      COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5  
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

**NOTES:**

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	AEOD/ROAB/DSP	2 2	NRR/DET/ECMB 9H	1 1
	NRR/DET/EMEB 7E	1 1	NRR/DLPQ/LHFB11	1 1
	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	<u>REG FILE</u> 02	1 1
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EXTERNAL:	EG&G BRYCE, J.H	3 3	L ST LOBBY WARD	1 1
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MAY 14 1991

L-91-141  
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: 91-02  
Date of Event: April 15, 1991  
Missed Technical Specification  
Surveillance Due to Procedural 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,

A handwritten signature in cursive script that reads 'DASager'.

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 #430

9105220106 910514  
FDR ADOCK 05000389  
S FDR

20099

an FPL Group company

Handwritten initials in cursive script, possibly 'TEC' or 'TEC2', with two vertical lines below them.

LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 30.8 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-55), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20545, AND TO THE PAPERWORK REDUCTION PROJECT (3150-0104), OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1) St. Lucie Unit 2		DOCKET NUMBER (2) 05000389	PAGE (3) 1 OF 4
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TITLE (4) Missed Technical Specification Surveillance Due To Procedural 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)									
0	4	15	9	1	9	1	0	0	2	0	0	0	5	1	4	9	1	N/A	0510101
									N/A	0510101									

OPERATING MODE (9) 1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR : (Check one or more of the following) (11)									
POWER LEVEL (10) 1   0   0	20.402(b)	20.405(c)	50.73(a)(2)(iv)	73.71(b)	OTHER (Specify in Abstract below and in Text NRC Form 366A)					
	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)							
	20.405(a)(1)(iii)	X	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 Patricia K. Wachtel, 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	

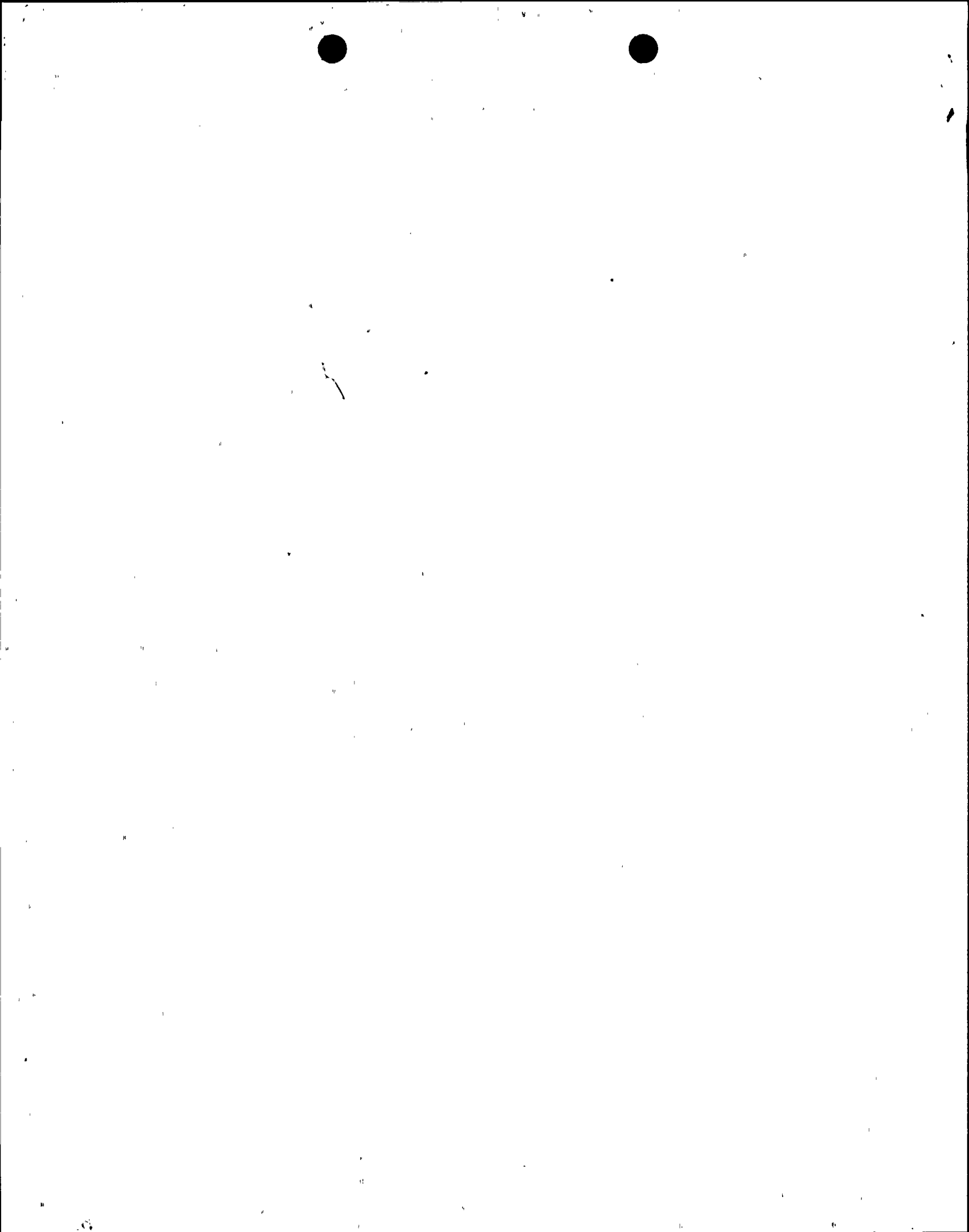
SUPPLEMENTAL REPORT EXPECTED (14)							EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR
<input type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE)							<input checked="" type="checkbox"/> NO				

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

On April 15, 1991, following a review of a Surveillance Procedure, a utility Instrumentation and Controls supervisor found that four component relays that feed the Boric Acid Gravity Feed Valves and the Reactor Cavity Cooling Fans had not been tested. Further investigation into this missed surveillance revealed that these equipment relays had been tested every eighteen months during the Integrated Safeguards Test, but not during the semi-annual Channel Functional Test required for Safety Injection Actuation Signal Automatic Actuation Logic as per Technical Specification Surveillance 4.3.2.1. This has been the practice since Unit 2 began commercial operation in September of 1983.

The root cause of the missed surveillance has been attributed to procedural error. The relays concerned were inadvertently deleted during initial development of the surveillance procedure.

The Corrective Actions implemented as a result of this event include revising the Surveillance Procedure to require testing the equipment relays for the Boric Acid Gravity Feed Valves and Reactor Cavity Cooling Fans with a Digital-Multi-Meter during power operations and verifying that the balance of the procedure is in compliance with Technical Specification Surveillance requirements and as described in the Final Updated Safety Analysis Report Tables 7.3-9 and 7.3-9a.



LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION  
REQUEST: 50.8 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE  
RECORDS AND REPORTS MANAGEMENT BRANCH (P-633), U.S. NUCLEAR REGULATORY  
COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT  
3150-0184, OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)  St. Lucie Unit 2	DOCKET NUMBER (2)  05000389	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		91--	002--	00	02	OF 04

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

DESCRIPTION OF THE EVENT

On April 15, 1991, Unit 2 was in Mode 1 at 100% power. Following a review of Operating Procedure (OP) 2-0400053, "Engineered Safeguards Relay Test," a utility Instrumentation and Controls (I&C) supervisor found that four component relays that feed the Boric Acid Gravity Feed Valves (EIS:CB), V-2508 and V-2509, and the Reactor Cavity Cooling Fans (EIS:VE), 2-HVS-2A and 2-HVS-2B, were not being checked during the semi-annual Channel Functional Test for Safety Injection Actuation Signal (SIAS) Automatic Actuation Logic required by Technical Specification Surveillance 4.3.2.1. Further investigation revealed that these equipment relays were tested every eighteen months during the Integrated Safeguards Test performed under Operating Procedure 2-0400050, "Periodic Integrated Test of the Engineered Safety Features." This has been the practice since Unit 2 began commercial operation in September of 1983.

CAUSE OF THE EVENT

The root cause of the missed surveillance is due to procedural error in an approved plant procedure. OP 2-0400053 did not require that the relays for the Boric Acid Gravity Feed Valves and the Reactor Cavity Cooling Fans be checked while performing this procedure. It appears that this omission was due to a concern which existed at the time the procedure was originally written. If the Boric Acid Gravity Feed Valves were tested improperly, an inadvertent boration into the Reactor Coolant System (EIS:AB) could add sufficient negative reactivity to initiate a serious plant transient. Also, if both Reactor Cavity Cooling Fans are stopped, an immediate plant shutdown (within forty-five minutes) is required.

ANALYSIS OF THE EVENT

This event is reportable to the Nuclear Regulatory Commission (NRC) under 10CFR50.73(a)(2)(i)(B) as an operation or condition prohibited by the Technical Specifications.

Operating Procedure 2-0400053 provides the sequence of operations required to verify proper functioning of Engineered Safeguard Features (ESF) relays as required by Note 2 of the Unit 2 Technical Specification Table 4.3-2 which states that "a subgroup relay test shall be performed which shall include energization/de-energization of each subgroup relay and verification of the OPERABILITY of each subgroup relay." The list of equipment to be tested was compiled in 1983 following several months of correspondence with the Nuclear Regulatory Commission (NRC). In this correspondence, Florida Power and Light (FPL) requested that specific Engineered Safeguards Actuation Features Signal (ESFAS) (EIS:JE) actuation devices (i.e., subgroup relays, initiation relays) be released from the testing requirements during power operations because it was felt that testing at power would jeopardize plant safety and operations. The relays that feed the Boric Acid Gravity Feed Valves and the Reactor Cavity Cooling Fans were not ultimately included as exemptions; however, this was not reflected in OP 2-0400053.

In the event of a Safety Injection Actuation Signal concurrent with a loss of offsite power, the relays to the Reactor Cavity Cooling Fans open causing the Reactor Cavity Cooling Fans to stop and to load onto the Emergency Diesel Generator (EIS:EK) within eighteen seconds. Because there are no safety-related components located in the reactor cavity, the Reactor Cavity Cooling System is not

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION  
REQUEST: 30.11 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE  
RECORDS AND REPORTS MANAGEMENT BRANCH (P-320), U.S. NUCLEAR REGULATORY  
COMMISSION, WASHINGTON, DC 20555, AND TO THE PAPERWORK REDUCTION PROJECT  
3150-0104, OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)  St. Lucie Unit 2	DOCKET NUMBER (2)  05000389	LER NUMBER (6)			PAGE (3)	
		YEAR 91	SEQUENTIAL NUMBER 002	REVISION NUMBER 00	03	OF 04

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

ANALYSIS OF THE EVENT (Cont.)

required to safely shutdown the reactor or to mitigate the consequences of a design basis accident. Boric Acid gravity feed is automatically initiated by a Safety Injection Actuation Signal by opening motor operated gravity feed line isolation valves, V-2508 and V-2509, and closing V-2501, the suction valve from the Volume Control Tank. The Boric Acid Makeup Pumps also receive a start signal in the event of a Safety Injection Actuation Signal. A single boric acid flowpath is required since the safe shutdown of the plant can depend on the injection of concentrated boric acid into the Reactor Coolant System. With this redundancy in the boron control system, a flow path was always available, even without the gravity feed isolation valves.

The previous eighteen month Integrated Safeguards Relay Tests have been performed satisfactorily for the relays that feed the Boric Acid Gravity Feed Valves and the Reactor Cavity Cooling Fans. Following an extensive technical review, it was determined that these subgroup relays could be tested using a Digital-Multi-Meter across the relay contacts during future semi-annual relay surveillances. This method of relay operation verification does not call for the equipment being tested to change state, thereby preventing an inadvertent boration or possible loss of the Reactor Cavity Cooling Fans.

Since the relays that feed the Boric Acid Gravity Feed Valves and the Reactor Cavity Cooling Fans were tested satisfactorily every eighteen months, they would have properly actuated the Boric Acid Gravity Feed Valves and the Reactor Cavity Cooling Fans in the event of an Safety Injection Actuation Signal. Therefore, the health and safety of the public was not at risk at any time during this time period.

CORRECTIVE ACTIONS

1. The Operations Department revised OP 2-0400053 to require testing of the subgroup relays on the Boric Acid Gravity Feed Valves and the Reactor Cavity Cooling Fans with a DMM.
2. The I&C Department verified the operability of the subgroup relays by checking the contacts with a DMM.
3. An I&C supervisor reviewed the balance of OP 2-0400053 and verified it to be in compliance with the Technical Specification Surveillance Requirements.
4. The Technical Staff reviewed the Unit 1 Technical Specification Surveillance Requirements to ensure that the semi-annual relay testing was not required to demonstrate the OPERABILITY of each ESFAS channel. SIAS Automatic Actuation Logic circuits are tested manually at least once per thirty-one days and the relays are tested during the eighteen month Integrated Safeguards Test.

ADDITIONAL INFORMATION

Failed Component Identification:  
None

LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION  
REQUEST: 501 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE  
RECORDS AND REPORTS MANAGEMENT BRANCH (P-303), U.S. NUCLEAR REGULATORY  
COMMISSION, WASHINGTON, DC 20546, AND TO THE PAPERWORK REDUCTION PROJECT  
3150-0104, OFFICE OF MANAGEMENT AND BUDGET, WASHINGTON, DC 20503.

FACILITY NAME (1)  St. Lucie Unit 2	DOCKET NUMBER (2)  05000389	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
		91--	002--	00	04	OF 04

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

ADDITIONAL INFORMATION (Cont.)

Previous Similar Events:

Only one other event at St. Lucie involved missing a Technical Specification Surveillance due to procedural error:

LER 335-90-006 Missed Surveillance on Control Element Assemblies



100