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 FACIL: 50-335 St. Lucie Plant, Unit 1, Florida Power & Light Co. 05000335
 AUTH. NAME AUTHOR AFFILIATION
 WEEKS, J.W. Florida Power & Light Co.
 SAGER, D.A. Florida Power & Light Co.
 RECIPIENT AFFILIATION

SUBJECT: LER 90-001-00: on 900124, low steam generator pressure trip to main steam isolation signal set below TS allowed min value.

W/8 ltr.

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 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

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	AEOD/ROAB/DSP	2 2	DEDRO	1 1
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	NRR/DST/SRXB 8E	1 1	REG FILE 02	1 1
	RES/DSIR/EIB	1 1	RGN2 FILE 01	1 1
EXTERNAL:	EG&G WILLIAMS, S	4 4	L ST LOBBY WARD	1 1
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FEBRUARY 21 1990

L-90-66
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: 90-01
Date of Event: January 24, 1990
Low Steam Generator Pressure Trip to Main Steam
Isolation Signal Set Below Technical Specification
Allowed Minimum Value 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,

DA Sager
D. A. Sager
Vice President
St. Lucie Plant

DAS/GRM/slh

Attachment

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

9003060224 900221
PDR ADOCK 05000335
S FDC

TKC
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LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) <p style="text-align: center;">ST. LUCIE, UNIT 1</p>	DOCKET NUMBER (2) <p style="text-align: center;">0 5 0 0 0 3 3 5</p>	PAGE (3) <p style="text-align: center;">1 OF 0 3</p>
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TITLE (4) **LOW STEAM GENERATOR PRESSURE TRIP TO MAIN STEAM ISOLATION SIGNAL SET BELOW TECHNICAL SPECIFICATION ALLOWED MINIMUM VALUE 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	1	2 4 9 0	9	0	--	0	2	2 1 9 0	N/A	0 5 0 0 0 3 3 5	

OPERATING MODE (9) <p style="text-align: center;">5</p>	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR : (Check one or more of the following) (11)					
POWER LEVEL (10) <p style="text-align: center;">0 0 0</p>	20.402(b)		20.405(c)		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)	XX	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 <p style="text-align: center;">JAY W. WEEKS, SHIFT TECHNICAL ADVISOR</p>	TELEPHONE NUMBER
	AREA CODE <p style="text-align: center;">4 0 7</p>
	<p style="text-align: center;">4 6 5 - 3 5 5 0</p>

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 24 January, 1990, St. Lucie Unit 1 was in Mode 5 and preparing for a refueling outage when an Instrumentation and Controls (I & C) supervisor discovered a discrepancy in an I & C procedure when compared to the Technical Specification. Technical Specification 3.3.2, Table 3.3-4 states that the minimum allowable setpoint for the low Steam Generator (SG) pressure input to the Main Steam Isolation Signal (MSIS) of the Engineered Safety Features Actuation System (ESFAS) is 585 psig. The I & C procedure had the setpoint set to 585 +/- 7.5 psig.

The root cause of the event was a procedural error in that the setpoint adjustments in the ESFAS calibration procedure were not in accordance with the requirements of the Technical Specifications. The I & C procedure will be revised to reflect the correct settings for the low SG pressure inputs to the MSIS. The procedures have been thoroughly reviewed and independently verified by qualified I & C personnel to ensure no other setpoint problems exist on either Unit 1 or Unit 2 procedures. The actual settings of the low SG pressure inputs to the MSIS will be adjusted to the correct setpoints prior to entering Mode 3. Mode 3 is the first mode after the outage that the MSIS is required to be operable and in service.

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 0 --	0 0 1 --	0 0	0 2	OF	0 3			

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

DESCRIPTION OF THE EVENT:

On 24 January, 1990, St. Lucie Unit 1 was in Mode 5 and preparing for a refueling outage. A plant Instrumentation and Control (I & C) supervisor discovered that a discrepancy existed in one of the I & C Maintenance procedures to a requirement of the Technical Specifications. Technical Specification 3.3.2, Table 3.3-4 states that the minimum allowable value of Steam Generator (EII:AB) (SG) low pressure trip setpoint to the Main Steam Isolation Signal (MSIS) of the Engineered Safety Features Actuation System (EII:JE) (ESFAS) is 585 psig.

The I & C Maintenance procedure that tests and calibrates the ESFAS inputs had an erroneous value for setting the SG low pressure trip inputs to the MSIS. The SG pressure instrument setpoint has a variable range of -15 to 1185 psig. The instrument providing this signal has an output of 4 to 20 milliamps. This is a linear instrument where the pressure of -15 psig corresponds to 4 milliamps output and the 1185 psig corresponds to 20 milliamps. The midpoint of the range is 585 psig (corresponding to 12 milliamps). 585 psig is the Technical Specification minimum, therefore the minimum allowable instrument output would be 12.00 milliamps. However, the procedure required that the MSIS trip setting be set at 12.00 milliamps +/- 0.10 milliamps. This allowed the actual setpoint to be 585 +/- 7.5 psig (577.5 to 592.5 psig). While some of these setpoints were set correctly to agree with the Technical Specifications, at times some were set below the Technical Specification minimum.

This event was discovered while the unit was in Mode 5. The Technical Specification requirement for the MSIS to be operable is for Modes 1, 2, and 3. Therefore, the unit did not enter into any Action Statement.

CAUSE OF THE EVENT:

The root cause of the event is a procedural error in that the approved procedure for testing and calibrating the ESFAS trip signals specified MSIS setpoints less conservative than the requirements of the Technical Specifications. The error was not discovered during the original preparation and review of the procedure by plant I & C personnel. No unusual characteristics of the work location were known to have contributed to this event.

ANALYSIS OF THE EVENT:

Unit 1 Technical Specification requires that the SG low pressure trip setting for the MSIS be \geq 585 psig. The procedure for testing and calibrating this setpoint allowed the trip to be set as low as 577.5 psig. Upon review of previously performed calibration data sheets, it was determined that the setpoint had in fact been set between 577.5 and 585 psig. At no time was the setpoint set below 577.5 psig.

This event was reportable to the NRC under 10CFR50.73.a.2.i.B as any operation or condition prohibited by the plant's Technical Specifications.

Though the setpoint was below the Technical Specification Minimum, it was still bounded by the analysis of the limiting accident, Steam Line Rupture Event, in the Final Updated Safety Analysis Report (FUSAR). This analysis assumes the MSIS trip to actuate at a pressure of 578 psia (563.3 psig). Therefore, the actual setpoint was at least 14.2 psi above that of the limiting accident analysis.

Thus, the health and safety of the public was not endangered at any time before this event was discovered.

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 0	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. I & C Procedure No. 1-1400052 will be changed to correct the setpoints for MSIS low SG pressure trip.
2. The actual setpoints on the ESFAS cabinet will be corrected prior to Mode 3 following the refueling outage. Mode 3 is the first mode entry which requires the MSIS to be operable and in service.
3. Qualified I & C personnel have independently checked and verified that no other ESFAS or Reactor Protection System setpoints are in violation of their Technical Specification requirements for either Unit 1 or Unit 2.

ADDITIONAL INFORMATION:

Failed Component Identification:

There were no component failures associated with this event.

Previous Similar Events:

There have been no previous Licensee Event Reports involving incorrect ESFAS setpoints due to procedural error at this facility.