CATEGORY 1

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR:9608200064 DOC.DATE: 96/08/07 NOTARIZED: NO DOCKET #
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 96-009-00:on 960710,operation prohibited by TSs.Caused by procedural inadequacy & personnel error.C/As:rev of maint procedures to include verification that plant conditions IAW TS requirements prior to installation.W/960807 ltr.

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

FPL

AUG 0 7 1996

L-96-199
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: 96-009
Date of Event: July 10, 1996
Operation Prohibited by Technical Specifications
Due to Procedural Inadequacy and 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,

J. A. Stall
Vice President
St. Lucie Plant

JAS/EJB

Attachment

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

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 5

TITLE (4)

Operation Prohibited by Technical Specifications due to Procedural Inadequacy and 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
07	10	96	96	009	00	08	07	96	N/A	
									FACILITY NAME: N/A	DOCKET NUMBER

OPERATING MODE (9)	5
POWER LEVEL (10)	0

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)
Edwin J. Benken, Licensing	(561) 467 - 7156

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 July 10, 1996, St. Lucie Unit 1 was in Mode 5 with the reactor coolant system (RCS) vented to atmospheric pressure and RCS temperature being controlled by shutdown cooling at approximately 100 degrees Fahrenheit. The RCS was being filled in preparation for establishing pressurizer pressure control. The Technical Specification (TS) boration flowpath at the time was via the 1B high pressure safety injection (HPSI) pump, which was available for operation with its header stop valve open. At 0625, the pressurizer manway cover was installed. This action restored the RCS pressure boundary, which resulted in operation outside the Limiting Condition for Operation (LCO) specified in TS 3.5.3. This TS requires that all HPSI pumps be disabled and their associated header stop valves closed when RCS temperature is less than 236 degrees Fahrenheit and the RCS pressure boundary is intact.

The root causes of the event were determined to be insufficient procedural guidance and cognitive personnel error by utility licensed operators.

Corrective Actions: 1) A Maintenance Procedure was revised to include verification that plant conditions are in accordance with TS requirements prior to installation of the pressurizer manway cover. 2) Appropriate operations personnel were disciplined in accordance with plant policy. 3) The Conduct of Operations Procedure is being assessed for additional improvements in shift turnover and communication requirements. 4) Additional operating procedures are being reviewed for adequacy with regard to instructions for boration flowpath requirements. 5) The event is to be included into licensed operator requalification training.

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL	REVISION	
ST. LUCIE UNIT 1	05000335	96	-- 009 --	00	2 OF 5

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

DESCRIPTION OF THE EVENT

On July 9, 1996, St. Lucie Unit 1 was in Mode 5 with steam generator (SG) tube plugging work being performed. The reactor coolant system (RCS) (EIIS:AB) was vented through the open pressurizer manway and drained to a mid loop condition to support this work, and RCS temperature was being maintained by shutdown cooling (EIIS:BP) at approximately 100 degrees Fahrenheit. As the result of an approaching hurricane, plant management decided to suspend activities involving the SG work and fill the RCS to exit reduced inventory conditions. The Technical Specification boration flow path to the RCS at the time was the boric acid storage tanks via the boric acid makeup pumps and the 1B charging pump (EIIS:CB).

To facilitate the RCS fill evolution and prevent delays associated with boric acid batching operations, utility licensed operators changed the boration flow path at 2140 hours to use the refueling water tank (RWT) (EIIS:BP) via the 1B high pressure safety injection (HPSI) pump (EIIS:BQ). The 1B HPSI pump stop valve (V3654) (EIIS:BQ) was opened to take credit for this boration flow path. The 1B HPSI pump control switch was maintained in the STOP position and the cold leg HPSI injection valves from the 1B HPSI pump were maintained closed (refer to Simplified Flow Diagram - Figure 1).

St. Lucie Unit 1 Technical Specification 3.5.3.c requires that prior to decreasing the RCS temperature below 236 degrees Fahrenheit, all HPSI pumps shall be disabled and their associated header stop valves closed except as allowed by Specifications 3.1.2.1 and 3.1.2.3. Technical Specification 3.1.2.1 allows the use of the RWT and a single HPSI pump as the boration flow path during Mode 5 as long as the RCS pressure boundary does not exist, or no charging pumps are operable. At the time the boration flowpath using the 1B HPSI pump was established, the RCS pressurizer manway cover was off and the RCS was at atmospheric pressure, therefore the RCS pressure boundary did not exist. The Nuclear Plant Supervisor (NPS) was aware that prior to installing the pressurizer manway, the boration flow path would need to be changed from the RWT via the 1B HPSI pump back to a boration flowpath using the charging pumps, however this information was not communicated to the oncoming (midnight shift) NPS or to the control room operating crew.

At 2200 operators started the 1A and 1B charging pumps and began filling the RCS. Reduced inventory conditions were exited at 2316, and the RCS was filled to establish a pressurizer level. RCS filling was secured at 0235 on July 10, 1996 with pressurizer level indicating 30 percent.

At approximately 0400 on July 10, 1996, construction personnel began installing the pressurizer manway cover in accordance with Mechanical Maintenance Procedure MMP 01.03, "Pressurizer Manway Cover Removal and Replacement," to allow for continued filling of the RCS and pressurizer and to enable operations to establish a bubble in the pressurizer. The above procedure did not reference TS requirements with regard to boration flow path restrictions with the RCS pressure boundary intact. At 0625, the control room was notified that the installation of the pressurizer manway cover was complete. With the pressurizer manway cover in place, the RCS pressure boundary was established.

DESCRIPTION OF THE EVENT Continued

During the shift turnover on the morning of July 10, 1996, the on-coming (day shift) NPS noted that the RWT and 1B HPSI pump were being used as the boration flowpath with charging pumps available and with the RCS pressure boundary intact. This was not in accordance with the requirements of TS 3.5.3.c, and at 0700 TS ACTION 3.5.3.b was entered. The operating crew took immediate action to close the 1B HPSI pump header stop valve (V3654) and restore the boration flow path using the boric acid makeup tank and charging pump. This was completed at 0720, and TS ACTION 3.5.3.b was then exited.

CAUSE OF THE EVENT

The root causes of the event were a combination of inadequate operational guidance contained in the procedure for replacing the pressurizer manway cover and cognitive personnel error by utility licensed operators who failed to properly communicate information regarding the change in TS boration flow path and to maintain an adequate awareness of the plant's operational configuration.

Specifically, the procedure which was used to replace the pressurizer manway cover (MMP 01.03) did not require that the control room be notified before the start of cover replacement to ensure that Technical Specification boration flowpath requirements were met prior to restoring the RCS pressure boundary. Additionally, information that the TS boration flow path had been changed and would need to be restored prior to reestablishment of the RCS pressure boundary was not effectively communicated to the on-coming (midnight shift) NPS or to the control room crew. The midnight shift NPS failed to identify through review of the control room log that the boration flow path had been changed.

A contributing causal factor was that the operating procedures governing the use of HPSI pumps in lower Modes of operation do not contain explicit guidance with respect to use of the pumps as a makeup source and a TS boration flow path.

ANALYSIS OF THE EVENT

This event is reportable under the requirements of 10 CFR 50.73.a.2.i.B, as "any operation or condition prohibited by the plant's Technical Specifications." TS 3.5.3 requires that all HPSI pumps be disabled with their associated header stop valves closed when RCS temperature is less than 236 degrees. The exceptions to this requirement are if the RCS pressure boundary is not intact or all charging pumps are disabled. The basis for the requirement provides additional administrative assurance that the TS pressure/temperature limits will not be exceeded during a mass addition to the RCS mitigated by a single Power Operated Relief Valve (PORV).

During the time that the 1B HPSI pump was aligned as the TS boration flowpath and the RCS pressure boundary was intact, the HPSI pump was not operated and the four HPSI header injection valves remained closed (refer to Figure 1). Additionally, the 1B HPSI pump control switch was maintained in the STOP position thereby preventing the potential for automatic actuation. There was no adverse effect on RCS pressure/temperature limits during this event and the Technical Specification requirement for rendering the HPSI pumps inoperable does not apply for plant operating Modes above 236 degrees.

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL	REVISION	
ST. LUCIE UNIT 1	05000335	96	009	00	4 OF 5

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

ANALYSIS OF THE EVENT Continued

Although the LCO requirements of TS 3.5.3 were not met during the time that the 1B HPSI pump was aligned as the boration flow path with its header stop valve (V3654) open, the four HPSI header to RCS injection valves remained closed, and the 1B HPSI pump control switch position was maintained so as to prevent the automatic start of the pump. The RCS was not challenged by any over pressure event, and the health and safety of the public were not affected.

CORRECTIVE ACTIONS

1. The Maintenance Procedure for installing the pressurizer manway cover (MMP-01.03) was revised to include verification that plant conditions meet applicable TS requirements prior to manway cover installation.

2. The appropriate operations personnel were disciplined in accordance with St. Lucie and Nuclear Division policy.

3. The Conduct of Operations Procedure (AP 0010120) is being evaluated for improvements in shift turnover and shift communication requirements.

4. Additional operating procedures used during Modes 3 thru 6 are being assessed for adequacy of guidance with regard to TS boration flowpath requirements in order to provide additional barriers to this event.

5. This event and the requirements and restrictions for maintaining TS boration flowpaths will be incorporated into licensed operator training lesson plans.

ADDITIONAL INFORMATION

Previous Similar Events

LER 335-95-008 High Pressure Safety Injection Operation During Plant Conditions Not Allowed by Technical Specifications - This event involved a failure to comply with TS requirements for HPSI pump isolation during in service leak testing. The cause of the event was attributed to personnel error.

Failed Components

None

FIGURE 1

SIMPLIFIED HPSI FLOWPATH DIAGRAM