



September 27, 1995

L-95-271
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: 95-008
Date of Event: August 28, 1995
High Pressure Safety Injection Pump Operation
During Plant Conditions Not Allowed
by Technical Specifications 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,

D. A. Sager
Vice President
St. Lucie Plant

DAS/GRM

Attachment

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

020065

9510020125 950927
PDR AD0CK 05000335
S PDR

an FPL Group company

LICENSEE EVENT REPORT (LER)

(See reverse for required number of digits/characters for each block)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS MANDATORY INFORMATION COLLECTION REQUEST: 60.0 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.

FACILITY NAME (1) St Lucie Unit 1		DOCKET NUMBER (2) 05000335	PAGE (3) 1 OF 6
---	--	--------------------------------------	---------------------------

TITLE (4)
High Pressure Safety Injection Pump Operation During Plant Conditions Not Allowed by Technical Specifications 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
08	28	95	95	-- 008	-- 00	09	27	95		05000
									FACILITY NAME	DOCKET NUMBER
										05000

OPERATING MODE (9)	5	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)								
POWER LEVEL (10)	0	20.2201(b)	20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	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)

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPROS

SUPPLEMENTAL REPORT EXPECTED (14)

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

ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)

On August 28, 1995, Unit 1 was in MODE 5, reactor coolant system (RCS) temperature was approximately 120 degrees and RCS pressure was approximately 250 psia. The Technical Specification (TS) boration flow path was via the gravity feed valve to the 1B charging pump. During an inservice leak test on the A train High Pressure Safety Injection (HPSI) header relief valve, the A header HPSI stop valve was opened and the 1A HPSI pump was run for approximately 10 minutes in violation of TS 3.5.3. This TS requires both HPSI pumps be disabled and their associated HPSI header stop valves be closed when RCS temperature is less than 236 Degrees F.

The root cause of the event was personnel error in having inadequate awareness of the plant operational configurations required by Limiting Condition for Operation (LCO) 3.5.3.c. Contributing to this error were inadequate administrative controls while changing plant configurations and an incomplete APPLICABILITY statement for LCO 3.5.3. The APPLICABILITY statement as currently written does not reflect the requirements as stated in LCO 3.5.3.c.

The corrective actions include the notification of the Operations department personnel of the lack of clarity in the Technical Specification APPLICABILITY statement, procedure enhancements, and Technical Specification changes.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
St Lucie Unit 1	05000335	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 6
		95	-- 008	-- 00	

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

DESCRIPTION OF THE EVENT

At approximately 0420 on August 28, 1995, Unit 1 was in MODE 5, reactor coolant system (RCS)(EIS:AB) temperature was approximately 120 degrees and RCS pressure was approximately 250 psia.

The Technical Specification (TS) boration flow path was from the boric acid makeup tank through the gravity feed valve(EIS:CB) to the 1B charging pump(EIS:CB). Both HPSI pumps were disabled and their associated header stop valves were closed in accordance with TS 3.5.3.c prior to decreasing RCS temperature less than 236 degrees. In preparation for an inservice leak test on the A train High Pressure Safety Injection (HPSI)(EIS:BQ) header relief valve (V-3417), the cooldown clearance tag was released on the A train HPSI header stop valve (V-3656) and its associated breaker was placed in the ON position. At approximately 0515, contrary to TS 3.5.3, the A train HPSI header stop valve was cycled to verify its operability. (See figure 1 for a simplified HPSI system diagram)

At approximately 0800 the utility licensed operators started drawing a bubble in the pressurizer. The four A train HPSI injection valves were closed and their breakers were placed in the OFF position. At 1000, the A train HPSI header was filled and vented using the refueling water tank(EIS:CB) head as a pressure source. Following the fill and vent of the A train HPSI header, the 1A HPSI pump clearance tag was released and the pump breaker was racked in. Contrary to TS 3.5.3, the 1A HPSI pump was started at 1025 and the header stop valve (V-3656) was opened a second time to perform an inservice leak test of the header relief valve (V-3417). During the time that valve V-3656 was open and the 1A HPSI pump was running, the four HPSI injection valves were shut and disabled, the pressurizer had a bubble at 250 psia and both pressurizer power operated relief valves (PORV)(EIS:AB) were available for overpressure protection. At 1035, the 1A HPSI pump was stopped and the header stop valve (V-3656) was closed.

The A train emergency core cooling system (ECCS) header venting and header relief valve V-3417 inservice leak test were performed using the clearance release process. The B train piping configuration is significantly different from the A train and the ECCS header venting process is more complicated. Therefore, a specific procedure was written to perform the B train venting. On September 2, 1995, while reviewing the procedure for filling and venting the B train HPSI header, a utility licensed senior operator determined that the procedure could not be executed due to the requirements of TS 3.5.3. Review of the control room chronological log at that time revealed that the TS had previously been violated when the A train HPSI header was filled and the relief valve (V-3417) was leak tested.



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
St Lucie Unit 1	05000335	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	3 OF 6
		95	-- 008	-- 00	

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

CAUSE OF THE EVENT

The root cause of the event is personnel error by utility licensed operators in having inadequate awareness of the plant operational configuration required by Limiting Condition for Operation (LCO) 3.5.3. Contributing to this error were the inadequate administrative controls for complying with TS 3.5.3 while changing plant configuration for maintenance of safety functions. Specifically, TS 3.5.3.c, requires that both HPSI pumps be disabled and their associated header stop valves be closed prior to decreasing RCS temperature less than 236 degrees. An exception to this requirement is permitted pursuant to LCO 3.1.2.1 or 3.1.2.3, when a) the RCS pressure boundary does not exist, or; b) no charging pumps are operable. Neither of these exceptions applied during this event.

An additional contributing factor to this event was the incomplete APPLICABILITY statement for TS 3.5.3. The APPLICABILITY statement as currently written does not reflect the requirements as stated in LCO 3.5.3.c. The APPLICABILITY statement lists only Mode 3 (less than 1750 psia) and Mode 4 (with RCS temperature greater than 250 degrees F) but Mode 5 and Mode 6 are not addressed. This was caused by an oversight during a previous Technical Specification amendment, but does not preclude the requirement of LCO 3.5.3.c.

ANALYSIS OF THE EVENT

This event is reportable under the requirements of 10 CFR 50.73.a.2.i.B, "any operation or condition prohibited by the plant's Technical Specifications".

TS 3.5.3 requires that both HPSI Pumps be disabled and their associated header stop valves closed when RCS temperature is less than 236 degrees. The exceptions to this requirement are if the RCS boundary is not intact or all charging pumps are disabled. When RCS temperature is less than 236 degrees, a surveillance is required monthly to verify the HPSI pumps and their associated header stop valves are in this condition. To meet this requirement, the reactor coolant system (RCS)(EIS:AB) cooldown procedure directs that the breaker for one HPSI pump to be opened and racked out, its associated header stop valve be shut with its associated breaker to be in the OFF position, and tagged (cooldown clearance) prior to cooling down below 270 degrees. When RCS temperature is less than 250 degrees but greater than 236 degrees, the other HPSI pump control switch is caution tagged in the Stop position and its associated header stop valve key switch is caution tagged in the Locked Closed position.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
St Lucie Unit 1	05000335	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 6
		95	-- 008	-- 00	

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

During the leak test of the A header HPSI relief valve (V-3417), the 1A HPSI pump pressurized the HPSI header to the HPSI pump shutoff head, approximately 1250 psig. The piping and valves in this portion of the HPSI system are designed to accommodate charging pump flow through the A train HPSI header for the safety injection tank outlet check valve testing, and to provide an alternate charging flow path. As such, the piping system is rated for 2485 psig; consistent with the RCS pressure boundary. This design pressure rating is much higher than the HPSI pump shutoff head.

The four A train HPSI injection valves were closed and their associated breakers were in the OFF position during the system venting procedure and inservice leak test. In addition, the automatic safety injection actuation system (SIAS)(EIS:JE) function was bypassed and in the blocked mode. Under these conditions, an inadvertent SIAS event is not considered credible. There was no adverse affect on RCS pressure/temperature (P/T)conditions. The four A train HPSI injection valves performed the isolation function and there was no mass or energy addition to the RCS as a result of the alignment.

The limitations on the HPSI pump operability when RCS temperature is less than or equal to 236 degrees, and the associated surveillance requirements provide additional administrative assurance that the RCS pressure/temperature limits will not be exceeded during a mass addition transient mitigated by a single PORV. However, during the time that valve V-3656 was open and the 1A HPSI pump was running, the four HPSI injection valves were shut and disabled, the pressurizer had a bubble at 250 psia and both pressurizer power operated relief valves (PORV)(EIS:AB) were available for overpressure protection.

Although the LCO requirements of TS 3.5.3 were not invoked during the inservice leak test of the 1A HPSI header relief valve and the 1A HPSI pump was run for approximately 10 minutes, the four A HPSI injection valves were closed and disabled isolating the pressure source from the RCS. Therefore the RCS was protected from an overpressure event and the public health and safety was not affected.

LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
St Lucie Unit 1	05000335	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	5 OF 6
		95	-- 008	-- 00	

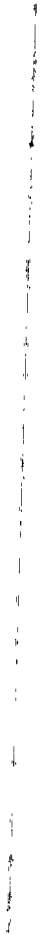
TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

CORRECTIVE ACTIONS

1. Operations department personnel were notified of the lack of clarity in the APPLICABILITY of TS 3.5.3.
2. The RCS Cooldown Procedure will be strengthened to provide additional administrative controls for implementing TS 3.5.3.
3. Operating procedures for Mode 4, Mode 5 and Mode 6 with RCS pressure boundary integrity established will be evaluated to determine if additional administrative controls are required to ensure operation will be consistent with the low temperature overpressure/overpressure mitigating system (LTOP/OMS) analyses.
4. Technical Specification 3.5.3 will be revised to clarify the APPLICABILITY statement.
5. Plant Licensing will evaluate a TS Amendment that will consolidate the LCOs for the LTOP/OMS plant conditions.
6. Plant Licensing will evaluate the administrative controls for the preparation and review of Technical Specification amendments and will change the process based on this evaluation.
7. This event will be incorporated into the operator license training program. The additional training will provide emphasis on the necessity of maintaining the RCS within the P/T curves and, which LCOs are applicable to these limits.

PREVIOUS SIMILAR EVENTS

None



LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

FACILITY NAME (1) St Lucie Unit 1	DOCKET 05000335	LER NUMBER (6)			PAGE (3) 6 OF 6
		YEAR 95 --	SEQUENTIAL NUMBER 008 --	REVISION NUMBER 00	

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

FIGURE 1 SIMPLIFIED HPSI SYSTEM DIAGRAM

