

**REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)**

ACCESSION NBR: 9411210292      DOC. DATE: 94/11/11      NOTARIZED: NO      DOCKET #  
 FACIL: 50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light Co      05000261  
 AUTH. NAME      AUTHOR AFFILIATION  
 JURY, K.R.      Carolina Power & Light Co.  
 YOUNG, D.E.      Carolina Power & Light Co.  
 RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 94-022-01: on 940907, SI accumulator & SI pump declared inoperable. Caused by sys configuration necessary to perform evolution not addressed by LCO action statement. SI sys restored. W/94110 ltr.

DISTRIBUTION CODE: IE22T      COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 5  
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10 CFR 50.73

Carolina Power & Light Company  
Robinson Nuclear Plant  
PO Box 790  
Hartsville SC 29550

Robinson File No.: 13510C  
Serial: RNP/94-1902

**NOV 10 1994**

United States Nuclear Regulatory Commission  
Attn: Document Control Desk  
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H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2  
DOCKET NO. 50-261/LICENSE NO. DPR-23  
LICENSEE EVENT REPORT NO. 94-022-01

Gentlemen:

The enclosed Licensee Event Report (LER), is submitted in accordance with 10 CFR 50.73. The revised information is identified by a right hand margin bar.

Very truly yours,

Dale E. Young  
Plant General Manager

DTG:dtg  
Enclosure

c: Mr. S. D. Ebnetter, Regional Administrator, USNRC, Region II  
Ms. B. L. Mozafari, USNRC Project Manager, HBRSEP  
Mr. W. T. Orders, USNRC Senior Resident Inspector, HBRSEP

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NRC FORM 366  
(5-92)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104  
EXPIRES 5/31/95

## LICENSEE EVENT REPORT (LER)

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

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH  
THIS INFORMATION COLLECTION REQUEST: 50.0 HRS.  
FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO  
THE INFORMATION AND RECORDS MANAGEMENT BRANCH  
(MNB 7714), 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)

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT 2

DOCKET NUMBER (2)

050-261

PAGE (3)

1 OF 4

TITLE (4)

TECHNICAL SPECIFICATION 3.0: SAFETY INJECTION SYSTEM

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
09	07	94	94	-- 022 --	01	11	11	94	FACILITY NAME	DOCKET NUMBER
										05000
										05000

  

OPERATING MODE (9)	N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)					
POWER LEVEL (10)	100	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
		20.405(a)(1)(iii)		X 50.73(a)(2)(i)		50.73(a)(2)(viii)(A)	(Specify in abstract below and in Text, NRC Form 366A)
		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

K. R. Jury: Manager - Licensing/Regulatory Programs

TELEPHONE NUMBER (Include Area Code)

(803) 383-1363

## 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)

YES	NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR
(If yes, complete EXPECTED SUBMISSION DATE).	X				

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

On September 7, 1994, with the H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2 operating at 100% power, a Safety Injection (SI) accumulator and an SI pump were declared inoperable during performance of a feed and bleed evolution to increase the Boron concentration of the SI accumulator. This evolution requires that SI pump flow be lined up to the SI accumulator, thereby rendering the pump incapable of performing its injection function. The SI accumulator being fed is also out of service throughout this evolution if pressure, level, or boron concentration cannot be maintained. This configuration of SI equipment does not have a limiting condition for operation action required by Technical Specifications (TS); therefore, TS section 3.0 was entered to perform the feed and bleed evolution. Subsequently, on September 8, and October 12, 1994, an accumulator and SI pump were removed from service to perform the same evolution for that accumulator. A licensed operator was at the control board throughout both feed and bleed evolutions and could have taken procedurally directed, manual actions had the SI system been required to perform its intended function. Upon completion of the feed and bleed evolutions, the system was restored to its normal configuration. This event is reported pursuant to 10 CFR 50.73(a)(2)(i)(B) as operation in a condition prohibited by TS.

NRC FORM 366A  
(5-92)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104  
EXPIRES 5/31/95LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATIONESTIMATED BURDEN PER RESPONSE TO COMPLY WITH  
THIS INFORMATION COLLECTION REQUEST: 50.0 HRS.  
FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO  
THE INFORMATION AND RECORDS MANAGEMENT BRANCH  
(MNBB 7714), 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)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
H. B. ROBINSON, UNIT 2	050-261	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	2 OF 4
		94	022	01	

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

I. DESCRIPTION OF EVENT

On September 7, 8, and October 12, 1994, H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2 was operating at 100% power. At 1406 hours on September 7, the High Pressure Safety Injection (SI) system (EIIS Code: BQ) "A" SI accumulator (EIIS Code: ACC) and the SI pumps (EIIS Code: BQ) being individually utilized to fill the accumulator, were declared inoperable during performance of a feed and bleed evolution. This evolution was being conducted to increase the "A" SI accumulator's Boron concentration in accordance with Operating Procedure (OP)-202, "Safety Injection and Containment Vessel Spray System." Since the Boron concentration was below the HBRSEP administrative limit, the "A" SI accumulator was taken out of service to perform the feed and bleed evolution. Performance of OP-202 section 8.8, "Simultaneous Feed/Bleed of SI Accumulator "A", "B", or "C", requires that SI flow be diverted from the injection flow path to feed the inoperative SI accumulator. Since the required, individual SI pump injection flow rate is not automatically attainable during this feed and bleed configuration, the SI pump being used to feed the accumulator was also declared inoperable. The HBRSEP TS do not have a limiting condition for operation action statement for this SI equipment configuration; therefore, TS section 3.0 was entered. On September 8, at 0212 hours, and October 12, 1994 at 1740 hours, the SI system was also placed in this configuration during the feed and bleed evolution of "B" and "A" SI accumulators, respectively. Accordingly, TS section 3.0 was also entered during these evolutions.

II. CAUSE OF EVENT

The cause of this reportable situation is that the system configuration that is necessary to perform this evolution, is not addressed by a limiting condition for operation action statement, resulting in a condition prohibited by TS.

The reduced accumulator Boron concentration resulted from check valve back leakage from the Reactor Coolant system (RCS) (EIIS Code: AB) that slowly increased the volume of "A" and "B" SI system accumulators resulting in Boron concentration dilution. The increased SI accumulator level is controlled by draining the accumulator to maintain the level within its administrative limit. The subsequent decreases in Boron concentration are corrected by a feed and bleed evolution to maintain the Boron concentration within its administrative limit.

NRC FORM 366A (5-92)		U.S. NUCLEAR REGULATORY COMMISSION		APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95	
<p align="center"><b>LICENSEE EVENT REPORT (LER)</b> <b>TEXT CONTINUATION</b></p>				<p>ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE INFORMATION AND RECORDS MANAGEMENT BRANCH (MNBB 7714), 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.</p>	
FACILITY NAME (1)		DOCKET NUMBER (2)		LER NUMBER (6)	
H. B. ROBINSON, UNIT 2		050-261		YEAR	SEQUENTIAL NUMBER
				94	022
				REVISION NUMBER	PAGE (3)
				01	3 OF 4

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During this feed and bleed evolution, the SI pump does not have full design flow capability if injection into the RCS is required, since an additional flow path to the inoperative SI accumulator exists. TS section 3.3.1.2 only allows an individual inoperable SI system component/function at any one time. However, at any given time during this configuration, two components are rendered inoperable (i.e., accumulator and the SI pump feeding the accumulator) based upon the definition of operability in TS section 1.3.

Previous interpretations of TS section 3.3.1.2 assumed that use of the SI pumps to fill an accumulator did not put the system in a configuration prohibited by TS. A recent re-interpretation of TS sections 1.3 and 3.3.1.2 was applied during the performance of the feed and bleed evolution. As a result, a condition prohibited by TS was determined to exist.

### III. ANALYSIS OF EVENT

During the times that either SI pump was being run to feed the respective SI accumulator, the SI pump injection flow path was not obstructed and automatic start features were not inhibited. However, due to system configuration during these evolutions, the SI pump flow into the RCS is reduced, since an additional flow path from the Refueling Water Storage Tank (EIIS code: TK) to the SI accumulator exists. The periods of simultaneous inoperability of the SI accumulator and the SI pump being utilized to fill the accumulator, were 59 minutes, 57 minutes, and 29 minutes on September 7, 8, and October 12, 1994, respectively. During these times, the remaining SI pump and accumulators were operable, and a licensed operator was located at the control board throughout the evolution. The operator could have taken procedurally directed, manual action if the SI system had been required to perform its intended function. As a result, the safety significance of having the SI system in this configuration was low.

This event is reported pursuant to 10 CFR 50.73(a)(2)(i)(B) as operation in a condition prohibited by TS.

NRC FORM 366A  
(5-92)

U.S. NUCLEAR REGULATORY COMMISSION

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TEXT CONTINUATION

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FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)
H. B. ROBINSON, UNIT 2	050-261	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	4 OF 4
		94	022	01	

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IV. CORRECTIVE ACTIONS

The SI system was restored to operable status upon completion of each feed and bleed evolution that was performed.

A change to TS and/or implementation of procedural changes will be evaluated as a possible long-term solutions to preclude recurrence of entry into TS 3.0 due to the SI system configuration that is necessary to perform this feed and bleed evolution.

V. ADDITIONAL INFORMATION

## A. Failed Component Information

None

## B. Previous Similar Events

None