

# CATEGORY 1

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 FACIL: 50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light Co.      05000261  
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 RECIP. NAME      RECIPIENT AFFILIATION

SUBJECT: LER 96-001-00: on 960213, discrepancy in surveillance tests for nuclear instrumentation sys power range channels discovered. Caused by misinterpretation of info contained in remarks section of TS. Procedures revised. W/960312 ltr.

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Carolina Power & Light Company  
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3581 West Entrance Road  
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Robinson File No: 13510C  
Serial: RNP-RA/96-0061

**MAR 12 1996**

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. 96-001-00

Gentlemen:

The enclosed Licensee Event Report (LER), is submitted in accordance with 10 CFR 50.73.  
This report is required to be submitted to the NRC by March 14, 1996.

Very truly yours,

D. E. Young  
Plant General Manager

DTG/klb

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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<b>NRC FORM 366</b> (4-95)		<b>U.S. NUCLEAR REGULATORY COMMISSION</b>		<b>APPROVED BY OMB NO. 3150-0104</b> <b>EXPIRES 04/30/98</b> <small>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.</small>	
<b>LICENSEE EVENT REPORT (LER)</b> (See reverse for required number of digits/characters for each block)					
FACILITY NAME (1) <b>H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2</b>			DOCKET NUMBER (2) <b>05000-261</b>		PAGE (3) <b>1 OF 4</b>
TITLE (4) <b>CONDITION PROHIBITED BY TECHNICAL SPECIFICATIONS DUE TO INADEQUATE TESTING OF NUCLEAR INSTRUMENTATION POWER RANGE CHANNELS</b>					
EVENT DATE (5)		LER NUMBER (6)		REPORT DATE (7)	
MONTH	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REVISION NUMBER
02	13	96	96	-- 001	-- 00
MONTH		DAY	YEAR		
03		14	96		
OPERATING MODE (9)			THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)		
N			20.2201(b)		
POWER LEVEL (10)			20.2203(a)(1)		
100			20.2203(a)(2)(i)		
			20.2203(a)(2)(ii)		
			20.2203(a)(2)(iii)		
			20.2203(a)(2)(iv)		
			20.2203(a)(2)(v)		
			20.2203(a)(2)(vi)		
			20.2203(a)(2)(vii)		
			OTHER		
			Specify in Abstract below or in NRC Form 366A		
LICENSEE CONTACT FOR THIS LER (12)					
NAME			TELEPHONE NUMBER (Include Area Code)		
A. L. Garrou, Manager - Licensing/Regulatory Programs (Acting)			(803) 857-1544		
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)					
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS	REPORTABLE TO NPDOS
SUPPLEMENTAL REPORT EXPECTED (14)					
YES (If yes, complete EXPECTED SUBMISSION DATE).			X NO		EXPECTED SUBMISSION DATE (15)
					MONTH DAY YEAR
<b>ABSTRACT</b> (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16) <p>On February 13, 1995, H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2 was operating at 100 percent power. While performing a review of Technical Specifications (TS), as a part of the conversion of the current TS to the improved Standard Technical Specifications (STS), a discrepancy in the surveillance tests for the Nuclear Instrumentation System (NIS) Power Range (PR) channels was discovered. The HBRSEP, Unit No. 2 STS Conversion Implementation Team discovered that the TS surveillance requirement for testing the NIS PR channels was not fully satisfied by the plant's surveillance test procedures. The TS Table 4.1-1, Item 1, "Nuclear Power Range," is a bi-weekly surveillance that requires a continuity check of the NIS PR channels signal to the Reactor Protection System Delta Temperature (<math>\Delta T</math>) input circuitry as one of two functional checks required by the TS. This condition was caused by misinterpretation of the information contained in the "Remarks" section of TS Table 4.1-1, Item 1, Remark 2, and a subsequent isolated error in that personnel failed to identify that the discrepancy existed. The applicable surveillance test procedure was revised to include the untested portion of the circuit in question and the NIS PR channels were tested and continuity was verified. We determined that the circuits were operable and performing their intended function. A review of TS Table 4.1-1 was completed and procedures will be revised to provide adequate instructions for maintaining operability of the NIS PR channels throughout the range of reactor power levels. Since the TS required surveillance requirement had not been performed and the TS required action not taken, this LER is submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by the TS.</p>					

NRC FORM 366A  
(4-85)LICENSEE EVENT REPORT (LER)  
TEXT CONTINUATION

FACILITY NAME (1)	DOCKET	LER NUMBER (6)			PAGE (3)
H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2	05000-261	YEAR	SEQUENTIAL	REVISION	2 OF 4
		96	001	00	

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

I. DESCRIPTION OF EVENT

On February 13, 1995, H. B. Robinson Steam Electric Plant (HBRSEP), Unit No. 2 was operating at 100 percent power. While performing a review of the Technical Specifications (TS), as a part of the conversion of the current TS to the improved Standard Technical Specifications (STS), a discrepancy in the surveillance tests for the Nuclear Instrumentation System (NIS) (EIS System Code: JC) Power Range (PR) channels was discovered. The HBRSEP, Unit No. 2 STS Conversion Implementation Team discovered that the TS surveillance requirement for testing the NIS PR channels was not fully satisfied by the plant's surveillance test procedures. The TS Table 4.1-1, Item 1, "Nuclear Power Range," is a bi-weekly surveillance that requires a continuity check between the NIS PR channels output and the Reactor Protection System (RPS) (EIS System Code: JC) Delta Temperature ( $\Delta T$ ) input circuits, one of two functional checks required by the TS. The implementation of TS Table 4.1-1, Item 1, Remark 2, "Signal to  $\Delta T$ ; bistable action (permissive, rod stop, trips)," was being conducted in accordance with procedures Operations Surveillance Tests (OSTs)-001, 002, 003, 004 and 005, "Nuclear Instrumentation Power Range," for different ranges of reactor power levels. The bistable functional checks are satisfactorily tested by these procedures; however, the circuit overlap portion between the NIS PR channels output and the RPS Over-Power (OP) and Over-Temperature (OT)  $\Delta T$  inputs was not included in these biweekly surveillance tests.

An independent assessment of the implementation of HBRSEP, Unit No. 2 TS surveillance requirements was performed in September 1990. As a result of this assessment, a plan that included the performance of an indepth review of the programmatic and procedural adequacy of the TS surveillance program was developed. An impartial, indepth review was performed by a contractor who documented the comprehensive comparison of the HBRSEP, Unit No. 2 surveillance test procedures against TS Table 4.1-1 in a 1992 report. As a part of our evaluation of this condition, a detailed review of the contractor's report and supporting documentation covering the affected section was performed, and we determined that an isolated error occurred in that the contractor failed to identify that the circuit overlap portion between the NIS PR channels output and the RPS  $\Delta T$  inputs was not included in our surveillance procedures.

II. CAUSE OF EVENT

This condition was caused by misinterpretation of the information contained in the "Remarks" section of TS Table 4.1-1, Item 1, and subsequently an isolated oversight error in that personnel, both contractor and licensee, failed to identify that the discrepancy existed. This is considered an isolated occurrence since no other instances on non-compliance with the surveillance requirements of TS Table 4.1-1 have occurred since the completion of the independent review in 1992.

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

III. ANALYSIS OF EVENT

The safety significance of this condition is considered minimal. Although the circuit overlap testing was not specifically performed since the plant was licensed, the NIS PR to RPS  $\Delta T$  circuits isolation amplifier (EIS Component Code: AMP) circuit design has not experienced any history of repetitive failures, and the circuitry was shown to have continuity when the circuit overlap test was performed on February 13, 1996. The NIS PR channels were tested at the current reactor power level and continuity verified. We determined that the circuits were operable and performing their intended function. The current and effective test procedure, OST-005, has been revised to provide adequate instructions for maintaining operability of the NIS PR channels, and a review of TS Table 4.1-1 was completed by the ISTS Conversion Implementation Team.

Since the TS surveillance requirement had not been performed and the TS required action was not taken, this LER is submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) as a condition prohibited by the TS.

IV. CORRECTIVE ACTIONS

On February 13, 1996, NIS PR channels upper and lower detector signals overlap circuit continuity was verified to be received by the RPS OP $\Delta T$  and OT $\Delta T$  circuits in accordance with TS Table 4.1-1, Item 1, Remark 2, "Signal to  $\Delta T$ ."

On February 22, 1996, procedure OST-005 was revised and made effective to include steps that adequately test the NIS PR channels for "Signal to  $\Delta T$ " overlap.

Surveillance test procedures OST-001, 002, 003, and 004 will be revised and made effective prior to being used to satisfy the bi-weekly surveillance testing requirement. The procedures will be revised to provide adequate instructions for maintaining operability of the NIS PR channels throughout the range of reactor power levels no latter than by May 10, 1996.

A comparison review of the HBRSEP, Unit No. 2 TS Table 4.1-1 against improved STS Tables 3.1.1 and 3.3.2 criteria was completed by the STS Conversion Implementation Team in order to ensure compliance with the STS surveillance testing. In addition, the STS Conversion Implementation Team will continue to review and verify adequacy of all other TS surveillance requirements in the improved STS as part of the conversion effort.

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V. ADDITIONAL INFORMATION

## A. Failed Component Information

None

## B. Previous Similar Events

LER 90-005

LER 94-001

The corrective actions taken could not have prevented recurrence since this was an isolated occurrence of personnel error.