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ACCESSION NBR: 9207020223 DOC. DATE: 92/06/26 NOTARIZED: NO DOCKET #
 FACILITY: 50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light Co 05000261
 AUTH. NAME AUTHOR AFFILIATION
 BAUCOM, C.T. Carolina Power & Light Co.
 CHAMBERS, R.H. Carolina Power & Light Co.
 RECIPIENT NAME RECIPIENT AFFILIATION

SUBJECT: LER 92-010-00: on 920528, failure to test auxiliary feedwater flow indication. Cause is speculative. Minimum Equipment List & Shift Relief revised to incorporate & document requirement. W/920626 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 6
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

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	NRR/DST/SRXB 8E		1	1		<u>REG FILE 02</u>		1	1
	RES/DSIR/EIB		1	1		<u>RGN2 FILE 01</u>		1	1
EXTERNAL:	EG&G BRYCE, J.H		3	3		L ST LOBBY WARD		1	1
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JUN 26 1992

RNPD/92-1739
(10CFR50.73)

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. 92-010-00

Gentlemen:

The enclosed Licensee Event Report (LER), is submitted in accordance with 10 CFR 50.73 and NUREG 1022, Supplements No. 1 and 2.

Very truly yours,

Rory H. Chambers

R. H. Chambers
General Manager

H. B. Robinson S. E. Plant

CTB:dwm

Enclosure

cc: Mr. S. D. Ebnetter
Mr. L. W. Garner
INPO

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LICENSEE EVENT REPORT (LER)

ESTIMATED BURDEN PER RESPONSE TO COMPLY WITH THIS INFORMATION COLLECTION REQUEST: 50.0 HRS. FORWARD COMMENTS REGARDING BURDEN ESTIMATE TO THE RECORDS AND REPORTS MANAGEMENT BRANCH (P-530), U.S. NUCLEAR REGULATORY COMMISSION, WASHINGTON, DC 20555, 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 NO. 2	DOCKET NUMBER (2) 0 5 0 0 0 2 6 1 1	PAGE (3) 1 OF 0 5
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TITLE (4)
FAILURE TO TEST AUXILIARY FEEDWATER FLOW INDICATION

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	5	2 8 9 2	9 2	0 1 0	0 0	0	6	2 6 9 2			0 5 0 0 0

OPERATING MODE (9) N	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)									
POWER LEVEL (10) 0	<input type="checkbox"/> 20.402(b)	<input type="checkbox"/> 20.405(c)	<input type="checkbox"/> 50.73(a)(2)(iv)	<input type="checkbox"/> 73.71(b)						
	<input type="checkbox"/> 20.405(a)(1)(i)	<input type="checkbox"/> 50.38(c)(1)	<input type="checkbox"/> 50.73(a)(2)(v)	<input type="checkbox"/> 73.71(c)						
	<input type="checkbox"/> 20.405(a)(1)(ii)	<input type="checkbox"/> 50.38(c)(2)	<input type="checkbox"/> 50.73(a)(2)(vii)	OTHER (Specify in Abstract below and in Text, NRC Form 366A)						
	<input type="checkbox"/> 20.405(a)(1)(iii)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)							
	<input type="checkbox"/> 20.405(a)(1)(iv)	<input type="checkbox"/> 50.73(a)(2)(ii)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)							
<input type="checkbox"/> 20.405(a)(1)(v)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(x)								

LICENSEE CONTACT FOR THIS LER (12)

NAME C. T. BAUCOM - REGULATORY COMPLIANCE	TELEPHONE NUMBER
	AREA CODE: 8 0 3 3 8 3 - 1 2 5 3

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

CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFAC-TURER	REPORTABLE TO NPRDS

SUPPLEMENTAL REPORT EXPECTED (14)

<input checked="" type="checkbox"/> YES (If yes, complete EXPECTED SUBMISSION DATE) <input type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH DAY YEAR 1 0 2 13 9 2
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On May 28, 1992, with H. B. Robinson Unit No. 2 in cold shutdown for a scheduled refueling outage, all channels of Auxiliary Feedwater (AFW) flow indication to each of three steam generators (SG) were declared inoperable. This affected a total of six flow indication channels, including individual flow indication to each SG from the Motor Driven AFW pumps, and individual flow indication to each SG from the Steam Driven AFW pump. The cause of this condition was the inability to identify a specific procedure or procedural steps to satisfy the Channel Check and Functional Test requirements provided by Technical Specification Table 4.1-1, Item 33, "Auxiliary Feedwater Flow Indication." An Adverse Condition Report has been initiated for review of this occurrence, and to establish root causes and corrective actions. A supplement to this Licensee Event Report (LER) will be submitted to provide the results of this review. Existing plant procedures have been revised to address the Channel Check requirement, and a Special Procedure was written and performed to satisfy the Functional Test requirement. This LER is submitted pursuant to 10CFR50.73(a)(2)(i)(B) as a condition prohibited by the plant's Technical Specifications.

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

I. DESCRIPTION OF EVENT

In May of 1992, H. B. Robinson Unit No. 2 (HBR2) was in cold shutdown for a scheduled refueling outage.¹ In progress was an on-going review of Technical Specification (TS) Surveillance Test Procedures (STP) which implement the requirements of TS Table 4.1-1.² During review of Table 4.1-1, Item 33, "Auxiliary Feedwater Flow Indication," certain discrepancies were identified with regard to the implementation of the associated surveillance requirements. Specifically, this item requires a monthly Channel Check and a refueling interval Functional Test. However, a review of STPs could not identify a specific procedure or procedural steps to satisfy the Channel Check requirement, nor could a specific procedure be identified to satisfy the Functional Test requirement.

With regard to the Channel Check requirement, PLP-024, "Surveillance Testing Program," states that this requirement is satisfied by Operations Surveillance Tests, OST-201, "Motor Driven Auxiliary Feedwater System Component Test (Monthly)," and OST-202, "Steam Driven Auxiliary Feedwater System Component Test (Monthly)." For the Motor Driven Auxiliary Feedwater (AFW) System test, OST-201 monitors and records flow data from FIC-1424 and FIC-1425 for the "A" and "B" pumps, respectively, which are flow indicator/controllers that provide total pump discharge flow indication. For the Steam Driven AFW System test, OST-202 monitors and records flow data from FIC-6416, which is the flow indicator/controller that provides total pump discharge flow for the Steam Driven pump. In contrast, TS Table 4.1-1, Item 33, is annotated with a note stating that the purpose of this TS is to satisfy the requirements of NUREG-0578 which requires safety-grade instrumentation indicating individual loop flow to each steam generator (SG). Further, TMM-026, "List of Regulatory Guide 1.97 Equipment," states that the Regulatory Guide (RG) 1.97 instrumentation for AFW flow indication is provided by FI-1425A, B, and C for the Motor Driven pumps, and FI-1426A, B, and C for the Steam Driven pump. Since the TS and RG 1.97 requirements are applicable to the individual AFW loop flow instrumentation to each SG, the existing OSTs do not satisfy the requirement to perform a monthly Channel Check.

With regard to the Functional Test, PLP-024 states that this requirement is satisfied by Maintenance Surveillance Test, MST-203, "Auxiliary Feedwater System Flow Indication (Refueling Interval)." However, this

¹ H. B. Robinson Steam Electric Plant Unit No. 2 is a Westinghouse pressurized water reactor in commercial operation since March 1971.

² Reference Supplemental Response to NRC Inspection Report No. 90-11, dated September 21, 1990.

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MST was written to perform a Functional Test on previously installed ultrasonic flow instrumentation; this ultrasonic flow instrumentation was upgraded to a differential pressure transmitter system by plant modification MOD-937 in 1988. As a result of this modification, MST-203 was canceled in January 1989. No existing plant procedure could be identified as replacing MST-203 to perform the Functional Test of the upgraded instrumentation.

Also during the course of this review, a related issue was identified in that the existing TS requirement for a Functional Test is not an appropriate surveillance for these instrumentation loops. Currently, TS Table 4.1-1, Item 33, is the only post-accident monitoring instrumentation to have a Functional Test requirement instead of a Calibration. This is attributed to the unique testing that was required for the previously installed ultrasonic flow instrumentation equipment. However, the TS requirements for NUREG-0737 instrumentation, as specified within Generic Letter 83-37, identify a refueling interval Calibration for AFW flow indication.

Based on the identification of these discrepancies, an Adverse Condition Report (ACR) was initiated on May 28, 1992.³ This ACR was delivered to the Unit 2 Control Room, where upon review by the Shift Supervisor, the affected channels of AFW flow indication were declared inoperable at 1350 hours.

II. CAUSE OF EVENT

As stated above, an ACR has been initiated for review of this occurrence, and to establish root causes and corrective actions. Until this review has been completed, any root causes identified would be preliminary and speculative. Therefore, a supplement to this Licensee Event Report will be submitted to provide the results of this review following close-out of the ACR.

III. ANALYSIS OF EVENT

The failure to properly identify and proceduralize the surveillance testing requirements associated with AFW flow indication is not considered to be safety significant. This instrumentation provides indication of individual flow to each SG from the Motor Driven AFW pumps and the Steam Driven AFW pump. These channels satisfy the post-accident monitoring function required by RG 1.97, and are designated as Type D, Category 2 instrumentation. Primary indication for availability of

³ Reference ACR No. 92-175.

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secondary heat sink, however, is provided by narrow-range SG level, which is designated as a Type A, Category 1 variable under RG 1.97. Further, each SG is provided with wide-range level indication, and each AFW pump is provided with a flow indicator/controller which both indicates and controls total discharge flow from each pump.

Although no formal Channel Check or Functional Test could be identified for the affected AFW flow indication, it is considered unlikely that these instrument channels would have been unavailable for their post-accident monitoring function. A short or open circuit within these instrument loops would cause the Control Board indication to read full up or down scale, respectively. Also, although no procedural requirement or step exists, it is reasonable to expect that these indicators were observed during pump operation or testing, and that a gross channel error would have been observed. Also, as stated above, other indicators are available for monitoring the availability of the secondary heat sink. Therefore, the loss or inaccuracy of the affected AFW flow indication would not have adversely affected accident mitigation activities, or the successful completion of emergency operating procedure steps.

It should also be noted that under the existing plant calibration program, calibration of individual loop components has been performed on a specified frequency. The differential pressure transmitters, square root extractors, and indicators have all been calibrated on a routine frequency using generic procedures for each of these loop components. However, there is currently no provision to establish the needed overlap such that a proper calibration or functional test of the entire loop is performed.

The failure to properly perform and document the Channel Check and Functional Test requirements is in violation of TS Table 4.1-1, Item 33. As such, this occurrence is reportable pursuant to 10CFR50.73(a)(2)(i)(B) as a condition prohibited by the plant's Technical Specifications.

IV. CORRECTIVE ACTIONS

Immediate corrective actions taken include the following:

- To address the existing TS requirement to perform a monthly Channel Check, Operations Management Manual, OMM-008, "Minimum Equipment List and Shift Relief," was revised to incorporate and document this requirement. Revision 63 to this procedure was made effective on June 5, 1992.

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TEXT (If more space is required, use additional NRC Form 366A (11/77))

2. The existing Functional Test requirement has been addressed by the development of a Special Procedure, SP-1148. This procedure was used to satisfactorily complete the Functional Test of the affected AFW flow indication loops.

3. The adequacy of the Functional Test requirement, as provided within the existing TS, will be addressed by the processing and submittal of a License Amendment Request. The proposed Amendment would eliminate the Functional Test requirement and implement a refueling interval Channel Calibration requirement. The proposed License Amendment Request will be submitted to NRC by November 20, 1992.

Additional corrective actions which may be identified as part of the review performed under ACR No. 92-175 will be provided within a supplement to this Licensee Event Report.

V. ADDITIONAL INFORMATION

A. Failed Component Identification

None.

B. Previous Similar Events

The following Licensee Event Reports identified previous similar events:

1. LER 84-005, "Test of SI - High Steam Flow Coincident With Low Steam Line Pressure or Low Tave"
2. LER 86-008, "AFW Initiation on Station Blackout Technical Specification Required Test Discrepancy"
3. LER 88-011-01, "Automatic Reactor Trip Due to Turbine Trip From Turbine Overspeed Protection"
4. LER 90-005-01, "Failure to Test RPS Logic Channels in Accordance With Technical Specifications"
5. LER 91-012, "Entry Into Technical Specification 3.0 Due to Inadequate Undervoltage Surveillance Procedure"
6. LER 92-002, "Failure to Test All Circuitry Associated With Auxiliary Feedwater Auto Start"