

PRIORITY 1

ACCELERATED RIDS PROCESSING

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 9409090196 DOC. DATE: 94/06/25 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.
 HERRELL, M.E. Carolina Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 92-010-01: on 920528, TS violation occurred due to inadequate surveillance testing of AFW flow indicators. Permanent maint procedure (LP-366) written & plant procedures OST-201 & OST-202 changed. W/940901 ltr.

DISTRIBUTION CODE: IE22T COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 7
 TITLE: 50.73/50.9 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

| | RECIPIENT ID CODE/NAME | COPIES LTTR ENCL | RECIPIENT ID CODE/NAME | COPIES LTTR ENCL |
|-----------|---------------------------|---------------------|---------------------------|---------------------|
| | PD2-1 PD | 1 1 | MOZAFARI, B | 1 1 |
| INTERNAL: | AEOD/ROAB/DSP | 2 2 | AEOD/SPD/RRAB | 1 1 |
| | NRR/DE/EELB | 1 1 | NRR/DE/EMEB | 1 1 |
| | NRR/DORS/OEAB | 1 1 | NRR/DRCH/HHFB | 1 1 |
| | NRR/DRCH/HICB | 1 1 | NRR/DRCH/HOLB | 1 1 |
| | NRR/DRSS/PRPB | 2 2 | NRR/DSSA/SPLB | 1 1 |
| | NRR/DSSA/SRXB | 1 1 | NRR/PMAS/IRCB-E | 1 1 |
| | REG FILE 02 | 1 1 | RES/DSIR/EIB | 1 1 |
| | RGN2 FILE 01 | 1 1 | | |
| EXTERNAL: | EG&G BRYCE, J.H | 2 2 | L ST LOBBY WARD | 1 1 |
| | NOAC MURPHY, G.A | 1 1 | NOAC POORE, W. | 1 1 |
| | NRC PDR | 1 1 | NUDOCS FULL TXT | 1 1 |

NOTE TO ALL "RIDS" RECIPIENTS:

PLEASE HELP US TO REDUCE WASTE! CONTACT THE DOCUMENT CONTROL DESK, ROOM P1-37 (EXT. 504-2083) TO ELIMINATE YOUR NAME FROM DISTRIBUTION LISTS FOR DOCUMENTS YOU DON'T NEED!

FULL TEXT CONVERSION REQUIRED
 TOTAL NUMBER OF COPIES REQUIRED: LTTR 26 ENCL 26

A04



10CFR50.73

Carolina Power & Light Company
Robinson Nuclear Plant
PO Box 790
Hartsville SC 29551

Robinson File No: 13510C
Serial: RNP/94-0478

SEP 1 1994

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, DC 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261/LICENSE NO. DPR-23
LICENSEE EVENT REPORT NO. 92-010-01

Gentlemen:

The enclosed Supplemental Licensee Event Report, (LER), is submitted in accordance with 10 CFR 50.73. This supplement provides the results of the root cause investigation of the event and the corrective actions that will be taken. The revisions are indicated by a right-hand margin bar. This supplement is being submitted significantly past the expected due date. The causes of this late submittal are currently being evaluated. Resultant corrective actions will be determined and dispositioned via our internal corrective action process.

Very truly yours,

Max E. Herrell
Acting Plant General Manager

RES:bej

Enclosure

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

9409090196 940625
PDR ADOCK 05000261
S PDR

Highway 151 and SC 23 Hartsville SC

TE22

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 (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) H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
H. B. ROBINSON, UNIT NO. 2DOCKET NUMBER (2)
05000 261PAGE (3)
1 OF 6

TITLE (4)

TECHNICAL SPECIFICATION VIOLATION DUE TO INADEQUATE SURVEILLANCE TESTING

| 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 |
| 05 | 28 | 92 | 92 | -- 010 -- | 01 | 06 | 25 | 94 | FACILITY NAME | DOCKET NUMBER |
| | | | | | | | | | | 05000 |
| | | | | | | | | | FACILITY NAME | DOCKET NUMBER |
| | | | | | | | | | | 05000 |

| | | | | | | | | | |
|--------------------|-----|---|------------------|----------------------|----------------|--|--|--|--|
| OPERATING MODE (9) | N | THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11) | | | | | | | |
| POWER LEVEL (10) | -0- | 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 | | | | |
| | | 20.405(a)(1)(iv) | 50.73(a)(2)(ii) | 50.73(a)(2)(viii)(B) | Abstract below | | | | |
| | | 20.405(a)(1)(v) | 50.73(a)(2)(iii) | 50.73(a)(2)(x) | and in Text, | | | | |
| | | | | | NRC Form 366A) | | | | |

K. R. JURY: REGULATORY AFFAIRS

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

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

On May 28, 1922, 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. 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." The root cause for not having the required procedure was due to the surveillance testing procedure being deleted without performing an adequate safety review. The safety review should have ensured that a new or revised procedure would meet the existing required channel functional testing. In addition, the original testing procedures had not been performing the Technical Specification required Channel Check due to a misunderstanding of the TS requirements. 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 until a new plant procedure was written and approved. This LER is submitted pursuant to 10CFR50.73 (a) (2) (i) (B) as a condition prohibited by the plant's Technical Specifications.

NRC FORM 366A
(5-92)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
|----------------------------|-------------------|----------------|-------------------|-----------------|----------|
| H. B. ROBINSON, UNIT NO. 2 | 05000 | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | 2 OF 6 |
| | | 92 | -- 010 -- | 01 | |

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

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
(MNNB 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 NO. 2 | 05000 | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER |
| | | 92 | -- 010 -- | 01 |
| 3 OF 6 | | | | |

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

I. Description of Event (Continued)

However, this 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. 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

The root cause of the inadequate surveillance testing of the AFW Flow Indicators was due to a misunderstanding of the TS requirements in the original testing program. In addition, personnel failed to perform an adequate review of procedures and the requirements of the TS to verify that an existing new or revised procedure would meet the TS required channel functional testing before deleting the current surveillance testing procedure.

| | | | | | |
|---|--|------------------------------------|--|--|-------------------|
| NRC FORM 366A (5-92) | | U.S. NUCLEAR REGULATORY COMMISSION | | APPROVED BY OMB NO. 3150-0104 EXPIRES 5/31/95 | |
| LICENSEE EVENT REPORT (LER) TEXT CONTINUATION | | | | 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 (MNNB 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) | |
| H. B. ROBINSON, UNIT NO. 2 | | 05000 | | YEAR | SEQUENTIAL NUMBER |
| | | | | 92 | -- 010 -- |
| | | | | REVISION NUMBER | 01 |
| | | | | PAGE (3) | |
| | | | | 4 OF 6 | |

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

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 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.

NRC FORM 366A
(5-92)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 5/31/95LICENSEE EVENT REPORT (LER)
TEXT CONTINUATION

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.

| FACILITY NAME (1) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
|----------------------------|-------------------|----------------|----------------------|--------------------|----------|
| H. B. ROBINSON, UNIT NO. 2 | 05000 | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | 5 OF 6 |
| | | 92 | -- 010 -- | 01 | |

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

IV. CORRECTIVE ACTIONS

Immediate corrective actions taken include the following:

1. 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.
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, was addressed by the submittal and subsequent NRC approval of a License Amendment Request.
4. A permanent maintenance procedure (LP-366), similar to the Special Procedure SP-1148, was written based on the Technical Specification change.
5. Plant procedures OST-201 and OST-202 were changed to delete the reference to Technical Specification Table 4.1-1 Item 33.
6. Plant procedure PLP-024 was revised to indicate OMM-008 not MST-203 demonstrates compliance with Technical Specification Table 4.1-1 Item 33.

A study of the surveillance requirements was performed for the AFW Flow Indicators and the present correct interpretation of this TS was formulated. In addition, a commitment was made in the July 26, 1994 Enforcement Conference held in the NRC Region II office in Atlanta, Georgia to conduct a sample of other TS circuit surveillance requirements to ensure that there are no other incidences of failure to perform TS required surveillance testing.

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
(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) | DOCKET NUMBER (2) | LER NUMBER (6) | | | PAGE (3) |
|----------------------------|-------------------|----------------|----------------------|--------------------|----------|
| H. B. ROBINSON, UNIT NO. 2 | 05000 | YEAR | SEQUENTIAL NUMBER | REVISION NUMBER | 6 OF 6 |
| | | 92 | -- 010 -- | 01 | |

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

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"