

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8705220454 DDC DATE: 87/05/15 NOTARIZED: NO DOCKET #
 FACIL: 50-261 H.B. Robinson Plant, Unit 2, Carolina Power & Light Co 05000261
 AUTH. NAME: SAYRE, D. AUTHOR AFFILIATION: Carolina Power & Light Co.
 MORGAN, R. E. Carolina Power & Light Co.
 RECIP. NAME: RECIPIENT AFFILIATION

SUBJECT: LER 87-003-00: on 870414, during cold shutdown, questionable cable splice identified. On 870415, splice determined to be installed improperly & not environmentally qualified. Splice replaced. Addl QC insps made. W/870515 ltr.

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 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

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RGN2 FILE 01	1 1		
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NRC Form 366
(9-83)

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES: 8/31/85

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) H. B. Robinson Steam Electric Plant Unit 2										DOCKET NUMBER (2) 0 5 0 0 0										PAGE (3) 1 OF 02																																	
TITLE (4) EQ Cable Splice Deficiencies																																																					
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 4			1 5			8 7			8 7			0 0			3			0 0			0 5			1 5			8 7															0 5 0 0 0											
OPERATING MODE (9)									THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more of the following) (11)																																												
POWER LEVEL (10) 0									20.402(b)									20.405(c)									50.73(a)(2)(iv)									73.71(b)																	
									20.405(a)(1)(i)									50.38(c)(1)									X 50.73(a)(2)(v)									73.71(c)																	
									20.405(a)(1)(ii)									50.38(c)(2)									50.73(a)(2)(vii)									OTHER (Specify in Abstract below and in Text, NRC Form 366A)																	
									20.405(a)(1)(iii)									50.73(a)(2)(i)									50.73(a)(2)(viii)(A)																										
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20.405(a)(1)(v)									50.73(a)(2)(iii)									50.73(a)(2)(ix)																																			
LICENSEE CONTACT FOR THIS LER (12)																																																					
NAME Don Sayre																				TELEPHONE NUMBER 8 0 3 3 8 3 - 1 2 4 2																																	
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																																																					
CAUSE		SYSTEM		COMPONENT		MANUFACTURER		REPORTABLE TO NPD				CAUSE		SYSTEM		COMPONENT		MANUFACTURER		REPORTABLE TO NPD																																	
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SUPPLEMENTAL REPORT EXPECTED (14)																				EXPECTED SUBMISSION DATE (15)																																	
X YES (If yes, complete EXPECTED SUBMISSION DATE)																				NO																																	
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ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)

On April 14, 1987, while Unit 2 was in cold shutdown for a refueling outage, a questionable cable splice was identified by inspection. The following day, this heat shrinkable tubing splice configuration was determined not to satisfy the installation acceptance criteria and not to demonstrate proper environmental qualification. The splice was installed to connect a pigtail from an electrical penetration assembly in containment and the 480V power lead to the motor on a cold leg Safety Injection valve.

The improper cable splice installation was due to failure to properly follow the procedure specified in the Plant modification which installed the splice.

The splice was removed and replaced with a satisfactory environmentally qualified configuration. In addition, the installation procedure was revised to require QC inspection of installations. As additional corrective action, an inspection program was initiated to verify proper cable splice configurations based on a representative sample of heat shrinkable tubing splices. As a result, 15 other splices were removed and replaced with proper environmentally qualified configurations.

Unit 2 remained in cold shutdown for completion of the refueling outage.

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PDR ADOCK 05000261
S PDR

JE23

2/1

NRC Form 386A
(9-83)

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED OMB NO. 3150-0104

EXPIRES 8/31 85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (6)			PAGE (3)	
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER		
H. B. Robinson Steam Electric Plant Unit 2	0 5 0 0 0 2 6 1	8 7	— 0 0 3	— 0 0	0 2	OF 0 2

TEXT (If more space is required, use additional NRC Form 386A's) (17)

EVENT DESCRIPTION

On April 14, 1987, while Unit 2 was in cold shutdown for a refueling outage, a questionable environmentally qualified cable splice was identified by inspection. The following day, at 1030 hours, this heat shrinkable tubing splice, connecting an electrical penetration assembly pigtail to the 480V power lead to the motor on cold leg Safety Injection (SI) valve SI-866A, was determined to be in a configuration that did not satisfy the installation acceptance criteria. Later that day, at 1230 hours, the configuration was evaluated to be unable to demonstrate proper environmental qualification.

The splice in question was a Raychem WCSF-200-12N splice installed between the 3-conductor pigtail from plug number 7 of containment electrical penetration assembly number D-8 and 3-conductor 480V power lead to the SI-866A motor, cable number C2241A. The as-found configuration involved a sleeve with an overall jacket length of about 12-1/4 inches. The seal at one end was about 5-1/4 inches but there was no apparent seal at the other end, as indicated by an overlap of about 1/2 inch and no sign of internal adhesive flow. Also, the application required a Raychem WCSF-500-12N splice instead of the undersized type used.

The NRC was notified of a nonemergency event (four-hour notification), in accordance with 10CFR50.72(b)(2)(i).

CAUSE

The improper cable splice installation was due to poor workmanship under Plant modification 521 in 1980. The incorrect size splice material was specified in the modification and the installation instructions for an environmentally qualified seal were not properly followed.

CORRECTIVE ACTION

The original cable splice was removed and replaced with a Raychem WCSF-500-12N splice. QA inspection of the completed configuration was accomplished May 9, 1987.

The installation procedure for heat shrinkable tubing was revised to require QC inspection of installation to assure proper application of Raychem sleeves at locations where required for environmental qualification.

As additional corrective action, a special inspection program was initiated to verify proper cable splice configurations based on a representative sample of heat shrinkable tubing splices in containment. As a result, a followup notification was made April 18, 1987, in accordance with 10CFR50.72(c), to identify an additional fifteen splices requiring replacement.

Unit 2 remained in cold shutdown for completion of the refueling outage.

Supplemental information on the full scope of the Raychem splice inspection and evaluation program will be provided by June 12, 1987, as a revision to this LER.



Carolina Power & Light Company

ROBINSON NUCLEAR PROJECT DEPARTMENT
POST OFFICE BOX 790
HARTSVILLE, SOUTH CAROLINA 29550

MAY 12 1987

Robinson File No: 13510C

Serial: RNP/87-2111
(10CFR50.73)

United States Nuclear Regulatory Commission
Attn: Document Control Desk
Washington, D. C. 20555

H. B. ROBINSON STEAM ELECTRIC PLANT, UNIT NO. 2
DOCKET NO. 50-261
LICENSE NO. DPR-23
LICENSEE EVENT REPORT 87-003

Dear Sir:

The enclosed Licensee Event Report (LER) is submitted in accordance with the Licensee Event Report System of 10CFR50.73. The format of the LER follows the recommendations of NUREG-0122 of September 1983.

Very truly yours,

R. E. Morgan
General Manager
H. B. Robinson S. E. Plant

DAS:lko

Enclosure

cc: J. N. Grace
H. E. P. Krug
INPO

IF22
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