

REGULATORY INFORMATION DISTRIBUTION SYSTEM (RIDS)

ACCESSION NBR: 8706180097 DOC. DATE: 87/06/12 NOTARIZED: NO DOCKET #
 FACIL: 50-261 H. B. Robinson Plant, Unit 2, Carolina Power & Light C 05000261
 AUTH. NAME AUTHOR AFFILIATION
 SAYRE, D. Carolina Power & Light Co.
 MORGAN, R. E. Carolina Power & Light Co.
 RECIP. NAME RECIPIENT AFFILIATION

SUBJECT: LER 87-007-00: on 870513, lubricating grease in limit switch compartments of motor operators of two safety injection & two RHR valves & in lower motor bearings of two RHR pumps could not be demonstrated. Cause unknown. W/870612 ltr.

DISTRIBUTION CODE: IE22D COPIES RECEIVED: LTR 1 ENCL 1 SIZE: 6pp.
 TITLE: 50.73 Licensee Event Report (LER), Incident Rpt, etc.

NOTES:

	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL	RECIPIENT ID CODE/NAME	COPIES LTTR ENCL
	PD2-1 LA	1 1	PD2-1 PD	1 1
	ECCLESTON, K	1 1		
INTERNAL:	ACRS MICHELSON	1 1	ACRS MOELLER	2 2
	AEOD/DOA	1 1	AEOD/DSP/ROAB	2 2
	AEOD/DSP/TPAB	1 1	DEDRO	1 1
	NRR/DEST/ADE	1 0	NRR/DEST/ADS	1 0
	NRR/DEST/CEB	1 1	NRR/DEST/ELB	1 1
	NRR/DEST/ICSB	1 1	NRR/DEST/MEB	1 1
	NRR/DEST/MTB	1 1	NRR/DEST/PSB	1 1
	NRR/DEST/RSE	1 1	NRR/DEST/SGB	1 1
	NRR/DLPQ/HFB	1 1	NRR/DLPQ/QAB	1 1
	NRR/DOEA/EAB	1 1	NRR/DREP/RAB	1 1
	NRR/DREP/RPB	2 2	NRR/PMAS/ILRB	1 1
	NRR/PMAS/PTSB	1 1	<u>REG FILE</u> 02	1 1
	RES DEPY GI	1 1	RGN2 FILE 01	1 1
EXTERNAL:	EG&G GROH, M	5 5	H ST LOBBY WARD	1 1
	LPDR	1 1	NRC PDR	1 1
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LICENSEE EVENT REPORT (LER)

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			
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)					
5	13	87	87	007	00								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 0 0		20.402(b)					20.406(c)					50.73(a)(2)(iv)					73.71(b)	
		20.406(a)(1)(i)					50.36(c)(1)					50.73(a)(2)(v)					73.71(c)	
		20.406(a)(1)(ii)					50.36(c)(2)					50.73(a)(2)(vi)					OTHER (Specify in Abstract below and in Text, NRC Form 366A)	
		20.406(a)(1)(iii)					50.73(a)(2)(i)					50.73(a)(2)(vii)(A)						
		20.406(a)(1)(iv)					X 50.73(a)(2)(ii)					50.73(a)(2)(viii)(B)						
		20.406(a)(1)(v)					50.73(a)(2)(iii)					50.73(a)(2)(ix)						
LICENSEE CONTACT FOR THIS LER (12)																		
NAME Don Sayre, Senior Specialist - Regulatory Compliance										TELEPHONE NUMBER 8 0 3 3 8 1 3 - 1 1 2 4 1 2								
COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)																		
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS		CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPDOS								
X																		
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH	DAY	YEAR		
X YES (If yes, complete EXPECTED SUBMISSION DATE)												NO		11	2	31	8	7
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single-space typewritten lines) (16)																		
<p>On May 13, 1987, it was determined that the lubricating grease in the limit switch compartments of the motor operators of two Safety Injection (SI) and two Residual Heat Removal (RHR) valves and in the lower motor bearings of two RHR pumps could not be demonstrated environmentally qualified by available documentation. Following this determination, the lubricating grease in the Containment fan cooler motors, HVH-1 through 4, was also found to be unqualifiable by available documentation. On May 14, other apparent qualification documentation deficiencies were identified: cable identification; electrical connector and pigtail splice qualification testing; as-installed versus as-tested SI and RHR valve motor operator configurations; heat shrinkable tubing cable splice installation; and, conduit seal installation. On May 15, with one exception, the cable qualification issue was resolved.</p> <p>The NRC was notified in accordance with 10 CFR 50.72 on each of the dates above.</p> <p>Prior to identification of the environmental qualification concerns in May, the issue of heat shrinkable tubing cable splice installation had been identified in April. This matter is discussed in LER 87-003, Revision 1.</p> <p>All concerns have been resolved, with the exception of cable identification. Additional qualification documentation is being collected to further assure the proper qualification of one type of cable in Containment as follow-up to a recent NRC inspection of the Unit 2 Environmental Qualification Program. Completion of this corrective action will be reported in a supplement to this LER.</p>																		
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NRC Form 308A
(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 S. E. Plant, Unit No. 2	0 5 0 0 0 2 6 1	8 7	- 0 0 7	- 0 0	0 2	OF	0 5

TEXT (If more space is required, use additional NRC Form 308A's) (17)

On May 13, 1987, at 1315 hours, it was determined that use of a specific manufacture of lubricating grease in certain safety-related components could not be demonstrated environmentally qualified by available documentation. The components included the limit switch compartments of the motor operators on two SI Valves, SI-866A and B, and two RHR valves, RHR-744A and B, and the lower motor bearings of RHR pumps A and B.

The NRC was notified of a nonemergency event (four-hour) at 1603 hours on May 13, 1987.

Following the May 13 determination, it was also determined that the lubricating grease in the Containment fan cooler motors, HVH-1 through 4, was also unqualifiable based on the lack of available documentation demonstrating qualification.

On May 14, 1987, at 1145 hours, five other apparent qualification deficiencies were also determined, including: 1) identification of environmentally qualified electrical cable in containment; 2) demonstration of environmental testing of Crouse-Hinds electrical connectors and Containment penetration assembly pigtail splices; 3) verification of installed Limitorque valve motor operators to as-tested configurations; 4) completion of the installation of Raychem heat shrinkable tubing cable splices; and 5) installation of conduit seals at cable entrances to certain ASCO solenoid valves and Rosemount transmitters in Containment. The addition of these qualification documentation discrepancies expanded the scope of the environmental qualification issue reported the previous day concerning grease in six safety-related components, and CP&L decided to group all issues under one LER.

A follow-up notification to the NRC was made at 1520 hours, May 14, 1987, to identify the additional five environmental qualification areas of concern.

On May 15, 1987, review of the electrical cable installed in Containment determined that inspection and evaluation of the cable, cable purchase documents, and cable test records provided adequate assurance of environmental qualification. The issue, therefore, was considered resolved satisfactorily. The remaining four environmental qualification areas of concern were still valid since all resulted from questions raised during a recent NRC inspection of the H. B. Robinson Unit 2 Environmental Qualification Program.

A follow-up notification was made to the NRC at 2018 hours, May 15, to identify the change in scope of the environmental qualification issues.

NRC Form 308A
(9-83)

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

U.S. NUCLEAR REGULATORY COMMISSION

APPROVED ONE NO 3150-0104

EXPIRES 8/31 85

FACILITY NAME (1)	DOCKET NUMBER (2)	LER NUMBER (3)			PAGE (3)		
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H. B. Robinson S. E. Plant, Unit No. 2	05000261	87	007	00	03	OF	05

TEXT (1) more space is required, use additional NRC Form 308A (117)

For purposes of simplicity, the following narrative describes the original six categories of environmental qualification issues and the corrective action status of each.

1. Identification of Environmentally Qualified Electrical Cable in Containment

The electrical cable within the H. B. Robinson Unit 2 Environmental Qualification Program was originally identified by review and evaluation of purchase orders, Plant construction specifications, cable and conduit lists, and other pertinent documents. Environmental qualification documentation for this cable is an integral part of the Unit 2 Environmental Qualification Central File (EQCF). As of May 14, 1987, evaluation of walkdown information recently gathered on cable in Containment provided reasonable assurance that properly qualified cable was in use for environmentally qualified electrical equipment. As further assurance of complete compliance with the requirements of 10 CFR 50.49, cable was replaced whenever reasonable assurance of qualification could not be demonstrated by available documentation.

Since May 14, discussions with NRC Region II and NRR personnel have resulted in additional corrective action, including submittal of a Justification for Continued Operation pending the collection and evaluation of further environmental qualification data on the cable. Should efforts to obtain sufficient supplemental data prove unsatisfactory, samples of the cable will be independently tested in an accident environment and the test results incorporated in the EQCF. The collection and evaluation of supplemental environmental qualification documentation is scheduled for completion following return of the unit to full power operation, currently scheduled for mid-June 1987.

A Justification for Continued Operation (JCO) was submitted to the NRC on June 1, 1987, to support operation during the time needed to provide further information regarding the one cable manufacturer for which additional qualification documentation was desired (Anaconda Continental Wire & Cable Company).

2. Demonstration of Environmental Testing of Crouse-Hinds Electrical Connectors and Containment Penetration Assembly Pigtail Splices

The environmental qualification of certain Crouse-Hinds connectors and certain Containment penetration assembly pigtail splices was determined to be questionable. The specific connectors and pigtail splices of concern have been replaced with known environmentally qualified Raychem heat shrinkable tubing cable splices.

NRC Form 306A
(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 S. E. Plant, Unit No. 2	05000261	87	007	00	04	OF 05

TEXT (If more space is required, use additional NRC Form 306A's) (17)

3. Verification of Installed Limitorque Valve Motor Operators to As-Tested Configurations

The installed configurations of four Limitorque valve motor operators, SI-866A and RHR-744A and B, were identified as different than the as-tested configurations. To assure agreement with test configurations, certain components of the four valve motor operators were replaced or otherwise corrected.

4. Completion of the Installation of Raychem Heat Shrinkable Tubing Cable Splices

In April of this year, a nonemergency four-hour notification and a subsequent follow-up notification were made to the NRC to identify an apparent environmental qualification deficiency with regard to sixteen Raychem cable splices in Containment. LER 87-003, Revision 1, discusses this issue.

5. Installation of Conduit Seals at Cable Entrances to Certain ASCO Solenoid Valves and Rosemount Transmitters in Containment

The lack of environmentally qualified conduit seals at the cable entrances to certain components in Containment was identified. Vendor recommendations for environmentally qualified ASCO solenoid valves and Rosemount transmitters in harsh environments include installation of the seals to assure relatively small intrusion by moisture or condensation during a Design Basis Accident. These seals have been installed.

6. Environmentally Qualified Grease Installation

The lubricating grease in the geared limit switch compartments of valves SI-866A and B and RHR-744A and B and in the lower motor bearings of RHR pumps A and B was identified as having not been demonstrated environmentally qualified. Subsequently, the lubricating grease in four Containment fan cooler motors, HVH-1 through 4, was also determined to be unqualifiable because of the lack of available documentation demonstrating qualification. The grease has been removed and a known environmentally qualified grease installed.

In summary, all six environmental qualification issues have been resolved, with the exception of providing additional qualification documentation for electrical cable in Containment.

CAUSE

The cause of the event described in this LER is under investigation. CP&L is awaiting receipt of the NRC I&E Report detailing the specific problem areas in the Unit 2 Environmental Qualification Program. The cause will be discussed in a supplement to this report following evaluation of this I&E Report.

Enclosure to Serial: RNP/87-2713

NRC Form 385A
(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 (5)			PAGE (3)		
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H. B. Robinson S. E. Plant, Unit No. 2	0500026187	-	007	-	00	05	OF 05

TEXT (if more space is required, use additional NRC Form 385A's) (17)

CORRECTIVE ACTION

The corrective action taken for the environmental qualification issues is discussed above.



Carolina Power & Light Company

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

JUN 12 1987

Robinson File No: 13510C

Serial: RNP/87-2713
(10 CFR 50.73)

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 87-007

Dear Sir:

The enclosed Licensee Event Report (LER) is submitted in accordance with the Licensee Event Report System of 10 CFR 50.73. The format of the LER follows the recommendations of NUREG-1022 of September 1983.

Very truly yours,

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

DAS:sdm

Enclosure

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

IE22
1/1