

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1) River Bend Station	DOCKET NUMBER (2) 0 5 0 0 0 4 5 8	PAGE(S) 1 OF 0 4
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TITLE (4)
Unqualified Wiring Discovered in Limitorque Operators

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 1	0 7	8 6	8 6	0 0 8	0 0 0	2 0	8 8	6			0 5 0 0 0
											0 5 0 0 0

OPERATING MODE (9) 3	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §. (Check one or more of the following) (11)									
POWER LEVEL (10) 0 1 0 1 0	20.402(b)	20.406(a)	80.73(a)(2)(iv)	73.71(b)						
	20.406(a)(1)(i)	80.38(a)(1)	80.73(a)(2)(v)	73.71(a)						
	20.406(a)(1)(ii)	80.38(a)(2)	80.73(a)(2)(vi)	OTHER (Specify in Abstract below and in Text, NRC Form 306A)						
	20.406(a)(1)(iii)	80.73(a)(2)(i)	80.73(a)(2)(vii)(A)							
	20.406(a)(1)(iv)	80.73(a)(2)(ii)	80.73(a)(2)(vii)(B)							
	20.406(a)(1)(v)	80.73(a)(2)(iii)	80.73(a)(2)(viii)							
	20.406(a)(1)(vi)	80.73(a)(2)(iv)	80.73(a)(2)(ix)							

LICENSEE CONTACT FOR THIS LER (12)

NAME L. Schell - Senior Electrical Engineer	TELEPHONE NUMBER AREA CODE: 5 0 4 6 3 5 - 6 0 9 4
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COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NRC

SUPPLEMENTAL REPORT EXPECTED (14)

YES (If yes, complete EXPECTED SUBMISSION DATE)	<input checked="" type="checkbox"/> NO	EXPECTED SUBMISSION DATE (15)	MONTH	DAY	YEAR

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

On 01/07/86 at 2330 with the unit in operational condition 3 (hot shutdown), an equipment qualification engineer, examining a disassembled motor operator, discovered unqualified wiring connecting the control components. A subsequent engineering review identified eight safety-related operators which contained at least some of the subject wiring. Seven of the motor operators were part of the High Pressure Core Spray system and one was part of the suppression pool pumpback system. The valves were declared inoperable at 1015 on 01/09/86 and a design change was initiated to replace the wiring with qualified Rockbestos wire. This work was completed on 01/11/86. No safety consequences resulted from the above condition; however, the loss of both systems as a result of exposure to design basis environments constitutes a condition not analyzed in the Safety Analysis Report.

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TEXT (If more space is required, use additional NRC Form 366A 2) (17)

Reported Condition

On 01/07/86 at approximately 2330 with the unit in operational condition 3 (hot shutdown) an equipment qualification engineer examined the wiring connecting the control components of a Limitorque valve motor operator being disassembled in the maintenance shop. The control components and wire were contained in a bag and were identified as parts of the operator being disassembled. The operator had originally been supplied for the now cancelled River Bend Station (RBS) Unit 2 and was designated by its supplier, General Electric, as Master Parts List (MPL) no. 2E22-F011. The control wire was suspected to be unsuitable for the application because of its marking which identified the wire as "NARAGANSETT NARAWIRE 14 TYPE TW 600 VOLTS TDLY". TW type wire is a 60 degree C rated wire with PVC insulation of blue color and is generally used only for residential wiring. The wire to the limit switch compartment heater was noted to be unmarked and of red color. The quality of this wiring is not important since limit switch compartment heaters in safety-related Limitorque valve motor operators are not electrically connected at RBS. A telephone conversation with Limitorque, the manufacturer of the operator, on 01/08/86 confirmed that TW type wire is unsuitable for the application and is not environmentally qualified.

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TEXT (if more space is required, use additional NRC Form 365A's) (17)

Investigation:

A subsequent engineering review identified eight safety-related operators installed at RBS that are of the same vintage as 2E22-F011. An inspection was performed and all eight operators were found to contain at least some blue TW type or unmarked red wiring. The operators were supplied by GE and are located in the auxillary building outside primary containment.

GSU contacted Limitorque in order to determine where the blue and red wires were installed. Limitorque acknowledged that it generally supplies its valve control components pre-wired but stated that only units manufactured in the late 60's and early 70's had TW type wire in red and blue. The subject eight operators were manufactured prior to the early part of 1978 which can be inferred from the valve test reports (provided by Anchor Darling, the manufacturer of the associated valves) dated between 02/27/77 and 03/17/78. Procurement of these operators predates by approximately two (2) years the procurement of all other safety-related operators installed at RBS. An inspection performed in 1985 on all 62 Limitorque valve operators located inside containment identified that only Rockbestos or Raychem wiring is used. Either wiring is acceptable per the installation specification. An additional five operators located outside containment were inspected as the result of the condition reported here. No unqualified wiring was identified.

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TEXT (if more space is required, use additional NRC Form 385A 2) (17)

Corrective Action

The valves were declared inoperable at 1015 on 01/09/86 and Limiting Condition for Operation LCO-86-028 was initiated. Of the eight valves, seven (Mark no. 1E122*MOV001, 004, 010, 011, 012, 015, 023) are part of the High Pressure Core Spray (HPCS) system and one (Mark no. 1DFR*MOV146, originally supplied as MPL no. 2E22-F012) is part of the suppression pool pumpback system. A design change was issued on 01/09/86 to replace all internal control wiring in the subject eight (8) operators with qualified Rockbestos wire. The wiring was completed on 01/11/86 and LCO-86-028 was cancelled at 0815 on 01/11/86.

Safety Consequences

No actual safety consequences resulted from the condition reported here and the safety and health of the public was not endangered. However, since the capability of the TW type wire under environmental conditions resulting from design basis events is not exactly known, it can be postulated that the safety function of the HPCS and the suppression pool pumpback systems may have been adversely affected. The loss of both systems as the result of exposure to design basis environments constitutes a condition not analyzed in the Safety Analysis Report.



GULF STATES UTILITIES COMPANY

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February 8, 1986
RBG-23150
File Nos. G9.5, G9.25.1.3

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D. C. 20555

Dear Sir:

River Bend Station - Unit 1
Docket No. 50-458

Please find enclosed Licensee Event Report No. 86-008 for River Bend Station - Unit 1. This report is submitted pursuant to 10CFR50.73.

Sincerely,

Eddie R. Grant

for J. E. Booker
Manager-Engineering,
Nuclear Fuels & Licensing
River Bend Nuclear Group

JMP
JEB/TFP/DRG/BEH/ebm

cc: U. S. Nuclear Regulatory Commission
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