

**LICENSEE EVENT REPORT (LER)**

FACILITY NAME (1) Virgil C. Summer Nuclear Station										DOCKET NUMBER (2) 0 5 0 0 0 3 9 5										PAGE (3) 1 OF 0 2						
TITLE (4) Defective Brown Boveri Speed and Transfer Switches																										
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	7	1	3	8	3	8	4	-	0	2	9	-	0	0	0	8	1	0	9	4	0 5 0 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)			20.402(b)				20.406(c)				50.73(a)(2)(iv)				73.71(b)											
0 9 4			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)(vii)				XX OTHER (Specify in Abstract below and in Text, NRC Form 365A)											
			20.406(a)(1)(iii)				50.73(a)(2)(i)				50.73(a)(2)(viii)(A)				Part 21											
			20.406(a)(1)(iv)				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 Nancy E. Clark, Manager, Nuclear Licensing												TELEPHONE NUMBER AREA CODE 8 0 3 7 4 8 - 3 3 9 0														
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																
B	B	I	0 0 9 3	B 4 5 5	Y																					
SUPPLEMENTAL REPORT EXPECTED (14)												EXPECTED SUBMISSION DATE (15)		MONTH		DAY		YEAR								
YES (If yes, complete EXPECTED SUBMISSION DATE)												XX NO														
ABSTRACT (Limit to 1400 spaces, i.e., approximately fifteen single space typewritten lines) (16)																										
<p>On July 13, 1983, maintenance was being performed on the Service Water Pump 7.2 KV speed and transfer switches. Three (3) of the speed and transfer switch hinge stud assemblies that were torqued to the manufacturer's recommended value of 100-110 ft./lbs failed. The failed hinge stud assemblies were removed and returned to the manufacturer for determination of the cause of failure and recommended corrective action. The manufacturer recommended that the hinge stud assemblies be torqued to 100-110 ft./lbs., then backed off and retorqued to 80-90 ft./lbs. The Licensee initiated corrective action and two (2) additional hinge stud assemblies failed. The Licensee subsequently performed an analysis and has determined that equipment operability can be maintained with the hinge stud assemblies torqued to 60 ft./lbs. Discussions with the manufacturer are continuing in an effort to resolve this issue. The hinge stud assemblies will remain torqued to at least 60 ft./lbs., as an interim measure until final corrective action can be taken.</p>																										

## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		
Virgil C. Summer Nuclear Station	05000395	84	030	00	02	OF 02

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

On July 13, 1983, maintenance was being performed on the Service Water Pump 7.2KV speed and transfer switches. The hinge stud assemblies were torqued to the manufacturer's recommended torque value of 100-110 ft./lbs. Of the hinge stud assemblies torqued, three (3) failed. The failure mechanisms were identical in that the current carrying copper rod, which is pressed and soldered into the hinge jaw portion of the stud assembly was pulled out when torqued to 100-110 ft./lbs. The failures occurred on the Service Water Pump speed and transfer switches (XES-2003A, XES-2003B and XET-2003C). There are seven (7) Brown Boveri Electric, Inc., Type HPL-C speed and transfer switch assemblies in use at the Virgil C. Summer Nuclear Station: three (3) assemblies on the Service Water Pumps, three (3) assemblies on the Component Cooling Water Pumps, and one (1) assembly on the Charging Pumps.

The Licensee was in contact with Brown Boveri Electric, Inc., in an attempt to identify the nature of the failures and to provide for appropriate long term corrective action. Brown Boveri Electric, Inc., made a recommendation that the stud assembly of the hinge jaw portion of the speed and transfer switches be torqued to 100-110 ft./lbs., then backed off and retorqued to 80-90 ft./lbs. While performing the recommended corrective action, two (2) additional speed and transfer switch hinge stud assemblies failed. The Licensee subsequently performed an independent analysis and has determined that equipment operability can be maintained with the hinge stud assemblies torqued to at least 60 ft./lbs. Discussions with Brown Boveri Electric, Inc., are continuing in an effort to resolve this issue. The speed and transfer switch hinge stud assemblies will remain torqued to at least 60 ft./lbs. until final corrective action can be determined and implemented. Advice with respect to these failures will be rendered upon the issuance of the final report.

SOUTH CAROLINA ELECTRIC & GAS COMPANY

POST OFFICE 764

COLUMBIA, SOUTH CAROLINA 29218

O. W. DIXON, JR.  
VICE PRESIDENT  
NUCLEAR OPERATIONS

August 10, 1984

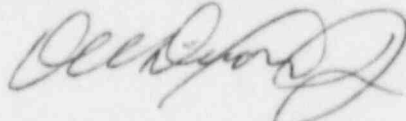
U. S. Nuclear Regulatory Commission  
Document Control Desk  
Washington, D.C. 20555

SUBJECT: Virgil C. Summer Nuclear Station  
Docket No. 50/395  
Operating License No. NPF-12  
LER 84-029  
P-21-84-001

Dear Sir:

Attached is Licensee Event Report (LER) #84-029 for the Virgil C. Summer Nuclear Station. This LER addresses recent failures of Brown Boveri Electric, Inc., type HPL-C speed and transfer switches. A supplemental report will be submitted upon determination and implementation of final corrective action.

Very truly yours,



O. W. Dixon, Jr.

WRM:OWD/dwf  
Attachment

cc: V. C. Summer	C. A. Ligon (NSRC)
T. C. Nichols, Jr./O. W. Dixon, Jr.	K. E. Nodland
E. H. Crews, Jr.	R. A. Stough
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