

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 3
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TITLE (4)  
Residual Heat Removal System Misalignment

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)																																																			
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<table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td style="width:15%;">OPERATING MODE (9) 3</td> <td colspan="10">THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR § (Check one or more of the following) (11)</td> </tr> <tr> <td rowspan="6">POWER LEVEL (10) 0 0 0</td> <td>20.402(b)</td> <td></td> <td>20.406(c)</td> <td></td> <td>50.73(a)(2)(vi)</td> <td></td> <td>73.71(b)</td> </tr> <tr> <td>20.406(a)(1)(i)</td> <td></td> <td>50.38(c)(1)</td> <td></td> <td>50.73(a)(2)(v)</td> <td></td> <td>73.71(c)</td> </tr> <tr> <td>20.406(a)(1)(ii)</td> <td></td> <td>50.38(c)(2)</td> <td></td> <td>50.73(a)(2)(vii)</td> <td></td> <td rowspan="4">OTHER (Specify in Abstract below and in Text, NRC Form 388A)</td> </tr> <tr> <td>20.406(a)(1)(iii)</td> <td>X</td> <td>50.73(a)(2)(i)</td> <td></td> <td>50.73(a)(2)(viii)(A)</td> <td></td> </tr> <tr> <td>20.406(a)(1)(iv)</td> <td></td> <td>50.73(a)(2)(ii)</td> <td></td> <td>50.73(a)(2)(viii)(B)</td> <td></td> </tr> <tr> <td>20.406(a)(1)(v)</td> <td></td> <td>50.73(a)(2)(iii)</td> <td></td> <td>50.73(a)(2)(ix)</td> <td></td> </tr> </table>												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 0 0	20.402(b)		20.406(c)		50.73(a)(2)(vi)		73.71(b)	20.406(a)(1)(i)		50.38(c)(1)		50.73(a)(2)(v)		73.71(c)	20.406(a)(1)(ii)		50.38(c)(2)		50.73(a)(2)(vii)		OTHER (Specify in Abstract below and in Text, NRC Form 388A)	20.406(a)(1)(iii)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)(A)		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)	
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LICENSEE CONTACT FOR THIS LER (12)

NAME A. R. Koon, Jr., Assoc. Mgr., Regulatory Compliance	TELEPHONE NUMBER 8 1 0 3 3 1 4 5 1 - 1 5 1 2 1 0 9
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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)

<input type="checkbox"/> 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 August 23, 1985 at 0620 hours, a plant mode change was made from Hot Shutdown (Mode 4) to Hot Standby (Mode 3) without the proper alignment of the Residual Heat Removal (RHR) system. The system misalignment was discovered by the Shift Technical Advisor (STA) during his review of the Bypass Inoperable Status Indication (BISI) system at 0738 hours. At 0738 hours, the system was returned to its proper alignment. The misalignment concerned valves XVG-8888 A & B, the low head safety injection valves to the reactor coolant system cold legs. These valves are required open for entry into Mode 3 per Technical Specification 3.5.2. Contrary to this requirement both valves were closed prior to 0620 hours when the mode change was made. The valves were closed for recirculation of both trains of the RHR system for boron equilization during the shutdown on August 21, 1985. The "B" Train of RHR was put into service with XVG-8888B open for the cooldown to Cold Shutdown (Mode 5). XVG-8888B remained open until the system was realigned for the Mode 3 entry on August 23. When the "B" Train RHR was secured and realigned for ECCS prior to the Mode 3 entry, the Operator-At-The-Controls (OATC) closed XVG-8888B and left XVG-8888A closed contrary to the system operating procedural requirements.

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## LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

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		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER			
Virgil C. Summer Nuclear Station	0 5 0 0 0 3 9 5	8 5	- 0 2 3	- 0 0	0 2	OF 0 3	

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

On August 23, 1985 at 0620 hours, a plant mode change was made from Hot Shutdown (Mode 4) to Hot Standby (Mode 3) without the proper alignment of the Residual Heat Removal (RHR) system. The system misalignment was discovered by the Shift Technical Advisor (STA) during his review of the Bypass Inoperable Status Indication (BISI) system at 0738 hours. At 0738 hours, the system was returned to its proper alignment. The misalignment concerned valves XVG-8888 A & B, the low head safety injection valves to the reactor coolant system cold legs. These valves are required open for entry into Mode 3 per Technical Specification 3.5.2. Contrary to this requirement both valves were closed prior to 0620 hours when the mode change was made. The valves were closed for recirculation of both trains of the RHR system for boron equilization during the shutdown on August 21, 1985. The "B" Train of RHR was put into service with XVG-8888B open for the cooldown to Cold Shutdown (Mode 5). XVG-8888B remained open until the system was realigned for the Mode 3 entry on August 23. When the "B" Train RHR was secured and realigned for ECCS prior to the Mode 3 entry, the Operator-At-The-Controls (OATC) closed XVG-8888B and left XVG-8888A closed contrary to the system operating procedural requirements.

The Licensee attributes this event to personnel error for a failure to follow procedures and inadequate procedural guidance. The General Operating Procedure (GOP-1) for Mode 4 operation requires the OATC to secure RHR and realign the system for safety injection prior to entry into Mode 3. Contrary to this requirement the system operating procedure realignment was not adequately performed. In addition, the performance of the Surveillance Test Procedure (STP-105.006) should have verified proper system alignment but did not include verification of the position of XVG-8888 A and B.

The consequences of this event are minimal. The RHR system was functional and capable of performing its intended ECCS function assuming operator action could be taken to manually align the system when required. The Emergency Operating Procedure (EOP-1.0) for Reactor Trip/Safety Injection Actuation requires the operator to verify flow or if no flow indication exists, manually start pumps and align the valves. However, this event is considered to be in violation of Technical Specification 3.0.4.

The Licensee has taken the following corrective action to prevent recurrence. Disciplinary action was taken against the OATC for failure to follow procedures when aligning the ECCS subsystem. The Control Room Supervisor was counselled concerning his failure to adequately monitor activities in the control room during the plant mode changes. This event was discussed in detail with all of the supervisors in Operations which were involved in the shutdown and startup activities.

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		- 0   2   3	- 0   0	0   2	OF	0   3	

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

The surveillance test (STP-105.006) required to be performed for alignment of the ECCS subsystems per Technical Specification 4.5.2b is being revised to include the valves in question. In the past, the alignment verification for these valves was accomplished per the main control board logs for Technical Specification 4.5.2a. The RHR System Operating Procedure (SOP-115) is being revised to caution the operator concerning the Technical Specification requirements when placing the system in recirculation for boron equilization. These procedure revisions will be complete by October 4, 1985.

SOUTH CAROLINA ELECTRIC & GAS COMPANY

POST OFFICE 764

COLUMBIA, SOUTH CAROLINA 29218

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

September 20, 1985

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

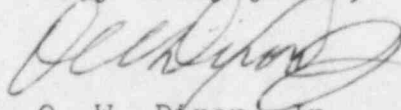
SUBJECT: Virgil C. Summer Nuclear Station  
Docket No. 50/395  
Operating License No. NPF-12  
LER 85-023

Dear Sir:

Attached is Licensee Event Report #85-023 for the Virgil C. Summer Nuclear Station. This report is submitted pursuant to the requirements of 10CFR50.73(a)(2)(1).

Should there be any questions, please call us at your convenience.

Very truly yours,



O. W. Dixon, Jr.

RMF/OWD:dwf  
Attachment

cc: V. C. Summer  
T. C. Nichols, Jr./O. W. Dixon, Jr.  
E. H. Crews, Jr.  
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W. A. Williams, Jr.  
D. A. Nauman  
J. Nelson Grace  
Group Managers  
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C. L. Ligon (NSRC)  
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