



February 07, 2000  
RC-00-0022

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

Gentlemen:

Subject: VIRGIL C. SUMMER NUCLEAR STATION  
DOCKET NO. 50-395  
OPERATING LICENSE NO. NPF-12  
LICENSEE EVENT REPORT (LER 2000-002-00)  
INADEQUATE SURVEILLANCE

**Gary J. Taylor**  
Vice President  
Nuclear Operations

Attached is Licensee Event Report No. 2000-002-00, for the Virgil C. Summer Nuclear Station (VCSNS). This report describes inadequate surveillance testing performed on two valves operated by a common switch. This issue is being reported per 10 CFR 50.73(a)(2)(i)(B).

South Carolina Electric & Gas Co  
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29065

Should you have any questions, please call Mrs. April Rice at (803) 345-4232.

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Very truly yours,

Gary J. Taylor

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DMS (RC-00-0022)

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<b>NRC FORM 366</b> <b>U.S. NUCLEAR REGULATORY COMMISSION</b> (6-1998)	<b>APPROVED BY OMB NO. 3150-0104</b> <b>EXPIRES 06/30/2001</b> <small>Estimated burden per response to comply with this mandatory information collection request: 50.0 hrs. Reported lessons learned are incorporated into the licensing process and fed back to industry. Forward comments regarding burden estimate to the Records Management Branch (T-6 F33), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, and to the Paperwork Reduction Project (3150-0104), Office of Management and Budget, Washington, DC 20503. If an information collection does not display a currently valid OMB control number, the NRC may not conduct or sponsor, and a person is not required to respond to, the information collection.</small>
<b>LICENSEE EVENT REPORT (LER)</b>	

<b>FACILITY NAME (1)</b> Virgil C. Summer Nuclear Station	<b>DOCKET NUMBER (2)</b> 05000395	<b>PAGE (3)</b> 1 of 4
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**TITLE (4)**  
Inadequate surveillance on two safety-related valves operated by a common switch

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 NAME	DOCKET NUMBER
01	11	00	2000	0002	00	02	07	00		05000
			--	--						

<b>OPERATING MODE (9)</b>	1	<b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)</b>								
		20.2201(b)		20.2203(a)(2)(v)	<input checked="" type="checkbox"/>	50.73(a)(2)(i)		50.73(a)(2)(viii)		
<b>POWER LEVEL (10)</b>	100	20.2203(a)(1)		20.2203(a)(3)(i)		50.73(a)(2)(ii)		50.73(a)(2)(x)		
		20.2203(a)(2)(i)		20.2203(a)(3)(ii)		50.73(a)(2)(iii)		73.71		
		20.2203(a)(2)(ii)		20.2203(a)(4)		50.73(a)(2)(iv)		OTHER		
		20.2203(a)(2)(iii)		50.36(c)(1)		50.73(a)(2)(v)				Specify in Abstract below or in NRC FORM 366A
		20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)				

LICENSEE CONTACT FOR THIS LER (12)	
<b>NAME</b> A. R. Rice Manager, Nuclear Licensing & Operating Experience	<b>TELEPHONE NUMBER (Include Area Code)</b> (803) 345-4232

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)										
CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO EPIX	

SUPPLEMENTAL REPORT EXPECTED (14)				EXPECTED SUBMISSION DATE (15)		
<b>YES</b> (If yes, complete EXPECTED SUBMISSION DATE).		<b>NO</b>				
		<input checked="" type="checkbox"/>				

**ABSTRACT (Limit to 1400 spaces, i.e., approximately 15 single-spaced typewritten lines) (16)**

The digital rod position indication (DRPI) cooling unit inlet header isolation valve, XVT03165, and the DRPI cooling unit outlet header isolation valve, XVT03169, are stroked by a common control switch. The surveillance test procedure times both safety-related valves from switch activation until the closed light only is illuminated. While researching an indication problem that occurred during surveillance testing, it was discovered that the control switch indication does not reflect the valves actual stroke time. Therefore, it is questionable whether past testing met surveillance requirements for Technical Specification 4.0.5. Subsequently, it was discovered that an individual valve could be verified for stroke times using indication on the integrated plant computer system computer isolation cards.

The test procedure was revised to reflect individual valve stroke testing and the valves were satisfactorily tested. The plant will identify where two or more safety-related valves are operated from a common control switch. If any other valves are found, then an evaluation will be performed with respect to Technical Specification surveillance requirements for stroke time.

**LICENSEE EVENT REPORT (LER)**

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

**PLANT IDENTIFICATION**

Westinghouse - Pressurized Water Reactor

**EQUIPMENT IDENTIFICATION**

XVT03165 and XVT03169-Service Water (EIIS ISV-KG)

**IDENTIFICATION OF EVENT**

While researching an indication problem, it was identified that individual valve stroke times were not determined. This issue was documented on CER # C-00-0041.

**EVENT DATE**

January 11, 2000

**REPORT DATE**

February 07, 2000

**CONDITIONS PRIOR TO EVENT**

Mode 1, 100% power.

**DESCRIPTION OF EVENT**

The digital rod position indication (DRPI) cooling unit inlet header valve, XVT03165, and the DRPI cooling unit outlet header isolation valve, XVT03169, are both operated by actuating a single control switch. A surveillance test is required to measure and evaluate the stroke time of these valves. The procedure attempted to do this by timing both valves' using the time interval from switch activation until only the "valves closed" indicator light is lit. While researching an indication problem, identified by Operations personnel, that occurred during valve stroke testing, it was discovered that control light indication does not adequately reflect the valves actual position. Therefore, it was determined that past testing did not meet surveillance requirements for ASME code and Technical Specification 4.0.5.

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**CAUSE OF EVENT**

The event is due to the indication circuitry logic being designed so the open indicator only reflects that both valves are not full closed and the closed indication only reflects that the valves are not full open. With this design, the open/closed indication is not acceptable for stroke time testing for combined valves.

**ANALYSIS OF EVENT**

A common switch on the HVAC control panel operates valves XVT03165 and XVT03169. The valves are stroked timed from switch initiation to a green light (valves closed) indication only. The limit switches for the valves are wired as follows: The red indication is illuminated when both valves are not fully closed and the green indication is illuminated when both valves are not fully open. During the last stroke test, the red indication went out after approximately 12 seconds. Approximately two seconds later, the green indication lit. This time was recorded as the stroke time of both valves.

Operations personnel questioned the response of the indicator lights. As troubleshooting began, it was realized that individual valve stroke times could not be taken from the common switch indication.

The DRPI cooling unit is a non-safety system and is supplied by the industrial cooling system during normal operations. It is isolated by these valves as part of a redundant boundary isolation design upon a safety injection signal. Their only safety function is to close. Although the surveillance was not accurately measuring the stroke times of these valves; the valves are safety-related, fail safe in the closed direction, and receive a local verification that they are achieving their required position in each refueling outage. This provides a high level of assurance that there was no impact to the safety function of the service water system by this inadequate surveillance. In addition, when the test method was revised, both valves operated satisfactorily.

**CORRECTIVE ACTIONS**

The plant entered the limiting conditions for operation (LCOs) Technical Specifications 3.6.2.3 and 3.6.3. With a successful retest approximately 10 hours later, the plant exited the LCOs.

The surveillance test procedure (STP-123.003A) was revised to measure individual stroke times using indication located on the IPCS computer isolation cards. The valves were satisfactorily tested using the revised procedure.

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Plant Support Engineering has identified no other instances where two or more safety-related valves are operated from a common control switch with similar indication logic exists.

**PRIOR OCCURRENCES**

None.