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November 22, 1996
RC-96-0275

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

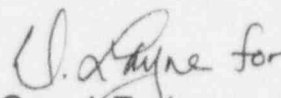
Gentlemen:

Subject: VIRGIL C. SUMMER NUCLEAR STATION
DOCKET NO. 50/395
OPERATING LICENSE NO. NPF-12
LICENSEE EVENT REPORT (LER 96-009)

Attached is Licensee Event Report (LER) No. 96-009 for the Virgil C. Summer Nuclear Station. This report is submitted pursuant to the requirements of 10CFR50.73(a)(2)(ii)(B).

Should you have any questions, please call Mr. Charles McKinney at (803) 345-4723.

Very truly yours,


Gary J. Taylor

cjm
Attachment

c: J. L. Skolds
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NSRC
RTS (LER 960009 & CER 960301)
Files (818.07 & 818.05)
DMS (RC-96-0275)

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PDR ADOCK 05000395
S PDR



NUCLEAR EXCELLENCE - A SUMMER TRADITION!

IE221

EXPIRES 04/30/98

LICENSEE EVENT REPORT (LER)

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 INFORMATION AND 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.

FACILITY NAME (1)

Virgil C. Summer Nuclear Station

DOCKET NUMBER (2)

05000395

PAGE (3)

1 OF 3

TITLE (4)

Outside Design Basis for Appendix R Analysis

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
10	26	96	96	-- 009	-- 0	11	22	96	FACILITY NAME	DOCKET NUMBER
										05000
										05000
OPERATING MODE (9)		1	THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR 5: (Check one or more) (11)							
POWER LEVEL (10)		100%	20.2201(b)		20.2203(a)(2)(v)		50.73(a)(2)(i)		50.73(a)(2)(viii)	
			20.2203(a)(1)		20.2203(a)(3)(i)		X 50.73(a)(2)(ii)		50.73(a)(2)(x)	
			20.2203(a)(2)(i)		20.2203(a)(3)(ii)0		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	
			20.2203(a)(2)(iv)		50.36(c)(2)		50.73(a)(2)(vii)		or in NRC FORM 366A	

LICENSEE CONTACT FOR THIS LER (12)

NAME

A. R. Rice, Manager, Nuclear Licensing & Operating Experience

TELEPHONE NUMBER (Include Area Code)

(803) 345-4232

COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)

CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS	CAUSE	SYSTEM	COMPONENT	MANUFACTURER	REPORTABLE TO NPRDS
A	BQ			N					

SUPPLEMENTAL REPORT EXPECTED (14)

YES	NO	EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
(If yes, complete EXPECTED SUBMISSION DATE).	X				

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

On October 26, 1996, at approximately 1300 hours, a potential condition that was considered to be outside the Appendix R Safe Shutdown Analysis for V. C. Summer Nuclear Station (VCSNS) was identified. An engineering review of motor operated valve circuits for susceptibility to "hot short" conditions identified the potential for spurious operation of Alternate High Head Safety Injection Cold Leg Recirculation Valve XVG08885-SI. The "hot short" was considered to impact the valve control wiring during a postulated fire in the plant Main Control Board and cause XVG08885-SI to open.

There were no programmatic controls contained in Fire Emergency Procedure (FEP) 4.0, Control Room Evacuation Due to Fire, to ensure that the valve was closed prior to starting Charging Pump B(C); therefore, it was possible for the valve to open and its position be unrecognized by the plant operators. In this scenario the open valve has the potential to cause a solid Reactor Coolant System (RCS) with a resultant Power Operated Relief Valve (PORV) lifting.

FEP-4.0 was revised on October 26, 1996, to require that operations verify the closed position of XVG08885-SI prior to starting Charging Pump B(C). Engineering review of other motor operated valve circuits that may be susceptible to "hot short" conditions with a fire in the Main Control Board has also been completed with no other similar problems found. Additional corrective action involved Management and Engineering training on Appendix R that was completed on November 20, 1996.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

FACILITY NAME (1)	DOCKET NUMBER	LER NUMBER (6)			PAGE (3)
		YEAR	SEQUENTIAL NUMBER	REVISION NUMBER	
V. C. Summer Nuclear Station	05000395	96	009	0	2 OF 3

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

PLANT IDENTIFICATION:

Westinghouse - Pressurized Water Reactor

EQUIPMENT IDENTIFICATION:

Alternate High Head Safety Injection Cold Leg Recirculation Valve XVG08885-SI

EIIS--BQ

IDENTIFICATION OF EVENT:

An engineering review of motor operated valve (MOV) circuits for susceptibility to "hot short" conditions resulting from fire scenarios identified the potential for Safety Injection (SI) valve XVG08835-SI to spuriously open with a postulated fire in the Main Control Board (MCB). This spurious operation without programmatic control to verify the valve position is considered to be outside of the Appendix R design basis at V. C. Summer Nuclear Station (VCSNS).

EVENT DATE: October 26, 1996

REPORT DATE: November 22, 1996

CONDITIONS PRIOR TO THE EVENT: Mode 1, 100% Power

DESCRIPTION OF EVENT:

An Appendix R reanalysis of MOV circuits susceptible to "hot shorts" was initiated by engineering at VCSNS due to recent industry events. At the conclusion of this review a problem was identified for the potential spurious operation of Alternate High Head Safety Injection Cold Leg Recirculation Valve XVG08885-SI with a postulated fire in the plant MCB. The postulated "hot short" was considered to occur instantaneously with the fire and to bypass the limit switch, torque switch, and thermal overloads.

LICENSEE EVENT REPORT (LER) TEXT CONTINUATION

EXPIRES 5/31/95

FACILITY NAME (1)	DOCKET NUMBER	LER NUMBER (6)			PAGE (3)
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TEXT (If more space is required, use additional copies of NRC Form 366A) (17)

CAUSE OF EVENT:

The cause is considered to be personnel oversight during the Appendix R Safe Shutdown analysis for VCSNS. Engineering failed to recognize the potential spurious operation of this valve with a postulated MCB fire and the impact to plant operation.

ANALYSIS OF EVENT:

XVG08885-SI is a motor operated gate valve in the high head cold leg recirculation line which is normally closed during plant operation. This valve may be operated from the MCB and can be opened during post loss of coolant accident recirculation to provide a redundant high head recirculation path to the cold legs.

The postulated "hot short" could cause the valve to go either open or closed. Since the "hot short" is postulated to occur instantaneously with a MCB fire, it was possible for the valve to open and its position be unrecognized by the plant operators. In this scenario, the open valve has the potential to cause the Reactor Coolant System (RCS) to become solid with a resultant Power Operated Relief Valve (PORV) lifting.

IMMEDIATE CORRECTIVE ACTIONS:

The NRC Operations Center was notified that the plant had a reportable event under 10CFR50.72(b)(1)(ii)(B) on October 26, 1996 following confirmation from Engineering that a fire scenario in the MCB could result in spurious operation of the valve. A revision was then made to Fire Protection Procedure (FEP) 4.0, Control Room Evacuation Due to Fire, to require that operations verify the closed position of XVG08885-SI prior to starting Charging Pump B(C).

ADDITIONAL CORRECTIVE ACTIONS:

Engineering has completed the reanalysis for MOV "hot shorts" resulting from a postulated fire in the MCB without finding any additional problems. To strengthen plant personnel awareness of Appendix R requirements, Engineering provided training to plant management on November 19, 1996. A two day Appendix R training course was also developed and attended by Design Engineering personnel (complete on November 20, 1996).