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September 22, 1998
RC-98-0174

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 1998-008-00)
MISSED SURVEILLANCE TEST FOR ECCS SUBSYSTEMS - $T_{AVG} \geq 350°F$

Gary J. Taylor
Vice President
Nuclear Operations

Attached is Licensee Event Report No. 1998-008-00, for the Virgil C. Summer Nuclear Station. This report is being submitted pursuant to the requirements of 10CFR50.73(a)(2)(i)(B).

Should you have any questions, please call Mr. Michael J. Zaccone at (803) 345-4328.

Very truly yours,

Gary J. Taylor

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DMS (RC-98-0174)

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NRC FORM 366 (4-95) U.S. NUCLEAR REGULATORY COMMISSION

APPROVED BY OMB NO. 3150-0104
EXPIRES 04/30/98
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.

LICENSEE EVENT REPORT (LER)

FACILITY NAME (1)	DOCKET NUMBER (2)	PAGE (3)
Virgil C. Summer Nuclear Station	05000395	1 OF 4

TITLE (4)

Missed Surveillance Test for ECCS Subsystems - Tavg ≥ 350° F

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
										05000
0 8	24	1998	19 98	- 008	-- 0 0	09	22	1998	FACILITY NAME	DOCKET NUMBER 05000

OPERATING MODE (9)	1
POWER LEVEL (10)	100

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §: (Check one or more) (11)

	20.2201(b)		20.2203(a)(2)(v)	X	50.73(a)(2)(i)		50.73(a)(2)(viii)
	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
	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	TELEPHONE NUMBER (Include Area Code)
April R. Rice, Manager, Nuclear Licensing & Operating Experience	(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
D	BP	P		N						

SUPPLEMENTAL REPORT EXPECTED (14)			EXPECTED SUBMISSION DATE	MONTH	DAY	YEAR
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO				

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

This report is made due to entering Technical Specifications (TS) 4.0.3.

On August 24, 1998, while reviewing a root cause report on introduction of gases in the Residual Heat Removal (RHR) System, it was noted that the station had not adequately tested certain portions of the ECCS subsystem per TS 4.5.2.b.2. The unit was at 100% power at the time of the discovery. The purpose of venting the ECCS pump casings is to ensure that gas binding will not occur. The RHR pumps are a bottom suction, side discharge design, with a pump seal and casing vent on the top. The RHR pump casings were not vented at the RHR pump seal and casing vent. Since this vent is at the top of the pump, its location makes it possible to vent off any gas trapped in this portion of a non-running pump. As a result, the surveillance test did not properly vent this location since initial operation of the unit. The venting was conducted, demonstrating that no gases were trapped in the pump casing. The cause of this event was determined to be an inadequate surveillance test procedure. The surveillance procedure was revised, both RHR pump casings were successfully vented, and the flow paths were satisfactorily verified. Further review resulted in identifying that the charging pumps were not included in the surveillance procedure. There are no existing vents for the charging pump casings due to their self-venting design. A review of other ECCS piping confirmed that there were no other accessible discharge high points that required venting.

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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:

Emergency Core Cooling System, Residual Heat Removal - EIIS Code BP

IDENTIFICATION OF EVENT:

This event was identified by condition evaluation report (CER) 98-0754, written on August 24, 1998.

EVENT DATE:

August 24, 1998

REPORT DATE:

September 22, 1998

CONDITIONS PRIOR TO THE EVENT:

MODE 1 at 100% power operation.

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

DESCRIPTION OF EVENT:

On August 24, 1998, while reviewing a root cause report on introduction of gases in the Residual Heat Removal System, it was noted that the station had not adequately tested certain portions of the ECCS subsystem per TS 4.5.2.b.2. The unit was at 100% power at the time of the discovery. The purpose of venting the ECCS pump casings is to ensure that gas binding will not occur. The RHR pumps are a bottom suction, side discharge design, with a pump seal and casing vent on the top. The RHR pump casings were not vented at the RHR pump seal and casing vent. Since this vent is at the top of the pump, its location makes it possible to vent off any gas trapped in this portion of a non-running pump. As a result, the surveillance test did not properly vent this location since initial operation of the unit. On August 24, 1998, at 1800 hours, TS 4.0.3 was entered to conduct Surveillance Test Procedure STP 105.006, Safety Injection / Residual Heat Removal Monthly Flowpath Verification Test. The venting was conducted on both RHR pump casings, demonstrating that no gases were trapped in the pump casings, and TS 4.0.3 was exited on August 25, 1998, at 1115 hours. The cause of this event was determined to be an inadequate surveillance test procedure. Further review resulted in identifying that the charging pumps were not included in the surveillance procedure. There are no existing vents for the charging pump casings due to their self-venting design. A review of other ECCS piping confirmed that there were no other accessible discharge high points that required venting.

CAUSE OF EVENT:

The cause of this event was determined to be an inadequate surveillance test procedure. Surveillance Test Procedure STP 105.006, Safety Injection / Residual Heat Removal Monthly Flowpath Verification Test was revised, both RHR pump casings were successfully vented, and the flow paths were satisfactorily verified.

ANALYSIS OF EVENT:

On August 24, 1998, while reviewing a root cause report on introduction of gases in the Residual Heat Removal System, it was noted that the station had not adequately vented certain portions of the ECCS subsystem per TS 4.5.2.b.2. The RHR pumps are a bottom suction, side discharge design, with a pump seal and casing vent on the top. The RHR pump casings were not vented at the RHR pump seal and casing vent. Since this vent is at the top of the pump, its location makes it possible to vent off any gas trapped in this portion of a non-running pump. As a result, the surveillance test did not properly vent this location since initial operation of the unit. The investigation conducted during the root cause review and operation of the system demonstrated that the pump casings were not prone to trapped gases. This was confirmed when the venting was conducted, demonstrating that no gases were trapped in the pump casing.

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

CORRECTIVE ACTIONS:

Surveillance Test Procedure STP 105.006, Safety Injection / Residual Heat Removal Monthly Flowpath Verification Test was revised, both RHR pump casings were successfully vented, and the flow paths were satisfactorily verified. This demonstrated that no gases were trapped in the pump casing.

Further review of surveillance procedure STP 105.006 resulted in identifying that the charging pumps were not included in the procedure. There are no existing vents for the charging pump casings due to their self-venting design. The pump vendor confirmed the adequacy of this design.

A review of other ECCS piping confirmed that there were no other accessible discharge high points that required venting.

A TS change will be processed to clarify venting requirements for ECCS pumps/piping.

PREVIOUS OCCURRENCES:

None