NRC FORM 366 (7-81)

U.S. NUCLEAR REGULATORY COMMISSION

LICENSEE EVENT REPORT

APPROVED BY OMB 3150-0011 EXPIRES 4-30-82

CONTROL BLOCK: (1) (PLEASE PRINT OR TYPE ALL REQUIRED INFORMATION)

0 1 | LICENSEE CODE: S C V C S 1 (2) | LICENSE NUMBER: 0 0 - 0 0 0 0 0 - 0 0 (3) | LICENSE TYPE: 4 1 0 0 0 (4) | CAT (5)

CON'T 0 1 | REPORT SOURCE: L (6) | DOCKET NUMBER: 0 5 0 0 0 3 9 5 (7) | EVENT DATE: 1 2 2 8 8 3 (8) | REPORT DATE: 0 1 2 7 8 4 (9)

EVENT DESCRIPTION AND PROBABLE CONSEQUENCES (10)

0 2 On August 31, 1983, with the Plant in Mode 1, Pressurizer Power Operated Relief

0 3 Valve (PORV) PCV-445A was declared inoperable when a concern was identified over

0 4 the possible inadvertent opening of the valve upon loss of power to Protection

0 5 Cabinet IV. The present plant design, with a loss of power to the protection

0 6 cabinet, would arm and actuate the PORV by means of the Cold Overpressure

0 7 Protection System.

0 8

	SYSTEM CODE	CAUSE CODE	CAUSE SUBCODE	COMPONENT CODE	COMP. SUBCODE	VALVE SUBCODE
0 9	C J (11)	B (12)	A (13)	I N S T R U (14)	X (15)	Z (16)

(17) LER/RO REPORT NUMBER	EVENT YEAR		SEQUENTIAL REPORT NO.		OCCURRENCE CODE	REPORT TYPE		REVISION NO.
	8 3	–	1 0 0	/	0 1	X	–	1

ACTION TAKEN	FUTURE ACTION	EFFECT ON PLANT	SHUTDOWN METHOD	HOURS (22)	ATTACHMENT SUBMITTED	NPRD-4 FORM SUB.	PRIME COMP. SUPPLIER	COMPONENT MANUFACTURER (26)
Z (18)	F (19)	Z (20)	Z (21)	0 0 0 0	Y (23)	N (24)	N (25)	W 1 2 0

CAUSE DESCRIPTION AND CORRECTIVE ACTIONS (27)

1 0 The cause is attributed to design error. The associated block valve for PORV

1 1 PCV-445A was closed and de-energized in accordance with Action Statement (a) of

1 2 Technical Specification 3.4.4 to prevent a possible LOCA. A Tech. Spec. change

1 3 request has been submitted to use the Residual Heat Removal System Relief Valves

1 4 as the primary method of mitigating cold overpressurization transients.

	FACILITY STATUS	% POWER	OTHER STATUS (30)	METHOD OF DISCOVERY	DISCOVERY DESCRIPTION (32)
1 5	E (28)	1 0 0 (29)	N/A	A (31)	Engineering Evaluation

	ACTIVITY RELEASED	CONTENT OF RELEASE	AMOUNT OF ACTIVITY (35)	LOCATION OF RELEASE (36)
1 6	Z (33)	Z (34)	N/A	N/A

PERSONNEL EXPOSURES

	NUMBER	TYPE	DESCRIPTION (39)
1 7	0 0 0 (37)	Z (38)	N/A

PERSONNEL INJURIES

	NUMBER	DESCRIPTION (41)
1 8	0 0 0 (40)	N/A

LOSS OF OR DAMAGE TO FACILITY (43)

	TYPE	DESCRIPTION
1 9	Z (42)	N/A

8402030418 840127
PDR ADOCK 05000395
S PDR

PUBLICITY

	ISSUED	DESCRIPTION (45)
2 0	N (44)	N/A

NRC USE ONLY

NAME OF PREPARER C. J. McKinney PHONE (803) 345-5209

SOUTH CAROLINA ELECTRIC & GAS COMPANY
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COLUMBIA, SOUTH CAROLINA 29218

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

January 27, 1984

Mr. James P. O'Reilly
Regional Administrator
U.S. Nuclear Regulatory Commission
Region II, Suite 2900
101 Marietta Street, N.W.
Atlanta, Georgia 30303

SUBJECT: Virgil C. Summer Nuclear Station
Docket No. 50/395
Operating License No. NPF-12
Fourteen Day Written Report
LER 83-100, Revision 1

Dear Mr. O'Reilly:

Please find attached Revision 1 to Licensee Event Report #83-100, for the Virgil C. Summer Nuclear Station. This revision is being submitted to provide updated information. This Fourteen Day Report was previously submitted on September 13, 1983 in accordance with Technical Specification 6.9.1.12.(i) as a result of entry into Action Statement (a) of Technical Specification 3.4.4, " Relief Valves," on August 31, 1983.

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

Very truly yours,

O. W. Dixon, Jr.

CJM:OWD/mac/fjc
Attachment

cc: V. C. Summer
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EVENT DESCRIPTION AND PROBABLE CONSEQUENCES

South Carolina Electric and Gas Company (SCE&G) has identified a concern with the channel assignment of an input to the Cold Overpressure Protection System (COPS). The concern involves the possible inadvertent opening of a Pressurizer Power Operated Relief Valve (PORV) due to a single failure.

During installation of the Reactor Vessel Level Instrumentation System (RVLIS) at Virgil C. Summer Nuclear Station, Westinghouse found it necessary to move a wide range hot leg temperature loop (T-433) from Channel I Protection Cabinet to Channel IV Protection Cabinet. This temperature loop is used by RVLIS for density compensation and was moved to a channel of the same separation group as the RVLIS channel to resolve a channel separation/independence concern. The present design creates a situation where a loss of power to Channel IV Protection Cabinet will inadvertently open PORV PCV-445A via the COPS.

CAUSE AND CORRECTIVE ACTIONS

The cause is attributed to design error as described above.

The immediate corrective action taken by SCE&G was to close and de-energize the block valve for PORV-445A in accordance with Action Statement (a) of Technical Specification 3.4.4. SCE&G then contacted Westinghouse and requested that a safety evaluation be performed to determine the safety significance of an inadvertent opening of a PORV. Westinghouse's final safety evaluation indicated that even though a loss of coolant accident (LOCA) due to an inadvertent opening of a PORV has a higher probability of occurring, the Virgil C. Summer Nuclear Station safeguards equipment is adequate to mitigate the consequences. Furthermore, the inadvertent opening of a single PORV coincident with an initiating failure of another PORV is bounded by the spectrum of FSAR small break LOCA analyses.

CAUSE AND CORRECTIVE ACTIONS - Continued

The final corrective action taken by SCE&G was to request a Technical Specification change in a letter dated October 21, 1983, (Mr. O. W. Dixon, Jr. to Mr. H. R. Denton), for the use of the Residual Heat Removal System (RHRS) relief valves as the primary method of mitigating cold overpressurization transients. SCE&G feels that this solution not only resolves the undesirability of operating with the PORV blocked, but also eliminates the necessity of performing hardware modifications to the PORV circuitry. The PORV will no longer be required to perform in a cold overpressurization mitigation capacity once the RHRS relief valves are approved as the method of mitigating cold overpressurization transients.