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April 20, 2001  
RC-01-0090

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 2001-002-00)  
INAPPROPRIATE MODE CHANGE DURING RTD CROSS CALIBRATION  
OF THE REACTOR PROTECTION SYSTEM

Attached is Licensee Event Report (LER) No. 2001-002-00, for the Virgil C. Summer Nuclear Station (VCSNS). The report describes a failure to stay within the Limiting Condition of Operation for Technical Specification 3.0.4 and is being submitted in accordance with 10 CFR 50.73(A)(2)(i)(B).

Should you have any questions, please call Mr. Mel Browne at (803) 345-4141.

Very truly yours,

Stephen A. Byrne

JT/SAB  
Attachment

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IE22

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**LICENSEE EVENT REPORT (LER)**

<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)**  
Inappropriate Mode Change During RTD Cross Calibration of the Reactor Protection System

EVENT DATE (5)			LER NUMBER (6)			REPORT DATE (7)			OTHER FACILITIES INVOLVED (8)	
MO	DAY	YEAR	YEAR	SEQUENTIAL NUMBER	REV NO	MO	DAY	YEAR	FACILITY NAME	DOCKET NUMBER
2	22	01	2001	002	00	04	20	01		05000
									FACILITY NAME	DOCKET NUMBER

<b>OPERATING MODE (9)</b>	3	<b>THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR §:</b> (Check all that apply) (11)								
		20.2201(b)		20.2203(a)(3)(ii)		50.73(a)(2)(ii)(B)		50.73(a)(2)(ix)(A)		
<b>POWER LEVEL (10)</b>	0	20.2201(d)		20.2203(a)(4)		50.73(a)(2)(iii)		50.73(a)(2)(x)		
		20.2203(a)(1)		50.36(c)(1)(i)(A)		50.73(a)(2)(iv)(A)		73.71(a)(4)		
		20.2203(a)(2)(i)		50.36(c)(1)(ii)(A)		50.73(a)(2)(v)(A)		73.71(a)(5)		
		20.2203(a)(2)(ii)		50.36(c)(2)		50.73(a)(2)(v)(B)		OTHER Specify in Abstract below or in NRC Form 366A		
		20.2203(a)(2)(iii)		50.46(a)(3)(ii)		50.73(a)(2)(v)(C)				
		20.2203(a)(2)(iv)		50.73(a)(2)(i)(A)		50.73(a)(2)(v)(D)				
		20.2203(a)(2)(v)	X	50.73(a)(2)(i)(B)		50.73(a)(2)(vii)				
		20.2203(a)(2)(vi)		50.73(a)(2)(i)(C)		50.73(a)(2)(viii)(A)				
		20.2203(a)(3)(i)		50.73(a)(2)(ii)(A)		50.73(a)(2)(viii)(B)				

**LICENSEE CONTACT FOR THIS LER (12)**

NAME M. N. Browne, Mgr., Nuclear Licensing & Operating Experience	TELEPHONE NUMBER (Include Area Code) (803) 345-4141
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**COMPLETE ONE LINE FOR EACH COMPONENT FAILURE DESCRIBED IN THIS REPORT (13)**

CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX	CAUSE	SYSTEM	COMPONENT	MANU-FACTURER	REPORTABLE TO EPIX
E				N					

<b>SUPPLEMENTAL REPORT EXPECTED (14)</b>				<b>EXPECTED SUBMISSION DATE (15)</b>		
YES (If yes, complete EXPECTED SUBMISSION DATE).	X	NO		MONTH	DAY	YEAR

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

On 2/22/01, a Resistance Temperature Detector (RTD) cross calibration for the Reactor Protection System was in progress during plant start-up. Plant instrumentation and control procedure ICP-340.048 directs all narrow range RTDs to be disconnected from their associated instrument channels to perform RTD cross calibration. The plant had proceeded from Mode 4 to Mode 3 during the calibration process. SCE&G Operations realized that Technical Specifications (TS) Table 3.3-3, Item 9.b, should have prevented entering Mode 3.

Table 3.3-3 item 9.b is the P-12 interlock, and its action statement 20 requires verification that the interlock is in its proper condition within 1 hour, which could be done, and was done. However since T.S. 3.0.4 applies, the plant should never have entered Mode 3 with this instrumentation out of service.

With the plant in Mode 3, the calibration was performed satisfactorily and the system returned to service.

The cause of this event is attributed to inadequate administrative control of operational restrictions within plant modes.

ICP-340.048 will be revised prior to refueling outage 13 to prevent performance during mode changes.

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

**PLANT IDENTIFICATION**

Westinghouse - Pressurized Water Reactor

**EQUIPMENT IDENTIFICATION**

N/A – Technical Specification 3.0.4

**IDENTIFICATION OF EVENT**

On 2/22/01, a Resistance Temperature Detector (RTD) cross calibration for the Reactor Protection System was in progress during the Virgil C. Summer Station (VCSNS) plant start-up. Plant instrumentation and control procedure ICP-340.048 directs all narrow range RTDs to be disconnected from their associated instrument channels to perform RTD cross calibration. The Main Steam Isolation Valves (MSIVs) were closed. The plant had proceeded from Mode 4 to Mode 3 during the calibration process. SCE&G Operations realized that Technical Specifications (TS) Table 3.3-3, Item 9.b, should have prevented entering Mode 3.

Table 3.3-3 item 9.b is the P-12 interlock, and its action statement 20 requires verification that the interlock is in its proper condition within 1 hour, which could be done, and was done. However since T.S. 3.0.4 applies, the plant should never have entered Mode 3 with this instrumentation out of service.

**EVENT DATE**

2/22/01

**REPORT DATE**

4/20/01

The event is documented in the VCSNS Corrective Action Program under Condition Evaluation Report CER 01-0262.

**CONDITIONS PRIOR TO EVENT**

Mode 4 (0% Power)

**DESCRIPTION OF EVENT**

On 2/22/01, a Resistance Temperature Detector (RTD) cross calibration for the Reactor Protection System was in progress during plant start-up. Plant instrumentation and control procedure ICP-340.048 directs all narrow range RTDs to be disconnected from their associated instrument channels to perform RTD cross calibration. The MSIVs were closed.

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

**DESCRIPTION OF EVENT (Cont'd)**

The plant had proceeded from Mode 4 to Mode 3 during the calibration process. SCE&G Operations realized that Technical Specifications (TS) Table 3.3-3, Item 9.b, should have prevented entering Mode 3.

Table 3.3-3 item 9.b is the P-12 interlock, and its action statement 20 requires verification that the interlock is in its proper condition within 1 hour, which could be done, and was done. However since T.S. 3.0.4 applies, the plant should never have entered Mode 3 with this instrumentation out of service.

At 2245 2/22/01 the Shift Supervisor declared that we were in T.S. 3.0.3. Per Action 20 of Table 3.3-3, item 9.b for Low-Low Tave, P-12 Interlock, the plant did not have to apply 3.0.3 because the interlocks were in the required state for the existing plant condition (Tave was still less than 552 Degrees F). However, since 3.0.4 does apply to Action 20, entry into Mode 3 should have been delayed until P-12 was determined to be operable. This was not possible since all 3 loops of Tave were in TEST per the applicable I&C procedure.

On 2/23/01, Removal and Restoration (R&R) order, 01-0078 was written as a Mode 2 restraint requiring Tave <552 degrees F and the Main Steam Isolation Valves closed. The cross-calibration work was allowed to continue. At 1645 on 2/23/01, the calibrations were successfully completed and the R&R was cleared.

**CAUSE OF EVENT**

The cause of this event is attributed to inadequate administrative control of operational restrictions within plant modes.

**ANALYSIS OF EVENT**

The plant entered Mode 3 with all three loops of narrow range RTDs in "Test". TS Table 3.3-3, Item 9.b, Action 20 (P-12 Interlock) does not have a TS 3.0.4 exclusion for entry into an operational mode while depending on the Action statement.

All three loops need to be tested simultaneously to get a valid cross-calibration of the RTDs. This is standard industry practice, and provides the most reliable results. Action 20, which deals specifically with P-12, was met with one or all channels of P-12 inoperable provided the bistable was in the correct state for the plant condition. With all loops in "Test", the P-12 function is guaranteed because the bistables are placed in a trip condition per the procedure. This actually put the plant in a safer state, as the P-12 function does not require bistable or logic states to change.

Additionally, NUREG-1431, Standardized Technical Specifications for Westinghouse Plants, includes a note that this function is not required if the MSIVs are closed. During the event, the MSIVs were closed.

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

**CORRECTIVE ACTIONS**

ICP-340.048 will be changed to assure that mode change restrictions (TS 3.0.4) are adhered to during surveillance testing.

Submit a TS change to align with the guidance of NUREG-1431 for actions associated with Table 3.3-3.

These actions will be completed prior to VCSNS Refueling Outage 13, currently scheduled for Spring 2002.

**PRIOR OCCURRENCES**

None