

V. C. Summer Nuclear Station
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October 9, 2019

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

Serial No. 19-391
VCS-LIC/BAB R0
Docket No. 50-395
License No. NPF-12

SOUTH CAROLINA ELECTRIC & GAS COMPANY
VIRGIL C. SUMMER NUCLEAR STATION (VCSNS) UNIT 1
LICENSEE EVENT REPORT 2019-002-00
CONDITION PROHIBITED BY TECHNICAL SPECIFICATION 3.6.4

South Carolina Electric & Gas Company¹ hereby submits Licensee Event Report (LER) 2019-002-00, for the Virgil C. Summer Nuclear Station. This report provides details concerning missed action requirements required by Technical Specification 3.6.4. This report is submitted in accordance with 10 CFR 50.73(a)(2)(i)(B).

This report exceeds the 60 day reporting requirement after discovery of an event. This has been documented in CR-19-02562.

Should you have any questions, please call Mr. Michael Moore at (803) 345-4752.

Sincerely,

A handwritten signature in black ink that reads "George A. Lippard". The signature is written in a cursive style with a large, looping initial "G".

George A. Lippard
Site Vice President
V.C. Summer Nuclear Station

Enclosure

Commitments contained in this letter: None

cc: G. J. Lindamood – Santee Cooper
L. Dudes – NRC Region II
S. A. Williams – NRC Project Mgr.
NRC Resident Inspector
J. N. Bassett – INPO
Marsh USA, Inc.

(1) In a letter dated July 30, 2019 (ML19214A046), South Carolina Electric & Gas Company (SCE&G) requested a License Amendment to amend the V. C. Summer operating license to reflect the name change from SCE&G to Dominion Energy South Carolina (DESC). The amendment request is currently under review by the NRC.



LICENSEE EVENT REPORT (LER)

(See Page 2 for required number of digits/characters for each block)

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to InfoCollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NE08-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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.

1. Facility Name V.C. Summer Nuclear Station, Unit 1	2. Docket Number 05000 395	3. Page 1 OF 3
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4. Title CONDITION PROHIBITED BY TECHNICAL SPECIFICATION 3.6.4
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5. Event Date			6. LER Number			7. Report Date			8. Other Facilities Involved	
Month	Day	Year	Year	Sequential Number	Rev No.	Month	Day	Year	Facility Name	Docket Number
03	08	2018	2019	002	00	10	07	2019	Facility Name	Docket Number
										05000

9. Operating Mode 1	11. This Report is Submitted Pursuant to the Requirements of 10 CFR §: (Check all that apply)			
	<input type="checkbox"/> 20.2201(b)	<input type="checkbox"/> 20.2203(a)(3)(i)	<input type="checkbox"/> 50.73(a)(2)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(viii)(A)
	<input type="checkbox"/> 20.2201(d)	<input type="checkbox"/> 20.2203(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(ii)(B)	<input type="checkbox"/> 50.73(a)(2)(viii)(B)
	<input type="checkbox"/> 20.2203(a)(1)	<input type="checkbox"/> 20.2203(a)(4)	<input type="checkbox"/> 50.73(a)(2)(iii)	<input type="checkbox"/> 50.73(a)(2)(ix)(A)
	<input type="checkbox"/> 20.2203(a)(2)(i)	<input type="checkbox"/> 50.36(c)(1)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(iv)(A)	<input type="checkbox"/> 50.73(a)(2)(x)
10. Power Level 100	<input type="checkbox"/> 20.2203(a)(2)(ii)	<input type="checkbox"/> 50.36(c)(1)(ii)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(A)	<input type="checkbox"/> 73.71(a)(4)
	<input type="checkbox"/> 20.2203(a)(2)(iii)	<input type="checkbox"/> 50.36(c)(2)	<input type="checkbox"/> 50.73(a)(2)(v)(B)	<input type="checkbox"/> 73.71(a)(5)
	<input type="checkbox"/> 20.2203(a)(2)(iv)	<input type="checkbox"/> 50.46(a)(3)(ii)	<input type="checkbox"/> 50.73(a)(2)(v)(C)	<input type="checkbox"/> 73.77(a)(1)
	<input type="checkbox"/> 20.2203(a)(2)(v)	<input type="checkbox"/> 50.73(a)(2)(i)(A)	<input type="checkbox"/> 50.73(a)(2)(v)(D)	<input type="checkbox"/> 73.77(a)(2)(i)
	<input type="checkbox"/> 20.2203(a)(2)(vi)	<input checked="" type="checkbox"/> 50.73(a)(2)(i)(B)	<input type="checkbox"/> 50.73(a)(2)(vii)	<input type="checkbox"/> 73.77(a)(2)(ii)
		<input type="checkbox"/> 50.73(a)(2)(i)(C)	<input type="checkbox"/> Other (Specify in Abstract below or in NRC Form 366A)	

12. Licensee Contact for this LER	
Licensee Contact Michael Moore, Manager Nuclear Licensing	Telephone Number (Include Area Code) (803) 345-4752

13. Complete One Line for each Component Failure Described in this Report									
Cause	System	Component	Manufacturer	Reportable to ICES	Cause	System	Component	Manufacturer	Reportable to ICES
B	SB	PCV	B045	N					
14. Supplemental Report Expected					15. Expected Submission Date				
<input type="checkbox"/> Yes (If yes, complete 15. Expected Submission Date) <input checked="" type="checkbox"/> No					Month Day Year				

Abstract (Limit to 1400 spaces, i.e., approximately 14 single-spaced typewritten lines)

On March 8, 2018, Steam Generator (SG) Power Operated Relief Valve (PORV), IPV-2010-MS, failed its operability test. An apparent cause evaluation determined that excessive grease in the valve positioner was blown downstream into the pilot stem, which caused the pilot stem to stick. A past operability evaluation determined that the SG PORV was inoperable between the time period of 1/30/2018 through 03/08/2018 due to the SG PORV's inability to open. This is a violation of Technical Specification 3.6.4, since the past operability exceeded the restoration time described in Technical Specification 3.6.4.

**LICENSEE EVENT REPORT (LER)
CONTINUATION SHEET**

(See NUREG-1022, R.3 for instruction and guidance for completing this form
<http://www.nrc.gov/reading-rm/doc-collections/nuregs/staff/sr1022/r3/>)

Estimated burden per response to comply with this mandatory collection request: 80 hours. Reported lessons learned are incorporated into the licensing process and fed back to industry. Send comments regarding burden estimate to the Information Services Branch (T-2 F43), U. S. Nuclear Regulatory Commission, Washington, DC 20555-0001, or by e-mail to Infocollects.Resource@nrc.gov, and to the Desk Officer, Office of Information and Regulatory Affairs, NEOB-10202, (3150-0104), Office of Management and Budget, Washington, DC 20503. If a means used to impose 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.

1. FACILITY NAME	2. DOCKET NUMBER	3. LER NUMBER		
		YEAR	SEQUENTIAL NUMBER	REV NO.
V.C Summer Nuclear Station, Unit 1	05000- 395	2019	- 002	- 00

NARRATIVE**1.0 DESCRIPTION OF THE EVENT**

The 'B' SG PORV (IPV02010-MS) failed to open on an open signal from the controller during performance of procedure STP-121.002A, "SG PORV Operability Test". Upon investigation, a white residue (grease) was discovered on the bottom end of the positioner pilot stem. After cleaning, the pilot stem was reassembled. The positioner then functioned properly and passed the PORV Operability Test. A past operability evaluation conservatively determined that the 'B' SG PORV was inoperable from 01/30/2018 through 03/08/2018. The plant was operating in MODE 1 during the time of inoperability.

Technical Specification 3.6.4 details the Limiting Condition of Operation (LCO) for Containment Isolation Valves (CIV). They are required to be operable in MODES 1, 2, 3, and 4. The action required with one or more of the isolation valves(s) inoperable, is to maintain at least one isolation valve OPERABLE in each affected penetration that is open and either:

- Restore the inoperable valves(s) to OPERABLE status within 4 hours, or
- Isolate each affected penetration within 4 hours by use of at least one deactivated automatic valve secured in the isolation position, or
- Isolate each affected penetration within 4 hours by use of at least one closed manual valve or blind flange, or
- Be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.

This is a violation of TS 3.6.4, since the SG PORV was inoperable for 38 days without performance of the required actions. Therefore, this report is submitted pursuant to 10 CFR 50.73(a)(2)(i)(B) as an operation or condition prohibited by Technical Specifications.

2.0 SIGNIFICANT SAFETY CONSEQUENCES AND IMPLICATIONS

A PORV is located in each of the Main Steam Headers between the outlet of the SGs and the Main Steam isolation valves (MSIV). As CIVs, these valves are "active" safety related devices. During normal plant operation, each valve is controlled automatically by steam line pressure instrumentation, or average temperature indication. The valves can also be manually controlled from the main control board (MCB). Manual control of the pressure set point is provided at a local panel and on the MCB. Valve status is indicated by lights on a local panel and on the MCB. Local manual handwheel control is provided in the event of loss of automatic control or Control Room evacuation.

These valves fail close on loss of air or control signal. The PORVs are necessary for the controlled shutdown of the plant if the condenser is unavailable. They are not, however, necessary to prevent overpressurization of the steam generators because the Main Steam safety valves are designed to completely relieve the SGs.

The SG PORV failed in the closed position, and therefore containment isolation was not affected.

The SG PORVs are discussed in Chapter 15 of the Final Safety Analysis Report (FSAR) entitled "Accident Analyses". Specifically, they are listed as equipment required for Cooldown following a High Energy Line Break (HELB) and for recovery from a SG tube rupture. The SG PORVs are equipped with local manual handwheel control in the event of loss of automatic control or Control Room evacuation. The FSAR credits manual operation of the valves. Manual operation of the valves was not affected by the grease buildup in the pilot stem.

The SG safety valves are credited in accident conditions. The steam generator pressure rises to the safety valve setpoint where steam release through safety valves limits secondary steam pressure at the setpoint value.

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V.C Summer Nuclear Station, Unit 1		05000-	YEAR	SEQUENTIAL NUMBER	REV NO.
			2019	002	00

NARRATIVE

The safety consequence is low since the PORV could perform it's specified safety functions during the time of inoperability.

3.0 CAUSE OF THE EVENT

An apparent cause evaluation determined that the manufacturer provided an AV1 controller with excess grease in the equipment internals. Excess grease was not identified during the receipt inspection nor during post maintenance testing after installation on 01/30/18. The problem did not manifest itself until it failed its operability test on 03/08/18.

4.0 IMMEDIATE CORRECTIVE ACTIONS

The pilot stem was cleaned, and a post maintenance test was successfully completed.

5.0 ADDITIONAL CORRECTIVE ACTIONS

None

6.0 ACTIONS TO PREVENT RECURRENCE

There are currently seven installed AV1 positioners at V.C. Summer. The currently installed AV1 positioners are scheduled to be replaced in either 2020 or 2021. Currently procured AV1 positioners were inspected for excessive grease. Receiving instructions for new positioners were revised to include filter inspection during future receipt inspections. The procedure for removal and installation of valves associated with instrumentation was also revised to provide guidance on the inspection of filters for foreign material. The filters act to keep particulates out of the air flow going to the pilot valve assembly. Grease in the filter could indicate excessive grease used during manufacturing.

7.0 SIMILAR EVENTS

None

8.0 MANUFACTURER/MODEL NUMBER

The positioner is an AV1 positioner manufactured by ABB.

9.0 ADDITIONAL INFORMATION

None