

V.C. Summer Nuclear Station
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March 31, 2022

ATTN: Document Control Desk
US Nuclear Regulatory Commission
Washington, D.C. 20555-001

Serial No. 22-091
LIC/TS/R0
Docket No. 50-395
License No. NPF-12

DOMINION ENERGY SOUTH CAROLINA, INC.
VIRGIL C. SUMMER NUCLEAR STATION UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12
ANNUAL OPERATING REPORT

Enclosed is the 2021 Annual Operating Report for the Dominion Energy South Carolina, Inc. Virgil C. Summer Nuclear Station Unit No. 1. This report is being submitted in accordance with Technical Specification 6.9.1.4.

If there are any questions, please call Tracey Stewart at (803) 931-5663.

Sincerely,

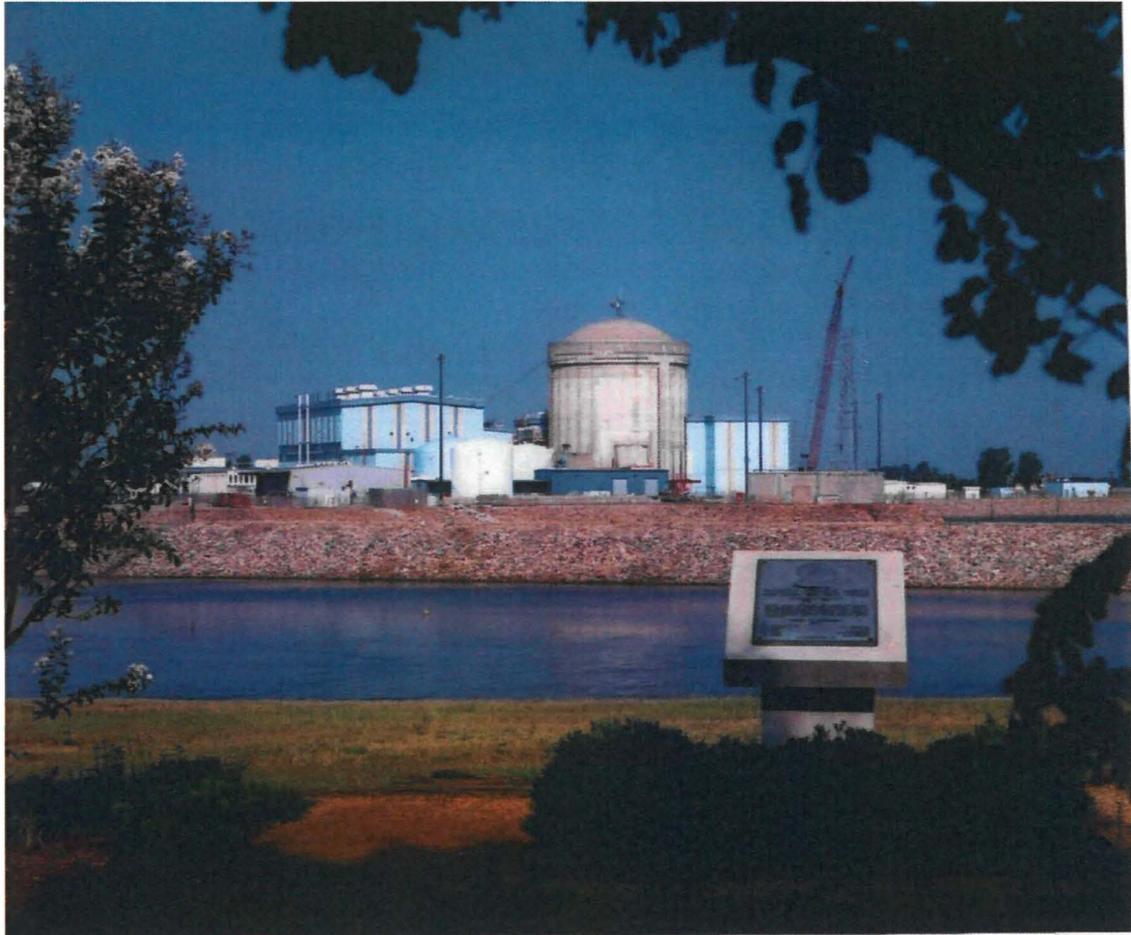
A handwritten signature in black ink, appearing to read "George A. Lippard".

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

w/o enclosure unless noted

cc: G. J. Lindamood – Santee Cooper
L. Dudes – NRC
G. Miller – NRC PM
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NRC Resident Inspector
Marsh USA, Inc.
ANI
REIRS Project Manager

VIRGIL C. SUMMER NUCLEAR STATION UNIT 1



2021 ANNUAL OPERATING REPORT

PREFACE

The 2021 Annual Operating Report for the Virgil C. Summer Nuclear Station Unit 1 is hereby submitted in accordance with Technical Specification 6.9.1.4 under Docket Number 50-395 and Facility Operating License NPF-12.

TABLE OF CONTENTS

<u>SECTION</u>	<u>TITLE</u>	<u>PAGE</u>
1.0	Introduction	3
2.0	Operational Data	3
3.0	Operating Summary	3
4.0	Failed Fuel	4

1.0 INTRODUCTION

The Virgil C. Summer Nuclear Station (VCSNS) utilizes a pressurized water reactor rated at 2900 MWT. The maximum dependable capacity is 966 MWe.

The station is located approximately 26 miles northwest of Columbia, South Carolina.

2.0 OPERATIONAL DATA

For the reporting period of January 1 through December 31, 2021, the station operated at a capacity factor of 82.7% (using maximum dependable capacity) and a unit availability of 82.5%. The reactor was critical for a total of 7270.8 hours, the generator remained on line 7223.9 hours and the total gross electrical energy generated for 2021 was 7,281,012 MWH.

3.0 OPERATING SUMMARY

VCSNS Unit No.1 operated at 100% power from January 1st through April 5th. On April 5th at 0900 hours power was reduced to 90% to support Main Turbine Valve Testing. Reactor power was restored to 100% on April 5th at 1622 hours.

VCSNS Unit No. 1 operated at 100% power from April 5th to May 12th. On May 12th at 1837 hours the plant was shut down to replace the valve air operator on the 'B' Main Feedwater Isolation Valve. The main generator breaker was closed on May 15th at 0329 hours. Reactor power was restored to 100% on May 17th.

VCSNS Unit No. 1 operated at 100% power from May 17th to October 8th. On October 8th the plant was shut down to begin Refueling Outage Twenty-Six (RF-26). The main generator breaker was opened on October 8th at 2348 hours. The outage was completed on November 14th at 1141 hours when the main generator breaker was closed. A fault occurred on the main transformer on November 15th at 1728 hours. The plant was shutdown to replace the main transformer with spare transformer. The main generator breaker was closed on December 10th at 1948 hours.

The unit remained at 100% power for the remainder of 2021.

Forced Power Reduction > 20% Exceeding 4 Hours

On May 12th the plant was shut down at 1837 hours to remove and replace a failed valve air operator on the Bravo Loop Main Feedwater Isolation Valve. The shutdown ended on May 15th at 0329 hours. The reactor was restored to 100% power on May 17th. The total outage duration was 56.86 hours.

On November 15th the plant was shut down to replace the main transformer with spare transformer due to a fault on the main transformer. The shutdown ended on December 10th. The reactor was restored to 100% power on December 18th. The total outage duration was 602.34 hours.

4.0 FAILED FUEL

VCSNS did not have any indications of failed fuel in 2021.