



March 31, 2011

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

Dear Sir/Madam:

Subject: VIRGIL C. SUMMER NUCLEAR STATION UNIT 1
DOCKET NO. 50-395
OPERATING LICENSE NO. NPF-12
ANNUAL OPERATING REPORT

Enclosed is the 2010 Annual Operating Report for the South Carolina Electric & Gas Company Virgil C. Summer Nuclear Station Unit No. 1. This report is being submitted in accordance with Technical Specifications 6.9.1.4 and Regulatory Guide 1.16.

If there are any questions, please call at your convenience.

Very truly yours,

Thomas D. Gatlin

SBR/TDG/wm
Attachment

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VIRGIL C. SUMMER NUCLEAR STATION



2010 ANNUAL OPERATING REPORT

PREFACE

The 2010 Annual Operating Report for the Virgil C. Summer Nuclear Station is hereby submitted in accordance with Technical Specifications 6.9.1.4 and Regulatory Guide 1.16 under Docket Number 50/395 and Facility Operating License NPF-12.

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- I. 2010 Man-Rem Report

ANNUAL OPERATING REPORT

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, 2010, the station operated at a capacity factor of 100.3% (using maximum dependable capacity) and a unit availability of 99.1%. The reactor was critical for a total of 8709.5 hours, the generator remained on line 8681.7 hours and the total gross electrical energy generated for 2010 was 8,822,600 MWH.

3.0 OPERATING SUMMARY

The Virgil C. Summer Nuclear Station (VCSNS) Unit No.1 operated at 100% power from January 1st through February 4th. On February 4th the plant was taken offline to repair the switchyard disconnect 8901. Reactor power was restored to 100% on February 6th.

VCSNS operated at 100% power from February 6th to April 2nd. On April 2nd, power was reduced to approximately 86% to resolve an emergent issue in the Emergency Feedwater System. Reactor power was restored to 100% on April 2nd. VCSNS operated at 100% reactor power from April 2nd to April 23rd when power was reduced to approximately 90% to perform the quarterly main turbine tests and planned maintenance to tune the feedwater regulating valves and perform 230 kV line work. Power was restored to 100% on April 24th.

VCSNS operated at 100% power from April 24rd to June 1st. On June 1st, reactor power was reduced to approximately 88% due to a "C" Feedwater pump trip which was caused by a failed Hydraulic Servo Slave (HSS) card. The failed HSS card was replaced and the leaking inboard seal on the "D" Feedwater Booster Pump was also repaired during the down power. Reactor power was restored to 100% on June 3rd.

VCSNS operated at 100% power from June 3rd to July 30th. On July 30th, reactor power was reduced to 90% to maintain the circulating water discharge temperature under 113 degrees F for National Pollutant Discharge Elimination System (NPDES) permit compliance. Reactor power was restored to 100% on August 4th.

VCSNS operated at 100% power from August 4th to August 13th. On August 13th reactor power was reduced to approximately 96% to maintain the circulating water discharge temperature under 113 degrees for NPDES permit compliance. Reactor power was restored to 100% on August 15th.

VCSNS operated at 100% power from August 15th to August 22nd when power was reduced to approximately 95% to maintain the circulating water discharge temperature under 113 degrees for NPDES permit compliance. Reactor power was restored to 100% on August 27th.

VCSNS operated at 100% power from August 27th to September 23rd. On September 23rd, the plant was taken offline to repair the "A" reactor coolant pump motor oil leak. The repair was completed and reactor power was restored to 100% on September 26th. The plant operated at 100% power for the remainder of 2010.

Forced Power Reduction >20% Exceeding 4 Hours

On February 4th, the plant was taken offline to address an issue with a Disconnect Switch (XDS8901) on the main outgoing power line. While performing a routine surveillance with a thermography camera, a technician noted a high temperature condition on the center phase of this 230KV switch. Additional investigation indicated that the center phase contact was not fully seated in the switch "jaws". The consequence of this switch opening under load would have been a large arc flash which could have caused significant damage to switchyard components, and posed a threat to plant personnel. The main generator was synchronized to the grid on February 5th at 1214 hours. Reactor power was restored to 100% on February 6th at 1453 hours. This outage did not result in any single release of radioactivity or single radiation exposure that accounted for more than 10% of the allowable annual values. The duration of the down power was approximately 17.5 hours.

On September 23rd, the plant was taken offline to repair a motor oil leak on "A" Reactor Coolant Pump. The reactor returned to criticality on September 25th at 0655 hours. The main generator was synchronized to the grid on September 25th at 1526 hours. Reactor power was restored to 100% on

September 26th at 1057 hours. This outage did not result in any single release of radioactivity or single radiation exposure that accounted for more than 10% of the allowable annual values. The duration of the down power was approximately 60.8 hours.

4.0 EXPOSURES

Attachment I lists the number of station, utility, and other personnel (including contract personnel) receiving exposures greater than 100 mrem/year and their associated man-rem exposure according to work and job function. The exposures reported are estimated doses based on electronic dosimeters.

5.0 FAILED FUEL

VCSNS did not have any indications of failed fuel in 2010.

ATTACHMENT I

TO

2010 ANNUAL REPORT

South Carolina Electric & Gas Company V. C. Summer Nuclear Station

Personnel and Man-Rem by Work and Duty Function
Regulatory Guide 1.16 Annual Report for 2010

Work and Job Function	Number of Personnel Over 100 mRem			Total Man-Rem		
	Station Workers	Utility Workers	Contract Workers	Station Workers	Utility Workers	Contract Workers
Inservice Maintenance						
Engineering Personnel	0	0	0	0.000	0.000	0.000
Health Physics Personnel	0	0	0	0.000	0.000	0.000
Maintenance Personnel	0	0	0	0.000	0.000	0.000
Operations Personnel	0	0	0	0.000	0.000	0.000
Supervisory Personnel	0	0	0	0.000	0.000	0.000
Reactor Operations & Surveillance						
Engineering Personnel	0	0	0	0.003	0.000	0.000
Health Physics Personnel	0	0	0	0.060	0.000	0.000
Maintenance Personnel	0	0	0	0.240	0.000	0.011
Operations Personnel	0	0	0	0.093	0.000	0.005
Supervisory Personnel	0	0	0	0.002	0.000	0.000
Refueling						
Engineering Personnel	0	0	0	0.000	0.000	0.000
Health Physics Personnel	0	0	0	0.000	0.000	0.000
Maintenance Personnel	0	0	0	0.000	0.000	0.000
Operations Personnel	0	0	0	0.000	0.000	0.000
Supervisory Personnel	0	0	0	0.000	0.000	0.000
Routine Maintenance						
Engineering Personnel	0	0	0	0.003	0.000	0.047
Health Physics Personnel	0	0	0	0.357	0.000	0.000
Maintenance Personnel	1	0	0	1.315	0.000	0.346
Operations Personnel	0	0	0	0.303	0.000	0.050
Supervisory Personnel	0	0	0	0.004	0.000	0.001
Special Maintenance						
Engineering Personnel	0	0	0	0.000	0.000	0.000
Health Physics Personnel	0	0	0	0.000	0.000	0.000
Maintenance Personnel	0	0	0	0.000	0.000	0.000
Operations Personnel	0	0	0	0.000	0.000	0.000
Supervisory Personnel	0	0	0	0.000	0.000	0.000
Waste Processing						
Engineering Personnel	0	0	0	0.000	0.000	0.000
Health Physics Personnel	0	0	0	0.300	0.000	0.002
Maintenance Personnel	0	0	0	0.008	0.000	0.000
Operations Personnel	0	0	0	0.001	0.000	0.000
Supervisory Personnel	0	0	0	0.009	0.000	0.000
Total						
Engineering Personnel	0	0	0	0.006	0.000	0.047
Health Physics Personnel	0	0	0	0.717	0.000	0.002
Maintenance Personnel	1	0	0	1.563	0.000	0.357
Operations Personnel	0	0	0	0.397	0.000	0.055
Supervisory Personnel	0	0	0	0.015	0.000	0.001
Grand Total	1	0	0	2.698	0.000	0.462