



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
245 PEACHTREE CENTER AVENUE NE, SUITE 1200  
ATLANTA, GEORGIA 30303-1257

November 16, 2017

Mr. George Lippard III, Vice President  
Nuclear Operations  
South Carolina Electric & Gas Company  
Virgil C. Summer Nuclear Station  
Post Office Box 88, Mail Code 800  
Jenkinsville, SC 29065

**SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION – NRC OPERATOR LICENSE  
EXAMINATION REPORT 05000395/2017301**

Dear Mr. Lippard:

During the period September 18 - 22, 2017, the Nuclear Regulatory Commission (NRC) administered operating tests to employees of your company who had applied for licenses to operate the Virgil C. Summer Nuclear Station (Unit 1). At the conclusion of the tests, the examiners discussed preliminary findings related to the operating tests and the written examination submittal with those members of your staff identified in the enclosed report. The written examination was administered by your staff on September 28, 2017.

All the applicants passed both the operating test and written examination. There were no post-examination comments. A Simulator Fidelity Report is included in this report as Enclosure 2.

The initial examination submittal was within the range of acceptability expected for a proposed examination. All examination changes agreed upon between the NRC and your staff were made according to NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 11.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter and its enclosures will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of the NRC's document system (ADAMS). ADAMS is accessible from the NRC Website at <http://www.nrc.gov/reading-rm.adams.html> (the Public Electronic Reading Room).

G. Lippard

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If you have any questions concerning this letter, please contact me at (404) 997-4662, (Internet E-mail: [Eugene.Guthrie@nrc.gov](mailto:Eugene.Guthrie@nrc.gov)).

Sincerely,

*/RA/*

Eugene F. Guthrie, Chief  
Operations Branch 2  
Division of Reactor Safety

Docket No: 50-395  
License No: NPF-12

Enclosures: 1. Report Details  
2. Simulator Fidelity Report

cc: Distribution via Listserv

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION – NRC OPERATOR LICENSE  
EXAMINATION REPORT 05000395/2017301

Distribution:

- D. Bacon, RII
- N. Lacy, RII
- M. Kennard, RII
- E. Guthrie, RII

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OFFICE	RII:DRS	RI:DRS	RII:DRS	RII:DRS			
SIGNATURE	<b>DXB2 EMAIL</b>	<b>NTL2 EMAIL</b>	<b>MNK1 EMAIL;</b>	<b>EFG</b>			
NAME	DBACON	NLACY	MKENNARD	EGUTHRIE			
DATE	11/6/2017	11/6/2017	11/16/2017	11/16/2017	11/ /2017	11/ /2017	11/ /2017
E-MAIL COPY?	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO	YES NO

OFFICIAL RECORD COPY      DOCUMENT NAME: G:\OLEXAMS\SUMMER EXAMINATIONS\INITIAL EXAM 2017-301 (UNIT 1)\CORRESPONDENCE\VC SUMMER UNIT 1 2017-301 EXAM REPORT.DOCX

**U.S. NUCLEAR REGULATORY COMMISSION**

REGION II

Docket No.: 05000395

License No.: NPF-12

Report No.: 05000395/2017301

Licensee: South Carolina Electric and Gas

Facility: Virgil C. Summer Nuclear Station, Unit 1

Location: Jenkinsville, South Carolina

Dates: Operating Test – September 18-22, 2017  
Written Examination – September 28, 2017

Examiners: D. Bacon, Chief Examiner, Senior Operations Engineer  
M. Kennard, Operations Engineer  
N. Lacy, Operations Engineer

Approved by: Eugene F. Guthrie, Chief  
Operations Branch 2  
Division of Reactor Safety

## **SUMMARY**

ER 05000395/2017301; September 18-22, 2017 & September 28, 2017; Virgil C. Summer Nuclear Station; Operator License Examinations.

Nuclear Regulatory Commission (NRC) examiners conducted an initial examination in accordance with the guidelines in Revision 11 of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors." This examination implemented the operator licensing requirements identified in 10 CFR §55.41, §55.43, and §55.45, as applicable.

Members of the Virgil C. Summer (VCS) Nuclear Station staff developed both the operating tests and the written examinations. The initial operating tests, written Reactor Operator (RO) examination, and written Senior Reactor Operator (SRO) examination submittals met the quality guidelines contained in NUREG-1021.

The NRC administered the operating tests during the period September 18-22, 2017. Members of the VCS Nuclear Station training staff administered the written examination on September 28, 2017. All RO and SRO applicants passed both the operating test and written examination. All applicants were issued licenses commensurate with the level of examination administered.

There were no post-examination comments.

No findings were identified.

## REPORT DETAILS

### 4. OTHER ACTIVITIES

#### 4OA5 Operator Licensing Examinations

##### a. Inspection Scope

The NRC evaluated the submitted operating test by combining the scenario events and JPMs in order to determine the percentage of submitted test items that required replacement or significant modification. The NRC also evaluated the submitted written examination questions (RO and SRO questions considered separately) in order to determine the percentage of submitted questions that required replacement or significant modification, or that clearly did not conform with the intent of the approved knowledge and ability (K/A) statement. Any questions that were deleted during the grading process, or for which the answer key had to be changed, were also included in the count of unacceptable questions. The percentage of submitted test items that were unacceptable was compared to the acceptance criteria of NUREG-1021, "Operator Licensing Standards for Power Reactors."

The NRC reviewed the licensee's examination security measures while preparing and administering the examinations in order to ensure compliance with 10 CFR §55.49, "Integrity of examinations and tests."

The NRC administered the operating tests during the period September 18-22, 2017. The NRC examiners evaluated six RO and three SRO applicants using the guidelines contained in NUREG-1021. Members of the VCS Nuclear Station training staff administered the written examination on September 28, 2017. Evaluations of applicants and reviews of associated documentation were performed to determine if the applicants, who applied for licenses to operate the VCS Nuclear Station (Unit 1), met the requirements specified in 10 CFR Part 55, "Operators' Licenses."

The NRC evaluated the performance or fidelity of the simulation facility during the preparation and conduct of the operating tests.

##### b. Findings

No findings were identified.

The NRC developed the written examination sample plan outline. Members of the VCS Nuclear Station training staff developed both the operating tests and the written examinations. All examination material was developed in accordance with the guidelines contained in Revision 11 of NUREG-1021. The NRC examination team reviewed the proposed examination. Examination changes agreed upon between the NRC and the licensee were made per NUREG-1021 and incorporated into the final version of the examination materials.

The NRC determined, using NUREG-1021, that the licensee's initial examination submittal was within the range of acceptability expected for a proposed examination.

All applicants passed both the operating test and written examination and were issued licenses.

Copies of all individual examination reports were sent to the facility Training Manager for evaluation of weaknesses and determination of appropriate remedial training.

The licensee did not submit any post-examination comments. A copy of the final written examinations and answer keys, with all changes incorporated, may be accessed not earlier than September 30, 2019, in the ADAMS system (ADAMS Accession Numbers ML17298A553 and ML17298A572).

#### 4OA6 Meetings, Including Exit

##### Exit Meeting Summary

On September 22, 2017, the NRC examination team discussed generic issues associated with the operating test with Mr. George Lippard, VCS Unit 1 Site Vice President, and members of the VCS Nuclear Station staff. The examiners asked the licensee if any of the examination material was proprietary. No proprietary information was identified.

#### **KEY POINTS OF CONTACT**

##### Licensee personnel

G. Lippard, Unit 1 Site Vice President  
 A. Barbee, Director Nuclear Training  
 R. Justice, General Manager Nuclear Plant Operations  
 N. Constance, Manager Nuclear Training  
 D. Shue, Manager Nuclear Operations  
 B. Thompson, Manager Nuclear Licensing  
 T. Stewart, Nuclear Licensing Engineer  
 R. Shane, Operations Training Supervisor (OTM)  
 D. Rhymer, Operations Representative, Shift Manager  
 J. Lawter, Supervisor, Simulator Engineering  
 R. Kimmy, Simulator Operations Specialist  
 D. Wokurka, Supervisor, Initial Operations Training Programs  
 D. Brookins, Lead Instructor, Initial Operations Training  
 R. Johnston, Lead Exam Developer  
 S. Richardson, Operations Training Exam Developer  
 M. Anderson, Operations Training Exam Developer  
 R. Crain, Operations Mentor

## SIMULATOR FIDELITY REPORT

Facility Licensee: Virgil C. Summer Nuclear Station

Facility Docket No.: 05000395

Operating Test Administered: September 18-22, 2017

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and, without further verification and review in accordance with Inspection Procedure 71111.11 are not indicative of noncompliance with 10 CFR 55.46. No licensee action is required in response to these observations.

While conducting the simulator portion of the operating test, examiners observed the following:

<u>Item</u>	<u>Description</u>
SDR #841	While trying to save a THOR SBT file, the program crashed. The information that was collected during the first scenario set of day one of the 2017 NRC Exam was lost.