



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
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March 23, 2017

South Carolina Electric & Gas Company  
ATTN: Mr. Paul Mothena  
Manager, Nuclear Training, Unit 2  
Virgil C. Summer Nuclear Plant  
P. O. Box 88  
Jenkinsville, SC 29065

**SUBJECT: V. C. SUMMER NUCLEAR PLANT UNIT 2 – NRC OPERATOR  
LICENSE EXAMINATION REPORT 5200027/2017301**

Dear Mr. Mothena:

During the period of January 30 – February 1, 2017, the Nuclear Regulatory Commission (NRC) administered operating tests to employees of your company who had applied for licenses to operate the V. C. Summer Nuclear Plant Unit 2. At the conclusion of the tests, the examiners discussed preliminary findings related to the operating tests with those members of your staff identified in the enclosed report. The written examination was administered by your staff on May 22, 2015.

Four Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. One SRO applicant failed the operating test. There were no post-examination comments. A Simulator Fidelity Report is included in this report as Enclosure 2.

The initial examination submittal met the guidelines for quality contained in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 10, following review by the NRC, and changes that were mutually agreed upon between the NRC and your staff.

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).

If you have any questions concerning this letter, please contact me at (404) 997- 4662.

Sincerely,

*/RA//*

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

Docket No: 5200027  
License Nos: NPF-93

Enclosures:

1. Report Details
2. Simulator Fidelity Report

cc: (See Page 3)

cc:

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SUBJECT: V. C. SUMMER NUCLEAR PLANT UNIT 2 – NRC OPERATOR  
 LICENSE EXAMINATION REPORT 5200027/2017301

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- A. Goldau, RII
- G. Guthrie, RII

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**U.S. NUCLEAR REGULATORY COMMISSION**

REGION II

Docket No.: 5200027

License No.: NPF-93

Report No.: 05200027/2017301

Licensee: Southern Carolina Electric and Gas

Facility: V. C. Summer Unit 2

Location: Jenkinsville, South Carolina

Dates: Operating Test – January 30 – February 1, 2017

Examiners: Phillip Capehart, Chief Examiner, Senior Operations Engineer  
Mark Bates, Senior Operations Engineer  
Andreas Goldau, Operations Engineer

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

## **SUMMARY**

ER 05200027/2017301; operating test January 30-February 1, 2017; V. C. Summer Unit 2; Operator License Examinations.

Nuclear Regulatory Commission (NRC) examiners conducted an initial operating examination in accordance with the guidelines in Revision 10 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.

The operating test was developed by members of the V. C. Summer staff.

The initial operating test submitted by your staff met the guidelines for quality contained in NUREG-1021, following review by the NRC, and changes that were mutually agreed upon between the NRC and your staff.

The NRC administered the operating tests during the period of January 30 – February 1, 2017. Four Senior Reactor Operator (SRO) applicants passed the operating test. One SRO applicant failed the administrative portion of the operating exam. None of the applicants were issued licenses; licensing action has been delayed pending receipt of additional information.

There were no post-examination comments.

No findings were identified.



## REPORT DETAILS

### 4. OTHER ACTIVITIES

#### 4OA5 Operator Licensing Examinations

##### a. Inspection Scope

The NRC examiners evaluated the operating test to ensure it met the NUREG-1021 criteria.

The examiners 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 examiners administered the operating tests during the period of January 30 – February 1, 2017. The examiners evaluated five Senior Reactor Operator (SRO) applicants using the guidelines contained in NUREG-1021. Evaluations of applicants and reviews of associated documentation were performed to determine if the applicants, who applied for licenses to operate the V. C. Summer Nuclear Plant Unit 2, met the requirements specified in 10 CFR Part 55, "Operators' Licenses."

Four of the SRO applicants took and passed the written examination that was administered on May 22, 2015. One additional SRO applicant took and passed the written examination that was administered on September 29, 2016. This applicant; however, failed the JPM portion of the operating exam administered during the week of September 12, 2016. The applicant successfully retook and passed the JPM portion of the exam given during this exam period. Three of the four SRO applicants that took the May 22, 2015 written exam passed this operating exam. One SRO applicant failed the administrative portion of this operating exam. Interim examination reports (ML15212A744 & ML17027A171) were written to document the administration of the written examinations in May 2015 and September 2016 as well as to disposition associated post-examination comments made by the operating facility. Individual applicant performance was documented in non-publicly available correspondence to the licensee (ML16221A238 & ML16343A787). Since there was no corresponding operating test administered for the May 2015 written examination; four of the applicants that passed that written examination were approved by the NRC in accordance with NUREG-1021, revision 10, guidance to take the January 2017 operating test. The May 2015 written examination, combined with the January 2017 operating test, constituted a complete examination for those four applicants.

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

##### b. Findings

No findings were identified.

The examiners and members of the V. C. Summer training staff developed the operating tests. All examination material was developed in accordance with the guidelines contained in Revision 10 of NUREG-1021. The NRC examination team

reviewed the proposed examination. Examination changes agreed upon between the examiners and the licensee were made per NUREG-1021 and incorporated into the final version of the examination materials.

A security issue was identified by the licensee during the development of the operating exam. Examination files associated with the simulator were not encrypted properly. An Apparent Cause Evaluation (ACE), CR-16-02300, was written by the licensee to document and correct this deficiency from reoccurring. The issue was screened as having a low probability of leading to an exam compromise due to the fact that the exam material was located on a simulator that was not being used by the applicants for training and other exam security measures were in place to prevent applicants from entering the simulator where the files were located.

Four SRO applicants passed the operating test. One SRO applicant failed the administrative portion of the operating test. Issuance of licenses for the four SRO applicants has been delayed pending receipt of additional information. Details concerning the need for additional information has been sent to the individual applicants and the facility licensee.

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.

#### 40A6 Meetings, Including Exit

##### Exit Meeting Summary

On February 1, 2017 the NRC examination team discussed generic issues associated with the operating test with Andy Barbee, V. C. Summer Training Director, and members of the V. C. Summer staff. The examiners asked the licensee if any of the examination material was proprietary. Examination material was identified as proprietary. At the time this report was issued, the NRC had not received redacted versions of the proprietary examination material. Material designated by the licensee as proprietary will be handled in accordance with NRC policies and procedures.

### **KEY POINTS OF CONTACT**

#### Licensee personnel

Paul Mothena, Unit 2/3 Training Manager  
 Andy Barbee, VCS Training Director  
 Scott Meier, Operations Training Supervisor  
 Scott Dimeler, Unit 2 PLI for Exam Development  
 Dan Zielinski, Unit 2 Exam Team Member  
 Brandon Christenson, Unit 2 Exam Team Member  
 Al Harris, Unit 2 Operations Manager  
 Michelle Martell, Operations Training Instructor  
 Max Kier, Operations Representative to the Exam Team

## **SIMULATOR FIDELITY REPORT**

Facility Licensee: V. C. Summer Unit 2

Facility Docket No.: 5200027

Operating Test Administered: January 30 – February 1, 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.

No simulator fidelity or configuration issues were identified.