



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION II  
245 PEACHTREE CENTER AVENUE N.E., SUITE 1200  
ATLANTA, GEORGIA 30303-1200

November 3, 2021

Mr. Daniel G. Stoddard  
Senior Vice President and  
Chief Nuclear Officer  
Innsbrook Technical Center  
5000 Dominion Blvd., Floor: IN-2SW  
Glen Allen, VA 29060

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION – NRC OPERATOR LICENSE  
EXAMINATION REPORT 05000395/2021301

Dear Mr. Stoddard:

During the period September 13-17, 2021, 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. 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 23, 2021.

All applicants passed both the operating test and written examination. There were two post-examination comment. These comments and the NRC resolution of those comments are summarized in Enclosure 2 to this letter. A Simulator Fidelity Report is included in this report as Enclosure 3 to this letter.

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 Nos: 50-395  
License Nos: NFP-12  
:

Enclosures:

1. Report Details
2. Simulator Fidelity Report

cc: Distribution via Listserv

SUBJECT: VIRGIL C. SUMMER NUCLEAR STATION – NRC OPERATOR LICENSE  
EXAMINATION REPORT 05000395/2021301 dated November 3, 2021

\* See previous page for concurrence

☒ PUBLICLY AVAILABLE   ☐ NON-PUBLICLY AVAILABLE   ☐ SENSITIVE   ☒ NON-SENSITIVE

ADAMS: ☒ Yes   ACCESSION NUMBER **ML21309A523**   ☐ SUNSI REVIEW COMPLETE   ☐ FORM 665 ATTACHED

OFFICE	RII:DRS/OB1	RII:DRS/OB1	RII:DRS/OB1		
NAME	DEgelstad	JBundy	GGuthrie		
DATE:	11/02/2021	11/02/2021	11/ 3 /2021		

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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Examination Report

Docket No.: 50-395

License No.: NPF-12

Report No.: 05000395/2021301

Enterprise Identifier: L-2021-OLL-0036

Licensee: South Carolina Electric & Gas Company

Facility: Virgil C. Summer Nuclear Station

Location: Jenkinsville, SC

Dates: Operating Test – September 13-17, 2021  
Written Examination – September 23, 2021

Examiners: J. Bundy, Chief Examiner, Senior Operations Engineer  
D. Bacon, Senior Operations Engineer  
D. Lanyi, Senior Operations Engineer

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

## **SUMMARY**

ER 05000395/2021301; September 13 – 17, 2021 & September 23, 2021; 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.

The NRC developed the written examination outline. Members of the Virgil C. Summer Nuclear Station staff developed both the operating tests and the written examination. The initial operating test submittal met the quality guidelines contained in NUREG-1021.

The NRC administered the operating tests during the period September 13 – 17, 2021. Members of the Virgil C. Summer Nuclear Station training staff administered the written examination on September 23, 2021. Six Reactor Operator (RO) and six Senior Reactor Operator (SRO) applicants were administered the examination. All applicants passed both the operating test and written examination. All applicants were issued licenses commensurate with the level of examination administered.

There were two post-examination comments.

No findings were identified.

## REPORT DETAILS

### 4. OTHER ACTIVITIES

#### 4OA5 Operator Licensing Examinations

##### a. Inspection Scope

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

The NRC performed an audit of license applications during the preparatory site visit to confirm that they accurately reflected the subject applicants' qualifications in accordance with NUREG-1021.

The NRC administered the operating tests during the period September 13-17, 2021. The NRC examiners evaluated six Reactor Operator (RO) and six Senior Reactor Operator (SRO) applicants using the guidelines contained in NUREG-1021. Members of the Virgil C. Summer Nuclear Station training staff administered the written examination on September 23, 2021. Evaluations of applicants and reviews of associated documentation were performed to determine if the applicants, who applied for licenses to operate the Virgil C. Summer Nuclear Station, 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 facility 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. Examination changes agreed upon between the NRC and the licensee were made per NUREG-1021 and incorporated into the final version of the examination material.

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 submitted two post-examination comments concerning the operating test and no comments concerning the written examination. A copy of the final written examinations and answer keys, with all changes incorporated, may be accessed not earlier than September 27, 2023, in the ADAMS system (ADAMS Accession Number(s) ML21279A228 and ML21279A222). A copy of the licensee's post-examination comments may be accessed in the ADAMS system (ADAMS Accession Number ML21279A219).

#### 4OA6 Meetings, Including Exit

##### Exit Meeting Summary

On September 17, 2021, the NRC examination team discussed generic issues associated with the operating test and written exam with R. Justice, General Manager of Nuclear Plant Operations, and other members of the Virgil C. Summer 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

M. Anderson, Examination Lead  
G. Lippard, Vice President Nuclear Operations  
R. Justice, General Manager of Nuclear Plant Operations  
D. Edwards, Operations Manager  
B. Moore, Training Manager  
T. Kogelmann, Training Supervisor  
L. Ainsworth, Training Supervisor  
N. O'kimosh, Shift Manager (Operations Representative)  
J. Reuer, Exam Writer  
K. Hilyer, Instructor  
E. Zimmerman, SRO

#### NRC personnel

M. Read, Senior Resident Inspector

## **FACILITY POST-EXAMINATION COMMENTS AND NRC RESOLUTIONS**

The facility submitted two post-examination comments as indicated in a letter which can be found in ADAMS under Accession Number ML21279A219.

### **Post-Examination Comment #1:**

Comment: 2021 NRC JPM A1-b (SRO)

The JPM required candidates to determine shift manning requirements given a set of parameters. One candidate observed that the attachment they were given did not match the attachment in the frozen procedures folder. The revision had a different name for one of the watchstanders and who was responsible for filling this attachment out.

#### Facility Licensee Recommendation

This did not impact the administration or performance of this JPM in any fashion. This was solely a visual issue and it did not change any answers or critical steps.

#### NRC Resolution:

Once the error was identified during administration the NRC examiner determined the correct revision of the attachment would be given to the applicants. Both versions of the attachment will be added to ADAMS in accordance with NUREG-1021, Rev. 11, ES-501, Section F.1. The error did not affect the JPM task standard or the applicant's ability to successfully complete the task.

### **Post-Examination Comment #2:**

Comment: 2021 NRC JPM A1-a (SRO)

The JPM required candidates to review a set of logs and determine any deficiencies. Reactor BLDG Temp – IPCS is above the allowed value on the logs. One candidate manually recalculated this temperature out using the equation from the logs. When they did this, it was determined that the AO wrote down the incorrect value and that the Reactor BLDG Temp was actually within the allowed band.

#### Facility Licensee Recommendation

During the performance of the A 1-a JPM for SROs, one candidate performed the JPM differently than how it was validated. This led to a new correct way to complete the JPM correctly.

During validation, all candidates reviewed the CB Tech Spec Rounds and found that REACTOR BUILDING TEMPERATURE was logged at 119.1°F, which is above the maximum allowed value of 118.3°F. There is a calculation to find the average Reactor Building Temperature. This specific point that is logged from IPCS, already takes this calculation into

account. All validators saw the value above the maximum allowed of 118.3°F, applied the Technical Specification of 3.6.1.5.

During the performance of this JPM, one candidate manually recalculated the average Reactor Building Temperature using the formula and points that are given in the CB TECH SPEC ROUNDS logs. When performing the manual calculation, an average Reactor Building Temperature of 111.2°F was calculated, which is in specifications for allowed average Reactor Building Temperature.

The candidate then said that the value was incorrectly written down and there is no need to enter Technical Specification 3.6.1.5. The candidate is correct with his statement.

The facility recommends that this JPM have two correct answers. Because the specific IPCS point already calculates the average temperature, those that read 119.1 °F and applied Technical Specification 3.6.1.5 would be correct since this is how the JPM was intended to be written. If the candidate manually calculated the average Reactor Building Temperature out and determined the value was incorrectly logged and therefore Technical Specification 3.6.1.5 is not applicable, is also correct. In accordance with NUREG 1021, ES-303, two correct answers should be accepted because there was a deficiency in the procedure (CB rounds handout) that was beyond the applicant's control. Both methods have validity to the way you answer the questions to complete the JPM satisfactorily. Both methods allowed the candidate to find an error within the logs.

#### NRC Resolution:

The NRC concurs with the facilities recommendation. The initial design of the JPM failed to accurately ensure the data feeding the calculation was correct, it was assumed that an applicant would not go back and recalculate a data point. However, since an applicant did go back and recalculate the data point, his method and approach to the log review was acceptable.

Both versions of the modified answer key will be added to ADAMS in accordance with NUREG-1021, Rev. 11, ES-501, Section F.1.

## **SIMULATOR FIDELITY REPORT**

Facility Licensee: Virgil C. Summer Nuclear Station

Facility Docket No.: 50-395

Operating Test Administered: September 13-17, 2021

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.

The following simulator fidelity or configuration issue was identified:

Simulator Work Request 1397 – Makeup Integrator Reset Inconsistent