



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

April 28, 2022

Southern Nuclear Operating Company  
ATTN: Mr. Glenn Chick  
Executive President  
7835 River Road, Bldg. 140, Vogtle 3&4  
Waynesboro, GA 30830

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT UNIT 3 & UNIT 4 – NRC  
OPERATOR LICENSE EXAMINATION REPORT (05200025/2022301 AND  
0520026/2022301)

Dear Mr. Chick:

During the period March 14-17, 2022, the Nuclear Regulatory Commission (NRC) administered operating tests to employees of your company who had applied for licenses to operate the Vogtle Electric Generating Plant Units 3 & 4. 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 March 23, 2022. The dates identified in the June 30, 2021 Corporate Notification Letter (ML21181A391) for the on-site preparatory visit, operating test, and written exam administration were shifted forward, i.e., one week earlier, at the request of members of the Vogtle Units 3 & 4 plant staff, because of the issuance date of Revision 12 of NUREG-1021.

Six Reactor Operator (RO) and six Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. One RO failed the 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> gov (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: 5200025, 5200026

License No: NPF-91, NPF-92

Enclosures:

1. Report Details
2. Simulator Fidelity Report

cc: See page 3

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT UNIT 3 & UNIT 4 – NRC  
OPERATOR LICENSE EXAMINATION REPORT (05200025/2022301 AND  
05200026/2022301) dated April 28, 2022

**DISTRIBUTION:**

B. Caballero, RII, OB2  
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S. Price, RII, ORA/RC

\* See previous page for concurrence

☒ PUBLICLY AVAILABLE

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ADAMS: ☐ Yes      ACCESSION NUMBER **ML22118A730** ☐ SUNSI REVIEW COMPLETE ☐ FORM 665 ATTACHED

OFFICE	RII/ DRS/OB	RII/ DRS/OB2	RII/ DRS/OB2		
NAME	DEgelstad	BCaballero	EGuthrie		
DATE	4/27/2022	4/ 27 /2022	4/ 28 /2022		

OFFICIAL RECORD COPY      DOCUMENT NAME: G:\G:\OLExams\Vogtle Examinations\Unit 3&4\Initial Exam AP1000 2022-301 (bruno)\Correspondence\VOGTLE UNIT 3 & 4 2022-301 EXAM REPORT.docx

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION II**

Docket No.: 05200025, 05200026

License No.: NPF-91, NPF-92

Report No.: 05200025/2022301 and 05200026/2022301

Enterprise Identifier: L-2022-OLL-0016, L-2022-OLL-0024

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Vogtle Unit 3 & 4

Location: Waynesboro, GA

Dates: Operating Test – March 14 -17, 2022  
Written Examination – March 23, 2022

Examiners: Bruno Caballero, Chief Examiner, Senior Operations Engineer  
Dan Bacon, Senior Operations Engineer  
Dave Lanyi, Senior Operations Engineer  
Mike Donithan, Operations Engineer  
Andreas Goldau, Operations Engineer  
Newton Lacy, Operations Engineer  
Tom Morrissey, Senior Construction Inspector

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

## SUMMARY

ER 05200025/2022301, 05200026/2022301; operating test March 14 – 17, 2022 & written exam March 23, 2022; Vogtle Unit 3 & 4; 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 Vogtle Units 3 & 4 plant staff developed both the operating tests and the written examination. The NRC developed the written examination outlines. The initial operating test, written RO examination, and written SRO examination submittals met the quality guidelines contained in NUREG-1021.

The NRC administered the operating tests during the period of March 14 - 17, 2022. Members of the Vogtle Units 3 & 4 training staff administered the written examination on March 23, 2022. The original dates for the on-site preparatory visit (week of February 14, 2022), operating test (week of March 21, 2022), and written exam administration (week of April 4, 2022) were identified in the June 30, 2021 Corporate Notification Letter (ML21181A391). However, members of the Vogtle Units 3 & 4 plant staff subsequently requested that the dates all be shifted forward, i.e., one week earlier, because of the issuance date of Revision 12 of NUREG-1021.

Six Reactor Operator (RO) and six Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. Two SRO upgrade applicants were issued licenses; however, licensing action for the other ten applicants has been delayed pending receipt of additional information. One RO applicant passed the operating test but failed the written examination.

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 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 of March 14-17, 2022. The NRC examiners evaluated seven RO and six SRO applicants using the guidelines contained in NUREG-1021. Members of the Vogtle Units 3 & 4 training staff administered the written examination on March 23, 2022. Evaluations of applicants and reviews of associated documentation were performed to determine if the applicants, who applied for licenses to operate the Vogtle Electric Generating Plant Units 3 & 4, met the requirements specified in 10 CFR Part 55, "Operators' Licenses."

The NRC 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 NRC developed the written examination sample plan outline. Members of the Vogtle Units 3 & 4 training staff developed both the operating tests and the written examination. 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.

Six RO applicants and six SRO applicants passed both the operating test and written examination. One RO applicant passed the operating test but did not pass the written examination. Two SRO upgrade applicants were issued licenses. Issuance of the licenses for six RO applicants and 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.

One generic weakness was noted by the examiners during the administration of operating test Scenario 1 to all four crews. The examiners in both simulators observed that the crews' implementation of red path procedure 3-EOP-FR-H.1, Response to Loss of Heat Sink, was delayed until after the Shift Technical Advisor (STA) completed 3-EOP-F-0, Critical Safety Function Status Trees, even though the Wall Panel Information System (WPIS) Screen Critical Safety Function Status Tree indication for heat sink was already red. This delay in FR-H.1 implementation led to a higher peak RCS pressure in each of the four crews' scenario.

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

Neither the facility licensee nor any of the applicants submitted post-examination comments. A redacted non-proprietary version of the final RO/SRO examination, with an answer key may be accessed no earlier than April 27, 2024, in the ADAMS system at ML22108A188 and ML22108A199. The non-redacted proprietary versions can be found at ML22108A172 and ML22108A177 but will not be publicly available.

#### 4OA6 Meetings, Including Exit

On March 18, 2022, the NRC examination team discussed generic issues associated with the operating test with Mr. Alex Schwartz, Nuclear Operations Training Manager. The chief examiner asked Mr. Schwartz if any of the examination material was proprietary. The information that the licensee identified as proprietary was handled in a manner consistent with NRC and licensee guidelines for this type of information.

**SUPPLEMENTAL INFORMATION****KEY POINTS OF CONTACT****Licensee Personnel**

Travis Mays, ILT Lead Instructor

Rich Davidson, Exam Author

Andy Nichols, Exam Lead

Ben Denlinger, Exam Team

Chris Parkes, Facility Representative

Tom Arnette, Operations Director

Derrick Trafford, Shift Manager

Greg Crosby, Shift Manager

Alex Schwartz, Operations Training Manager

Jonathan Hartman, Shift Operations Manager

Sarah Gillham, Operations Training Coordinator

Ken Berger, Exam Team

Eric Thompson, LOCT Lead Instructor

Craig Doxey, Maintenance & Technical Training Manager

Bill Levis, Assistant Executive Vice President

Rob Stough, Shift Support Manager

Henry Curry, Training Director



## **SIMULATOR FIDELITY REPORT**

Facility Licensee: Vogtle Unit 3 & 4

Facility Docket No.: 05200025, 0500026

Operating Test Administered: March 14-17, 2022

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 new simulator fidelity or configuration issues were identified that had not been previously identified.