



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

June 30, 2023

Southern Nuclear Operating Company, Inc.
Vogtle Electric Generating Station Units 1&2
Attn: Mr. Edwin D. Dean III
7821 River Road
Waynesboro, GA 30830-2965

**SUBJECT: VOGTLE ELECTRIC GENERATING PLANT UNITS 1&2 – NRC OPERATOR
LICENSE EXAMINATION REPORT 05000424/2023301 AND
05000425/2023301**

Dear Mr. Dean:

During the period May 1 – 4, 2023, the Nuclear Regulatory Commission (NRC) administered operating tests to employees of your company who had applied for licenses to operate the Vogtle Electric Generating Station Units 1&2. On May 4, 2023, the examiners discussed preliminary findings related to the operating tests with you and other members of your staff. The written examination was administered by your staff on May 11, 2023.

Seven Reactor Operator (RO) and Six Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. One RO applicant passed the operating test but failed the written examination. There were no post-administration comments concerning the operating test, there were 2 post-administration comments concerning the written examination. These comments and the NRC resolution of these comments are summarized in Enclosure 2. A Simulator Fidelity Report is included in this report as Enclosure 3.

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 12.

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).

E. Dean

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If you have any questions concerning this letter, please contact me at (404) 997-4703.

Sincerely,

/RA/

Thomas A. Stephen, Chief
Operations Branch 1
Division of Reactor Safety

Docket No.: 50-424, 50-425

License No.: NPF-68, NPF-81

Enclosures:

1. Report Details
2. Simulator Fidelity Report

cc: Distribution via Listserv

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT UNITS 1&2 – NRC OPERATOR
LICENSE EXAMINATION REPORT 05000424/2023301 AND
05000425/2023301 dated June 30, 2023

DISTRIBUTION:

J. Bundy, RII
T. Stephen, RII

*See previous page for concurrence

PUBLICLY AVAILABLE NON-PUBLICLY AVAILABLE SENSITIVE NON-SENSITIVE

ADAMS: Yes ACCESSION NUMBER: **ML23184A046** SUNSI REVIEW COMPLETE FORM 665 ATTACHED

| | | | | | |
|--------|--------------|--------------|--------------|--|--|
| OFFICE | RII/ DRS/OBI | RII/ DRS/OBI | RII/ DRS/OBI | | |
| NAME | DEgelstad | JBundy | TStephen | | |
| DATE | 6/29/2023 | 6/29/2023 | 6/30/ 2023 | | |

U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Examination Report

Docket No.: 50-424, 50-425

License No.: NPF-68, NPF-81

Report No.: 05000424/2023301, 05000425/2023301

Enterprise Identifier: L-2023-OLL-0022

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Vogtle Electric Generating Station Units 1&2

Location: Waynesboro, GA

Dates: Operating Test – May 1 - 4, 2023
Written Examination – May 11, 2023

Examiners: J. Bundy, Chief Examiner, Senior Operations Engineer
T. Morrissey, Senior Resident Inspector
M. Kennard, Senior Operations Engineer
N. Lacy, Operations Engineer
A. Goldau, Operations Engineer
V. Fisher, General Engineer (Observation/training only)

Approved by: Thomas A. Stephen, Chief
Operations Branch 1
Division of Reactor Safety

SUMMARY

ER 05000424/2023301, 05000425/2023301; May 1 - 4, 2023 & May 11, 2023; Vogtle Electric Generating Station Units 1&2; Operator License Examinations.

Nuclear Regulatory Commission (NRC) examiners conducted an initial examination in accordance with the guidelines in Revision 12 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 Electric Generating Station Units 1&2 staff developed both the operating tests and the written examination. The initial operating test, 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 May 1 - 4, 2023. Members of the Vogtle Electric Generating Station Units 1&2 staff administered the written examination on May 11, 2023. Seven Reactor Operator (RO) and six Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. One RO applicant passed the operating test but failed the written examination. Thirteen (13) applicants were issued licenses commensurate with the level of examination administered.

There were two (2) post-examination comments for the written examination.

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 in order to confirm that they accurately reflected the subject applicants' qualifications in accordance with NUREG-1021.

The NRC administered the operating tests during the period May 1 – 4, 2023. The NRC examiners evaluated eight Reactor Operator (RO) and six Senior Reactor Operator (SRO) applicants using the guidelines contained in NUREG-1021. Members of the Vogtle Electric Generating Station Units 1&2 staff administered the written examination on May 11, 2023. 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 Station Units 1&2 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 Vogtle Electric Generating Station Units 1&2 staff developed both the operating tests and the written examination. All examination material was developed in accordance with the guidelines contained in Revision 12 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.

Seven Reactor Operator (RO) and Six Senior Reactor Operator (SRO) applicants passed both the operating test and written examination and were issued licenses. One RO applicant passed the operating test but failed the written examination.

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 no post-examination comments concerning the operating test and no post-examination comments concerning the written examination. A copy of the final written examination and answer key may be accessed not earlier than May 12, 2025--two years after administration of the written exam, in the ADAMS system -- ADAMS Accession Number(s) ML23159A070 and ML23159A072.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On May 4, 2023, the NRC examination team discussed generic issues associated with the operating test with Mr. Sonny Dean, Site Vice President, and other members of the Vogtle Electric Generating Station Units 1&2 staff. The examiners asked the licensee if any of the examination material was proprietary. No proprietary information was identified.

FACILITY POST-EXAMINATION COMMENTS AND NRC RESOLUTIONS

A complete text of the applicant's and licensee's post-examination comments can be found in ADAMS under Accession Number ML23159A080.

Question RO 67, K/A G2.4.16

Initial conditions:

- Unit 1 reactor trip and SI occur due to a LOCA.
- RWST level is 26% and lowering.
- 19013-1, "Transfer to Cold Leg Recirculation," is in progress.

Current conditions:

- Crew is at Step 3 of 19013-1, "Initiate ATTACHMENT - 1 to align ECCS Pumps to the Cold Leg Recirculation flowpath."
- STA reports a valid **RED** path exists on Core Cooling.
- Neither Train of ECCS has been aligned for Cold Leg Recirculation.

Which one of the following completes the following statement?

Based on the conditions given, the crew (1) required to **immediately** transfer to procedure 19221-1, "Response to Inadequate Core Cooling,"

and

once procedure 19221-1 has been entered, the OATC (2) permitted to continue with subsequent steps of 19013-1 concurrently.

- | | <u>(1)</u> | <u>(2)</u> |
|----|------------|------------|
| A. | is NOT | is |
| B. | is NOT | is NOT |
| C. | is | is |
| D. | is | is NOT |

Comment from Applicant, in part:

Per the Transient Response Procedure User's Guide, NMP-AP-005-004, There are cases where guidance provided in other procedures (AOPs, SOPs, ARPs, etc.) may be useful to enhance the EOP procedure performance. This usage may be directed by referencing steps in the controlling EOPs. In addition, operator judgment may be used to identify appropriate performance of other procedures in conjunction with an EOP to enhance equipment and personnel emergency response. EOP actions take priority. Other procedures may be performed in parallel with EOPs as long as their actions do not conflict with the EOP steps. The shift supervisor, based on resources and competing priorities, can make the decision to implement both procedures concurrently based on NMP-AP-005-004. Therefore, "is" is the

correct answer for the second part of question #67. The recommended change is "A", is the correct answer choice.

Facility Licensee Recommendation, in part:

EOP usage is controlled by procedure NMP-AP-005-004, Transient Response Procedure User's Guide, which states that "Implement" is to "begin another guideline or procedure and follow it to completion (may be concurrent with procedure/task in progress)". NMP-AP-005-004 would permit Operators to perform the steps of 19013-1, Transfer to Cold Leg Recirculation, to realign the Containment Spray Pump suction source from the RWST to the Recirculation Sump concurrent with the steps of 19221-1, Response to Inadequate Core Cooling, as long as the steps do not impede the performance of or conflict with the actions of 19221-1. Recommend changing the answer to "A" for this question.

NRC Resolution:

The applicant's and licensee's recommendations were accepted.

No applicants asked questions concerning Question RO 67 during written exam administration on May 11, 2023.

The NRC regional office agrees with the applicant and facility contentions that once procedure 19221-1, Response to Inadequate Core Cooling, has been entered, the OATC is permitted to continue with subsequent steps of 19013-1, Transfer to Cold Leg Recirculation, concurrently in accordance with the Transient Response Procedure User's Guide, NMP-AP-005-004.

Per the above line of reasoning, the regional office determined that answer choice "A" is the only technically correct answer to Question RO 67; therefore, in accordance with NUREG-1021 section ES-4.4, changes were made to the approved answer key for Question RO 67.

Question SRO 8, K/A 050G2.2.45

Initial conditions:

- Both Units are at 100% reactor power.
- Unit 2 'B' Train CREFS is tagged out.

Current conditions:

- Unit 1 'A' Train CREFS is deemed inoperable due to breaker malfunction.
- OATC reports that the Control Room Temperature is 78F and slowly rising at a rate of 2F per hour.

Which one of the following completes the following statement?

Per Tech Spec 3.7.10, "Control Room Emergency Filtration System (CREFS) - Both Units Operating," the operating crew is required to (1) when required completion time of Condition B is not met,

and

Control Room Tech Spec air temperature limit will **first** be exceeded in (2) hours.

| | <u> (1) </u> | <u> (2) </u> |
|----|---------------------|----------------|
| A✓ | be in Mode 3 | 4 |
| B. | be in Mode 3 | 6 |
| C. | start 2 CREFS Units | 4 |
| D. | start 2 CREFS Units | 6 |

Comment from Applicant, in part:

When the 7 day completion time expires on 3.7.10 Condition B, 3.7.10 Condition F is entered which requires action to be initiated to place the unit in Mode 3 within 7 hours. The required action is not to "Be in Mode 3" as soon as 3.7.10 Condition B is not met. Per the Use and Application Chapter, Completion Time Section, of Technical Specifications, an example is provided (TS Example 1.3-2) in which it is demonstrated that when a required action is not met and another condition subsequently entered, the required actions of the first condition are still required to be completed even after the first condition's required action completion time is not met. Applying this example to 3.7.10 and the question asked if the actions of 3. 7.10 Condition B are completed (Start 2 CREFS Units) AFTER the 3.7.10 Condition B completion time has expired but before the 3.7.10 Condition F completion time is exceeded, 3.7.10 Condition F would be exited. It is recommended the answer to SRO Question #8 be changed to the correct answer "C".

Facility Licensee Recommendation, in part:

When the completion time for Condition 'B' , 7 days, is not met the unit has 7 hours to be in MODE 3. The answer implies that the unit is to be in MODE 3 when the 7-day clock for Condition 'B' expires. This is not true. The plant is given a reasonable amount of time (7 hours) to perform an orderly plant shutdown. Based on the given plant conditions the option of placing the 2 Operable CREFS Trains in service, to avoid going to MODE 3 does exist. Recommend changing the answer to "C".

NRC Resolution:

The applicant's and licensee's recommendations were accepted.

No applicants asked questions concerning Question SRO 8 during written exam administration on May 11, 2023.

The NRC regional office agrees with the applicant and facility contentions that starting 2 Operable CREFS Units is correct and complies with Technical Specifications Use and Application.

Per the above line of reasoning, the regional office determined that answer choice "C" is the only technically correct answer to Question SRO 8; therefore, in accordance with NUREG-1021 section ES-4.4, changes were made to the approved answer key for Question 67.

SIMULATOR FIDELITY REPORT

Facility Licensee: Vogtle Electric Generating Station Units 1&2

Facility Docket No.: 05000424, 05000425

Operating Test Administered: May 1 - 4, 2023

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 sufficient simulator fidelity. No performance deficiencies were observed during administration of the operating test.