



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

August 22, 2022

Ms. Jamie Coleman
Regulatory Affairs Director
Southern Nuclear Operating Company
7825 River Road, BIN 63031
Waynesboro, GA 30830

**SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNIT 3 – NRC INITIAL TEST
PROGRAM AND OPERATIONAL PROGRAMS INTEGRATED INSPECTION
REPORT 05200025/2022006**

Dear Ms. Coleman:

On August 3, 2022, the U.S. Nuclear Regulatory Commission (NRC) completed an inspection at the Vogtle Electric Generating Plant, Unit 3. The enclosed inspection report documents the inspection results, which the inspectors discussed on August 8, 2022, with Mr. Steven Leighty, Vogtle 3 & 4 Regulatory Affairs Manager, and other members of your staff.

The inspection examined a sample of construction activities conducted under your Combined License (COL) as it relates to safety and compliance with the Commission's rules and regulations and with the conditions of these documents. The inspectors reviewed selected procedures and records, observed activities, and interviewed personnel.

Based on the results of this inspection, one finding of very low safety significance (Green) was identified. This finding did not involve a violation of NRC requirements.

If you disagree with a cross-cutting aspect assignment or the finding not associated with a regulatory requirement in this report, you should provide a response within 30 days of the date of this inspection report, with the basis for your disagreement, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, DC 20555-0001; with copies to the Regional Administrator, Region II; and the NRC Resident Inspector at the Vogtle Electric Generating Plant, Units 3 & 4

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," a copy of this letter, its enclosure, and your response (if any), will be made available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system ADAMS. ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room). Should you have any questions concerning this letter, please contact us.

Sincerely,

 Signed by Davis, Bradley
on 08/22/22

Bradley J. Davis, Chief
Division of Construction Oversight
Construction Inspection Branch 2

Docket No.: 5200025

License No.: NPF-91

Enclosure: NRC Inspection Report (IR) 05200025/2022006
w/attachment: Supplemental Information

cc w/ encl: Distribution via LISTSERV

SUBJECT: VOGTLE ELECTRIC GENERATING PLANT, UNIT 3 – NRC INITIAL TEST PROGRAM AND OPERATIONAL PROGRAMS INTEGRATED INSPECTION REPORT 05200025/2022006 – Dated August 22, 2022

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**U.S. NUCLEAR REGULATORY COMMISSION
Region II**

Docket Numbers: 5200025

License Numbers: NPF-91

Report Numbers: 05200025/2022006

Licensee: Southern Nuclear Operating Company, Inc.

Facility: Vogtle Unit 3 Combined License

Location: Waynesboro, GA

Inspection Dates: July 1, 2022 through August 3, 2022

Inspectors: J. Eargle, Sr. Resident Inspector – Testing, Division of Construction Oversight
J. Parent, Resident Inspector, Division of Construction Oversight
B. Caballero, Sr. Operations Engineer, Division of Reactor Safety (DRS)
M. Meeks, Operations Engineer, DRS
R. Patterson, Physical Security Inspector, DRS
J. Justice, Physical Security Inspector, DRS
S. Sullivan, Sr. Security Specialist, Nuclear Security and Incident Response
J. Rey, Security Specialist, Nuclear Security and Incident Response

Approved by: Bradley J. Davis, Chief
Construction Inspection Branch 2
Division of Construction Oversight

Enclosure

SUMMARY OF FINDINGS

Inspection Report (IR) 05200025/2022006; 07/01/2022 through 08/3/2022; Vogtle Unit 3 Combined License, initial test program and operational programs integrated inspection report.

This report covers a one-month period of announced inspections of Inspections, Tests, Analysis, and Inspection Criteria (ITAAC), preoperational test program, startup test program, and operational program inspections by resident and regional inspectors. The significance of most findings are indicated by their color (Green, White, Yellow, or Red), using Inspection Manual Chapter (IMC) 2519, "Construction Significance Determination Process." Cross-cutting aspects are determined using IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects." All violations of NRC requirements are dispositioned in accordance with the NRC's Enforcement Policy and the temporary enforcement guidance outlined in enforcement guidance memorandum 11-006. The NRC's program for overseeing the safe construction of commercial nuclear power reactors are described in IMC 2506, "Construction Reactor Oversight Process General Guidance and Basis Document."

A. NRC-Identified and Self Revealed Findings

(Green) NRC inspectors identified a construction finding of very low safety significance for the licensee's failure to identify the procedures required to be entered and expected operator actions to be performed in the simulator exam guides in accordance with NMP-TR-424-F05, "Annual Simulator Exam Development & Validation." Specifically, 9 out of 25 of the events in four sampled scenario guides used to evaluate licensed operators during the 2022 annual operating test lacked adequate crew/operator performance standards.

The performance deficiency was determined to be more than minor and a finding because it affected the training and qualification attribute of the Operational Readiness Cornerstone (Operational Programs). Specifically, the failure of the licensee to identify in simulator exam guides the required procedures to be entered and operator actions to be performed affected the quality of the 2022 annual operating test administered to all licensed operators and could have impacted the licensee's ability to evaluate the licensed operators. The performance deficiency did not impact an ITAAC, and therefore was determined to be a construction finding. The inspectors determined that the finding was associated with the Operational Readiness Cornerstone and assessed the finding in accordance with IMC 2519, "Construction Significance Determination Process," Appendix A, "AP-1000 Construction Significance Determination Process." Using the flowchart in Appendix A, since the finding was related to the licensed operator requalification (LOR) program, and the program was already required to be implemented, the finding was further assessed using the Reactor Oversight Process IMC 0609, "Significance Determination Process," (SDP) Appendix I, "Licensed Operator Requalification Significance Determination Process," Figure I.1, "Licensed Operator Requalification SDP Flowchart." The finding was related to the quality of the annual operating test but did not include greater than 40% of the reviewed simulator scenario events that were flawed; therefore, the inspectors determined that the finding was of very low safety significance (Green). The inspectors determined this finding was indicative of current licensee performance and was associated with the cross-cutting aspect of procedure adherence, in the area of human performance in accordance with IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects." The proximate cause was attributed to the failure to follow processes, procedures, and work instructions. [H.8] (Section 3P01)

B. Licensee-Identified Violations

None.

REPORT DETAILS

Summary of Plant Construction Status

During this report period for Unit 3, the licensee completed various activities to satisfy aspects of the Vogtle Unit 3 operational programs. The licensee submitted their all-ITAAC complete letter and NRC issued the Title 10 of the Code of Federal Regulations (10 CFR) 52.103(g) finding.

2. SAFEGUARDS PROGRAMS

Cornerstones: Security Programs for Construction Inspection and Operations

IMC 2504, Construction Inspection Program – Inspection of Construction and Operational Programs

2P01 Security (operational)

- Inspection Procedure (IP) 81000.05 – Protective Strategy Evaluation

a. Inspection Scope

The inspectors reviewed 41 samples associated with the licensee's protective strategy to verify if the licensee had developed and was implementing or was prepared to implement its protective strategy in accordance with the NRC-approved security plan, regulatory requirements, and any other applicable Commission requirements. The inspectors reviewed the licensee's protective strategy to verify if it has been appropriately developed, was being effectively implemented, or was prepared to be implemented, and provided assurance of protecting certain vital equipment and critical personnel assets from the design basis threat of radiological sabotage. The inspectors also observed limited scope drills to verify if the protective strategy could be implemented in accordance with the NRC approved security plan.

The inspectors reviewed the licensee's physical protection program associated with this sample to verify if it was designed and implemented, or was prepared to be implemented, to meet the general performance objective of 10 CFR 73.55(b).

b. Findings

No findings were identified.

3. OPERATIONAL READINESS

Cornerstones: Operational Programs

IMC 2504, Construction Inspection Program – Inspection of Construction and Operational Programs

3P01 Reactor Operator Re-qualification

- IP 71111.11 - Licensed Operator Requalification Program and Licensed Operator Performance

a. Inspection Scope

The inspectors completed an inspection of the licensee's ability to perform the following activities in accordance with 10 CFR 55.59:

- evaluate the performance of their licensed operators during the conduct of examinations,
- assess their ability to properly develop and administer requalification annual operating tests and biennial written examinations,
- evaluate the performance of the control room simulator and their testing and maintenance of the simulator,
- ensure that licensed individuals satisfy the conditions of their licenses, and
- assess their effectiveness in ensuring that operator license conditions were satisfied.

The inspectors evaluated the quality of the licensed operator biennial requalification written examination administered in 2021. The inspectors evaluated the adequacy of the facility licensee's annual requalification operating tests administered in 2022. The inspectors evaluated the effectiveness of the facility licensee in administering requalification operating tests required by 10 CFR 55.59(a)(2) and that the facility licensee was effectively evaluating their licensed operators for mastery of training objectives. The inspectors evaluated the ability of the facility licensee to safeguard examination material, such that the examination was not compromised. The inspectors evaluated the effectiveness of remedial training conducted by the licensee and reviewed the adequacy of re-examinations for licensed operators who did not pass a required requalification examination. The inspectors evaluated the licensee's program for ensuring that licensed operators met the conditions of their licenses. The inspectors evaluated the adequacy of the facility licensee's control room simulator in modeling the actual plant, and for meeting the requirements contained in 10 CFR 55.46.

b. Findings

Introduction

NRC inspectors identified a construction finding of very low safety significance (Green) for the licensee's failure to identify the procedures required to be entered and expected operator actions to be performed in the simulator exam guides in accordance with NMP-TR-424-F05, "Annual Simulator Exam Development & Validation." Specifically, 9 out of 25 of the events in four sampled scenario guides used to evaluate licensed operators during the 2022 annual operating test lacked adequate crew/operator performance standards.

Description

On July 18, 2022, in accordance with IP 71111.11, "Licensed Operator Requalification Program and Licensed Operator Performance," Appendix C, "Annual Requalification Operating Test Quality Checklist," the inspectors reviewed the required sample of four scenario guides. Specifically, the inspectors reviewed Week 5 scenario guides ES-44, -45, and -46, and Week 3 scenario guide ES-039. The inspectors determined 9 out of 25 (~36%) events in these scenario guides were missing either the required procedure(s) to be entered and/or key expected operator actions.

Procedure NMP-TR-424-F05, Annual Simulator Exam Development & Validation, Attachment 2, Simulator Scenario Development Checklist requires, in part, that: "Simulator Exam Guides SHALL include, but not be limited to, the following:

- Expected Operator actions for normal, off-normal, and alarm response procedures, Technical Specifications [and]
- Each normal, abnormal, emergency, or alarm procedure expected to be used SHALL be identified and the key Operator actions expected based upon the scenario design and Management Expectations as a basis for evaluation...."

The licensee entered this issue into its corrective action program as condition report 50148048.

Analysis

The inspectors determined that the licensee's failure to identify the procedures required to be entered and expected operator actions to be performed in the scenario guides was a performance deficiency. In accordance with IMC 0613, "Power Reactor Construction Inspection Reports," Appendix E, "Examples of Minor Construction Issues," the inspectors determined that the performance deficiency was more than minor and a finding because it affected the training and qualification attribute of the Operational Readiness Cornerstone (Operational Programs). Specifically, the failure of the licensee to identify in simulator exam guides the required procedures to be entered and operator actions to be performed affected the quality of the 2022 annual operating test administered to all licensed operators and could have impacted the licensee's ability to evaluate the licensed operators. The performance deficiency did not impact an ITAAC, and therefore was determined to be a construction finding.

The inspectors determined that the finding was associated with the Operational Readiness Cornerstone and assessed the finding in accordance with IMC 2519, "Construction Significance Determination Process," Appendix A, "AP-1000 Construction Significance Determination Process." Using the flowchart in Appendix A, since the finding was related to the LOR program, and the program was already required to be implemented, the finding was further assessed using the Reactor Oversight Process IMC 0609, "Significance Determination Process," Appendix I, "Licensed Operator Requalification Program Significance Determination Process," Figure I.1, "Licensed Operator Requalification SDP Flowchart."

The finding was related to the quality of the annual operating test but did not include greater than 40% of the reviewed simulator scenario events that were flawed; therefore, the inspectors determined that the finding was of very low safety significance (Green).

The inspectors determined this finding was indicative of current licensee performance and was associated with the cross-cutting aspect of procedure adherence, in the area of human performance in accordance with IMC 0613, Appendix F, "Construction Cross-Cutting Areas and Aspects." The proximate cause was attributed to the failure to follow processes, procedures, and work instructions. [H.8]

Enforcement

10 CFR 55.59, "Requalification," requires in part, that the requalification program must include an annual operating test which will require the licensed operator or senior operator to demonstrate an understanding of, and the ability to perform, the actions necessary to safely mitigate a sample of abnormal and emergency conditions in the approved training simulator environment. However, the regulation does not specify a requirement for the quality of exam material used for the simulator scenario portions of the annual operating tests administered to licensed operators and senior operators. Therefore, inspectors did not identify a violation of regulatory requirements associated with this finding. The licensee entered this issue into its corrective action program as condition report 50148048. Because this finding does not involve a violation of regulatory requirements and has very low safety significance, it is identified as a FIN. (FIN 0500025/2022006, NRC Annual Operating Test Scenarios Did Not Meet Qualitative Standards)

4. OTHER INSPECTION RESULTS

4OA6 Meetings, Including Exit

.1 Exit Meeting.

On August 8, 2022, the inspectors presented the inspection results to Mr. Steven Leighty, Vogtle 3 & 4 Regulatory Affairs Manager, and other licensee and contractor staff members. Proprietary information was reviewed during the inspection period but was not included in the inspection report.

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licenses and Contractor Personnel

A. Nix, NI Manager
M. Hickox, Test Support Manager
C. Alexander, Milestone Manager
S. Boyle, Milestone Manager
D. Pagan-Diaz, ITP Turnover. Manager
J. Olsen, NI Supervisor
W. Garrett, SNC Licensing Supervisor
C. Castell, SNC Licensing Engineer
N. Patel, SNC Licensing Engineer
N. Chapman, SNC Licensing Engineer

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

<u>Item Number</u>	<u>Type</u>	<u>Status</u>	<u>Description</u>
05200025/2022006-01	FIN	Open/Closed	NRC Annual Operating Test Scenarios Did Not Meet Qualitative Standards

LIST OF DOCUMENTS REVIEWED

2. SAFEGUARDS PROGRAMS

Section 2P01
VEGP Unit 3 and Unit 4 Physical Security Plan, Revision 6
Vogtle 3 Protective Strategy Briefing PowerPoint Presentation
Vogtle 3 Drills and Exercises Documentation
Security officers Training Files

3. OPERATIONAL READINESS

Section 3P01
Versions 6 & 7 of the 2021 Biennial Written Exam
Eight 2022 Job Performance Measures (JPMs): JP-009-SIM, JP-028-SIM, JP038-SIM, JP-006-SIM, JP-027-IP, JP-004-IP, JP-007-ADM-RO, JP-002-IP
Four scenario guides: ES-44, -45, -46, and ES-039
Ten remedial training packages: Two 2021 Biennial Written Exam failure packages, Two 2021 JPM failure packages, Five 2022 JPM failure packages, and one 2022 crew scenario failure package
Operations Crew 2 (11 members) LOR attendance records, Regulatory Exam Failures, Watch standing Hours, and NRC Form 398/396 license issuance records

Five reactivations: 55-72969, 55-74744, 55-42005, 55-23836, 55-33258
10 medical records: 55-23150, 55-33258, 55-24374, 55-62331, 55-23941, 55-24181, 55-74786,
55-74777, 55-24194, and 55-24197

10 simulator deficiency reports closed during the previous 12 months

Scenario Based Testing (SBT) Package AP-LT-C-SIM-ES-046, rev 1.0, performed on
05/26/2022

The most recent performance of the following ANSI/ANS-3.5-2009 Appendix B Transient
Performance Tests on both simulator loads:

- AP-OPS-T-006, Main Turbine Trip Without Reactor Trip
- AP-OPS-T-007, Maximum Rate Power Ramp
- AP-OPS-T-008, Maximum Size Reactor Coolant System (RCS) Rupture with Loss of Offsite Power
- AP-OPS-T-010B, Slow Primary System Depressurization to Saturated Condition

LIST OF ACRONYMS

10 CFR	Title 10 of the Code of Federal Regulations
FIN	finding
IMC	inspection manual chapter
ITAAC	Inspections, Tests, Analysis, and Acceptance Criteria
LOR	licensed operator requalification
NRC	U.S. Nuclear Regulatory Commission
SDP	significance determination process

ITAAC INSPECTED

None