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

August 18, 2021

Mr. Charles Kharrl
Southern Nuclear Operating Co., Inc.
Joseph M. Farley Nuclear Plant
7388 North State Highway 95
Columbia, AL 36319-0470

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT – NRC OPERATOR LICENSE EXAMINATION REPORT 05000348/2021301 and 05000364/2021301

Dear Mr. Kharrl:

During the period June 14 – 18, 2021, the Nuclear Regulatory Commission (NRC) administered operating tests to employees of your company who had applied for licenses to operate the Joseph M. Farley Nuclear Plant. 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 June 30, 2021.

One Reactor Operator (RO) and seven Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. There were two post-administration comments, one concerning the written examination and the other concerning the operating test. 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 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 (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: 50-348 and 50-364
License Nos: NPF-2 and NPF-8

Enclosures: 1. Report Details
2. Facility Comments and NRC Resolution
3. Simulator Fidelity Report

SUBJECT: JOSEPH M. FARLEY NUCLEAR PLANT – NRC OPERATOR LICENSE EXAMINATION REPORT 05000348/2021301 and 05000364/2021301 dated August 18, 2021

* See previous page for concurrence

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

ADAMS: ☐ Yes ACCESSION NUMBER: ML21235A089 ☐ SUNSI REVIEW COMPLETE ☐ FORM 665 ATTACHED

OFFICE	RII/DRS/OB	RII/DRS/OB	RII/DRS/OB			
NAME	D. Egelstad	D. Lanyi	G. Guthre			
DATE	08/10/2021	08/10/2021	08/18/2021			

OFFICIAL RECORD COPY DOCUMENT NAME:
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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Examination Report

Docket No.:	05000348, 05000364
License No.:	NPF-2, NPF-9
Report No.:	05000348/2021301 and 05000364/2021301
Enterprise Identifier:	L-2021-OLL-0039
Licensee:	Southern Nuclear Company (SNC), LLC
Facility:	Joseph M. Farley Nuclear Plant
Location:	Columbia, AL
Dates:	Operating Test – June 14 – 18, 2021 Written Examination – June 30, 2021
Examiners:	D. Lanyi, Chief Examiner, Senior Operations Engineer M. Meeks, Senior Operations Engineer N. Lacy, Operations Engineer
Approved by:	Eugene F. Guthrie, Chief Operations Branch 2 Division of Reactor Safety

SUMMARY

ER 05000348/2021301, 05000364/2021301; June 14-18, 2021 & June 30, 2021; Joseph M. Farley Nuclear Plant; 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 Joseph M. Farley Nuclear Plant staff developed both the operating tests and the written examination. 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 June 14 -18, 2021. Members of the Joseph M. Farley Nuclear Plant training staff administered the written examination on June 30, 2021. One Reactor Operator (RO) and seven Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. All eight 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 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 June 14 - 18, 2021. The NRC examiners evaluated one Reactor Operator (RO) and seven Senior Reactor Operator (SRO) applicants using the guidelines contained in NUREG-1021. Members of the Joseph M. Farley Nuclear Plant training staff administered the written examination on June 30, 2021. Evaluations of applicants and reviews of associated documentation were performed to determine if the applicants, who applied for licenses to operate the Joseph M. Farley Nuclear Plant, 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 Joseph M. Farley Nuclear Plant 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.

One RO applicant and seven SRO applicants passed both the operating test and written examination. One RO applicant and seven SRO applicants 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 written examination. A copy of the final written examination and answer key, with all changes incorporated, may be accessed may be accessed not earlier than June 30, 2023, in the ADAMS system (ADAMS Accession Number(s) ML21214A317 and ML21214A323).

4OA6 Meetings, Including Exit

Exit Meeting Summary

On June 14, 2021, the NRC examination team preliminarily discussed generic issues associated with the operating test with C. Kharrl, Senior Vice President, Joseph M. Farley Nuclear Plant, and other members of the Joseph M. Farley Nuclear Plant staff. The examiners asked the licensee if any of the examination material was proprietary. No proprietary information was identified. On July 30, 2021, a final exit meeting was held with Mr. Darren Sanders, Requalification Supervisor, to discuss the results.

KEY POINTS OF CONTACT

Licensee personnel

C. Kharrl	Site Vice President
R. Norris	Operations Director
R. McAdams	Engineering Director
S. Schwindt	Training Director
A. Renaud	Operations Training Manager
G. Surber	Licensing Manager
S. Jackson	Operations Plant Instructor

NRC personnel

P. Meier	Senior Resident Inspector

FACILITY POST-EXAMINATION COMMENTS AND NRC RESOLUTIONS

A complete text of the licensee's post-examination comments can be found in ADAMS under Accession Number ML21214A318.

Item

Operating Exam

Several applicants commented on Administrative JPM SRO A.1.b. The applicants were expected to review the available crew members and determine that minimum staffing was met. Then, given that a particular crew member had to leave due to illness, they were to determine that minimum staffing needed to be restored within 2 hours. The applicants claimed that there is not any written guidance that requires a Fire Brigade slot to be filled when an illness leaves the crew below minimum staffing.

The licensee Training staff reviewed this claim and determined that it was not correct. They determined that the site is committed to A1818085, NFPA 805 FIRE PROTECTION PROGRAM DESIGN BASIS DOCUMENT. It states:

> **4.7 Fire Response**
> **4.7.1 Compliance Requirements**
> NFPA 805, Section 3.4.1, "On-Site Fire Fighting Capability" states that:
> "All of the following requirements shall apply. Emergency response procedures for the plant industrial fire brigade.
> (a) A fully staffed, trained, and equipped fire-fighting force shall be available at all times to control and extinguish all fires on site. This force shall have a minimum complement of five persons on duty and shall conform with the following NFPA standards as applicable: …

Due to the fact that the NFPA805 is part of the site's licensing basis, in the absence of other guidance, the 2 hour requirement of Technical Specifications is applicable and would be applied if the Fire Brigade were to fall below the minimum manning.

The NRC agreed with the licensee staff's view. No changes to the key were required.

Written Exam

The licensee commented on Question 94. They stated that the intent of the question was to have the applicants to determine whether or not the 10 CFR 50.59 process is required to be entered based on conditions in the stem (Supervisor review prior to installation) and then determine if they, as the SRO (Shift Supervisor), can authorize the installation of the Temporary Configuration Change (TCC). The last word of the first fill in the blank should have been "*screening"* and not "evaluation" since these are two different processes.

When it is determined that a TCC meets certain criteria, such as the conditions in the stem, then a 10 CFR 50.59 Screening is performed, and the results determine if an evaluation is required. The question was based on an actual TCC which did not require an evaluation.

The licensee contended that there is not enough information in the stem for the applicants to perform a 10 CFR 50.59 screening. It would require access at a minimum to NMP-AD-010, 10 CFR 50.59 Screening and Evaluations and the FSAR. Additionally, a special qualification is required to perform these screenings and the SROs are not required to have this qualification.

Per NUREG-1021 ES-403, D.1:

b. Despite the extensive reviews performed by both the NRC and the facility licensee before examination administration (refer to ES-201, Attachment 5), it is possible that a few isolated errors may be discovered only after an examination has been administered. The following types of errors, if identified and ES-403, adequately justified by the facility licensee or an applicant, are most likely to result in post-examination changes agreeable to the NRC:

- a question with an unclear stem that confused the applicants or *did not provide all the necessary information*
- a question that is at the wrong license level (RO versus SRO) or *not linked to job requirements.*

The NRC concurred with the licensee's assertion. Adequate information was not provided to the applicants to answer the question as asked. Additionally, due to an error in the stem, the question asked information that was not linked to the SRO job requirement. Therefore question 94 was deleted from the exam. The key was updated as required.

SIMULATOR FIDELITY REPORT

Facility Licensee: Joseph M. Farley Nuclear Plant

Facility Docket No.: 05000348, 05000364

Operating Test Administered: June 14-18, 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.

No simulator fidelity or configuration issues were identified.