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

August 19, 2022

Ms. Lisa Hilbert
Senior Vice President
North Anna Power Station
1022 Haley Drive
Mineral, Virginia 23117

SUBJECT: NORTH ANNA POWER STATION – NRC OPERATOR LICENSE EXAMINATION REPORT 05000338/2022301, 05000339/2022301

Dear Ms. Hilbert:

During the period June 6 – 10, 2022 the Nuclear Regulatory Commission (NRC) administered operating tests to employees of your company who had applied for licenses to operate the North Anna Power Station. 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 June 15, 2022.

Three Reactor Operator (RO) and five Senior Reactor Operator (SRO) applicants passed both the operating test and written examination. One SRO applicants 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 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).

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 Nos: 50-338, 50-339
License Nos: NPF-4, NPF-7

Enclosures:
1. Report Details
2. Simulator Fidelity Report

cc: Distribution via Listserv

SUBJECT: NORTH ANNA POWER STATION – NRC OPERATOR LICENSE EXAMINATION REPORT 05000338/2022301, 05000339/2022301 dated August 19, 2022

DISTRIBUTION:
M. Kennard, RII
T. Stephen, RII

- See previous page for concurrence

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ADAMS: ☐ Yes ACCESSION NUMBER: ML22234A028 ☐ SUNSI REVIEW COMPLETE ☐ FORM 665 ATTACHED

OFFICE	RII/ DRS/OB1	RII/ DRS/OB1	RII/ DRS/OB1		
NAME	DEgelstad	MKennard	TStephen		
DATE	8/17/2022	8/18/2022	8/ 19/2022		

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U.S. NUCLEAR REGULATORY COMMISSION

REGION II

Examination Report

Docket No.:	50-338, 50-339
License No.:	NPF-4, NPF-7
Report No.:	05000338/2022301, 05000339/2022301
Enterprise Identifier:	L-2022-OLL-0019
Licensee:	Virginia Electric and Power Company (VEPCO)
Facility:	North Anna Power Station
Location:	Mineral, VA
Dates:	Operating Test – June 6-10, 2022 Written Examination – June 15, 2022
Examiners:	Michael Kennard, Chief Examiner, Senior Operations Engineer Daniel Bacon, Senior Operations Engineer Michael Donithan, Operations Engineer
Approved by:	Thomas A. Stephen, Chief Operations Branch 1 Division of Reactor Safety

SUMMARY

ER 05000338/2022301, 05000339/2022301; operating test June 6-10, 2022 & written exam June 15, 2022; North Anna Power Station; 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 North Anna Power Station 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 6-10, 2022. Members of the North Anna Power Station training staff administered the written examination on June 15, 2022. Three Reactor Operator (RO) and five Senior Reactor Operator (SRO)] applicants passed both the operating test and written examination. Eight applicants were issued licenses commensurate with the level of examination administered.

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 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 6-10, 2022. The NRC examiners evaluated three Reactor Operator (RO) and six Senior Reactor Operator (SRO) applicants using the guidelines contained in NUREG-1021. Members of the North Anna Power Station training staff administered the written examination on June 15, 2022. Evaluations of applicants and reviews of associated documentation were performed to determine if the applicants, who applied for licenses to operate the North Anna Power 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 NRC developed the written examination sample plan outline. Members of the North Anna Power Station training 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.

The NRC determined that the licensee's initial written examination submittal was within the range of acceptability expected for a proposed examination.

The NRC determined that the licensee's initial operating test submittal was within the range of acceptability expected for a proposed examination.

Three RO applicants and five SRO applicants passed both the operating test and written examination. One SRO applicant passed the operating test but did not pass the written examination. Three RO applicants and five SRO applicants were issued licenses.

During the simulator scenario portion of the operating test the simulator failed on the third run of the first day of examination. The simulator failure resulted in a partial run of scenario 1 and an abbreviated run of the spare scenario (scenario 3) for one crew. At the time of the simulator malfunction the scenario was stopped, and the crew was sequestered to attempt to resolve the simulator issue. The scenario was run by the North Anna Power Station staff five additional times with the simulator functioning properly. One attempt was made to resume the scenario and the simulator failure occurred again. At this point no further attempts were made to resume scenario 1. Scenario 3 was shortened to remove events that were not needed to complete the simulator portion of the operating test for one crew.

Due to the simulator issue, the exam schedule was adjusted to allow for administrative JPMs and in-plant JPMs to be conducted while the facility attempted to resolve the simulator issue. Once the simulator issue was definitively identified. The remaining simulator portions of the examination were evaluated against the simulator deficiency and then administered.

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 did not submit any post-examination comments. A copy of the final written examination and answer key, with all changes incorporated, may be accessed not earlier than June 17, 2024, in the ADAMS system ML22214A025 and ML22214A027.

4OA6 Meetings, Including Exit

Exit Meeting Summary

On June 10. 2022 the NRC examination team discussed generic issues associated with the operating test with James Jenkins, Nuclear Plant Manager, and members of the North Anna Power 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

James H. Jenkins, Nuclear Plant Manager
Doug Spears, Operations Manager
Benjiman Chang, Supervisor Nuclear Training
Andrew Brust, Lead Exam Writer
Khanh Le, Nuclear Simulator Engineering Specialist
Travis Mark, Technical Specialist

NRC personnel

M. Fannon, Branch Chief, DRP 4
K. Carrington, Senior Resident Inspector

SIMULATOR FIDELITY REPORT

Facility Licensee: North Anna Power Station

Facility Docket No.: 50-338, 50-339

Operating Test Administered: June 6-10, 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.

While conducting the simulator portion of the operating test, examiners observed the following:

Item	Description
CR1201087	Simulator System abort during initial Licensed Operator Exam
CA11186516	Simulator vendor identified the parameter that appeared erratic after the initiating event. The simulator scenario was conducted an additional 25 times with a focus on the suspect parameter with a system abort only occurring one time. The parameter of concern was noted to have moved with a significant enough error to initiate a computational error and result in a system abort. The simulator vendor developed a patch to correct the issue. The station Training Department decided not to implement the patch until further testing and screening of impacts are complete. As a result, an assessment of all additional simulator activities for the Initial examination were performed. Based on the results of this assessment the Simulator Support can provide reasonable assurance of functionality for the remaining simulator item.