



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION III
2443 WARRENVILLE ROAD, SUITE 210
LISLE, ILLINOIS 60532-4352

April 8, 2021

Mr. Rod Penfield
Site Vice President
Energy Harbor Nuclear Corp.
Perry Nuclear Power Plant
10 Center Road,
Perry, OH 44081

SUBJECT: PERRY NUCLEAR POWER PLANT—NRC INITIAL LICENSE EXAMINATION
REPORT 05000440/2021301

Dear Mr. Penfield:

On March 3, 2021, the U.S. Nuclear Regulatory Commission (NRC) completed the initial operator licensing examination process for license applicants employed at your Perry Nuclear Power Plant. The enclosed report documents the results of those examinations. Preliminary observations noted during the examination process were discussed on February 16, 2021, with yourself, and other members of your staff. An exit meeting was conducted by telephone on March 22, 2021, with yourself, other members of your staff, and Mr. Randy Baker, Chief Operator Licensing Examiner, to review the final grading of the written examination for the license applicants. During the telephone conversation, NRC resolution of the facility's post-examination comments, received by the NRC on March 3, 2021, were discussed.

The NRC examiners administered an initial license examination operating test during the week of February 8, 2021. The written examination was administered by training department personnel on February 19, 2021. Ten Senior Reactor Operator applicants and four Reactor Operator applicants were administered license examinations. The results of the examinations were finalized on March 26, 2021. One applicant failed one section of the administered examination and was issued a Preliminary Results Letter. Thirteen applicants passed all sections of their respective examinations and nine applicants were issued senior operator licenses and four applicants were issued operator licenses.

The administered written examination and operating test, as well as documents related to the development and review (outlines, review comments and resolution, etc.) of the examination will be withheld from public disclosure until March 3, 2023. However, since an applicant received a Preliminary Results Letter because of a written examination grade less than 80.0 percent, the applicant was provided a copy of the written examination. For examination security purposes, your staff should consider that written examination uncontrolled and exposed to the public.

This letter, its enclosure, and your response (if any) will be made available for public inspection and copying at <http://www.nrc.gov/reading-rm/adams.html> and at the NRC Public Document Room in accordance with Title 10 of the *Code of Federal Regulations*, Part 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,

Patricia
J. Pelke

Digitally signed
by Patricia J. Pelke
Date: 2021.04.08
15:33:40 -05'00'

Patricia J. Pelke, Chief
Operations Branch
Division of Reactor Safety

Docket No. 50-440
License No. NPF-58

Enclosures:

1. Examination Report 05000440/2021301
2. Simulator Fidelity Report

cc: Distribution via LISTSERV®
R. O'Connor, Training Manager

Letter to Rod Penfield from Patricia J. Pelke dated April 8, 2021.

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REPORT 05000440/2021301

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U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-440

License No: NPF-58

Report No: 05000440/2021301

Enterprise Identifier: L-2021-OLL-0019

Licensee: Energy Harbor Nuclear Corp.

Facility: Perry Nuclear Power Plant

Location: Perry, OH

Dates: February 8, 2021, through March 3, 2021

Examiners: R. Baker, Senior Operations Engineer, Chief Examiner
C. Zoia, Senior Operations Engineer, Examiner
B. Bartlett, Senior Operations Engineer, Examiner
D. Bacon, Senior Operations Engineer, RII, Examiner
J. Robbins, Operations Engineer, Examiner-in-Training
L. Rodriguez, Operations Engineer, Examiner-in-Training

Examination Author: J. Nance, Operations Engineer, RIII

Approved By: P. Pelke, Chief
Operations Branch
Division of Reactor Safety

SUMMARY

Examination Report 05000440/2021301; 02/08/2021–03/03/2021; Energy Harbor Nuclear Corp.; Perry Nuclear Power Plant; Initial License Examination Report.

The announced initial operator licensing examination was conducted by regional Nuclear Regulatory Commission examiners in accordance with the guidance of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 11.

Examination Summary

Thirteen of fourteen applicants passed all sections of their respective examinations. Nine applicants were issued senior operator licenses, four applicants were issued operator licenses, and one applicant was issued a Preliminary Results Letter for failure of one section of the administered examination. (Section 40A5.1)

REPORT DETAILS

40A5 Other Activities

.1 Initial Licensing Examinations

a. Examination Scope

The U.S. Nuclear Regulatory Commission (NRC) examiners and members of the facility licensee's staff used the guidance prescribed in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 11, to develop, validate, administer, and grade the written examination and operating test. The written examination outlines and operating test outlines were prepared by the NRC staff. The NRC staff also developed 50 percent of the written examination and 50 percent of the operating test portion of the initial examination for the purpose of examiner qualifications. Members of the facility licensee's staff developed the remaining portions of the initial license examination. As part of the operating test development, the NRC examiners visited the facility during the week of October 5, 2020, to pre-validate the events/malfunctions constructed from the NRC prepared outlines, and to obtain feedback from your staff regarding scenario validity and capabilities of the simulator to support event performance. The NRC examiners validated the proposed examination during the week of January 4, 2021, with the assistance of members of the facility licensee's staff. During the onsite validation week, the chief examiner audited three license applications for accuracy. The NRC examiners, with the assistance of the facility licensee's training staff, administered the operating test, consisting of job performance measures and dynamic simulator scenarios, during the period of February 8, 2021, through February 13, 2021. The facility licensee administered the written examination on February 19, 2021.

b. Findings

(1) Written Examination

The NRC examiners determined that the written examination, as proposed, was within the range of acceptability expected for a proposed examination. Less than 20 percent of the proposed examination questions were determined to be unsatisfactory and required modification or replacement.

During validation of the written examination, several questions were modified or replaced. All changes made to the written examination were made in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," and documented on Form ES-401-9, "Written Examination Review Worksheet," used primarily for the documentation of metrics on the facility developed portion of the written examination. The Form ES-401-9, the written examination outlines (ES-401-1 and ES-401-3), and both the proposed and final written examinations, will be available electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's Agencywide Documents Access and Management System (ADAMS) on March 3, 2023, (ADAMS Accession Numbers ML20136A290, ML20136A286, ML20136A288, and ML20136A294, respectively).

On March 3, 2021, the licensee submitted documentation noting that there were no post-examination comments affecting changes to the answer key for consideration by the NRC examiners when grading the written examination.

The NRC examiners completed grading of the written examination on March 14, 2021, and conducted a review of each missed question to determine the accuracy and validity of the examination questions.

(2) Operating Test

The NRC examiners determined that the operating test, as proposed, was within the range of acceptability expected for a proposed examination. Less than 20 percent of the proposed operating test portion of the examination was determined to be unsatisfactory and required modification or replacement.

Following the review and validation of the operating test, minor modifications were made to multiple job performance measures, and minor modifications were made to the dynamic simulator scenarios. All changes made to the operating test were made in accordance with NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," and were documented on Form ES-301-7, "Operating Test Review Worksheet." The Form ES-301-7, the operating test outlines (ES-301-1, ES-301-2, and ES-D-1s), and both the proposed and final operating tests, will be available electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS on March 3, 2023, (ADAMS Accession Numbers ML20136A290, ML20136A286, ML20136A288, and ML20136A294, respectively).

The NRC examiners completed grading of the operating test on March 25, 2021.

(3) Examination Results

Ten applicants at the Senior Reactor Operator level and four applicants at the Reactor Operator level were administered written examinations and operating tests. Thirteen applicants passed all portions of their examinations and were issued their respective operating licenses on March 26, 2021. One applicant failed the written portion of the administered examination and was issued a Preliminary Results Letter.

.2 Examination Security

a. Scope

The NRC examiners reviewed and observed the licensee's implementation of examination security requirements during the examination validation and administration to assure compliance with Title 10 of the *Code of Federal Regulations*, Part 55.49, "Integrity of Examinations and Tests." The examiners used the guidelines provided in NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," to determine acceptability of the licensee's examination security activities.

b. Findings

None.

4OA6 Management Meetings

.1 Debrief

The chief examiner presented the examination team's preliminary observations and findings on February 16, 2021, to Mr. Rod Penfield, Site Vice President, and other members of the Perry Nuclear Power Plant Operations and Training Department staff.

.2 Exit Meeting

The chief examiner conducted an exit meeting on March 22, 2021, with Mr. Rod Penfield, Site Vice President, and other members of the Perry Nuclear Power Plant staff, by telephone. The NRC's final disposition of the station's written examination grading was disclosed during the telephone discussion. The chief examiner asked the licensee whether any of the material used to develop or administer the examination should be considered proprietary. No proprietary or sensitive information was identified during the examination or debrief/exit meetings.

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee

R. Penfield, Site Vice President
C. Elliott, Plant General Manager
S. Barnes, Operations Manager
J. Tufts, Performance Improvement Director
R. O'Connor, Training Manager
G. Burnham, Regulatory Compliance Manager
M. McFarland, Nuclear Operations Training Superintendent
R. Torres, Nuclear Operations Instructor
S. Fahnestock, Regulatory Compliance Specialist

U.S. Nuclear Regulatory Commission

J. Steffes, Senior Resident Inspector
T. Ospino, Resident Inspector
R. Baker, Senior Operations Engineer, Chief Examiner

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened, Closed, and Discussed

None

LIST OF DOCUMENTS REVIEWED

<u>Type</u>	<u>Designation</u>	<u>Description or Title</u>
Corrective Action Doc.	CR-2021-01208	Simulator issues identified during NRC On-Site Validation of 1-LOT [Licensed Operator Training] -21 Operating Exam
Corrective Action Doc.	CR-2021-01210	During administration of 1-LOT-21 NRC Operating Exam, the simulator experienced a THOR Abort
Corrective Action Doc.	CR-2021-01212	Several generic weaknesses were observed during the 1-LOT-21 NRC Operating Exam

LIST OF ACRONYMS USED

ADAMS	Agencywide Documents Access and Management System
LOT	Licensed Operator Training
NRC	U.S. Nuclear Regulatory Commission

SIMULATOR FIDELITY REPORT

Facility Licensee: Perry Nuclear Power Plant

Facility Docket No: 50-440

Operating Tests Administered: February 8, 2021, through February 13, 2021

The following documents observations made by the U.S. Nuclear Regulatory Commission examination team during the initial operator license examination. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of non-compliance with Title 10 of the *Code of Federal Regulations*, Part 55.45(b). These observations do not affect U.S. Nuclear Regulatory Commission certification or approval of the simulation facility other than to provide information which may be used in future evaluations. No licensee action is required in response to these observations.

During the conduct of the simulator portion of the operating tests, the following items were observed:

ITEM	DESCRIPTION
SWR-2021-0004.	Condition Report 2021-01210 documents that during the NRC exam, the simulator froze from a THOR (Simulator Operating System) Abort. This is a condition where a cell gets outside the limits or bounds set up by the software engineer for the simulator modelling. The problem was that the condition could not be repeated after the occurrence during the examination. This specific scenario was run three times prior to the THOR Abort. The simulator lead did note that during this scenario the crew went a slightly different path. Simulator work request, SWR-2021-0004, was written to find and fix the THOR aborted cell in the software.