



**UNITED STATES
NUCLEAR REGULATORY COMMISSION**

REGION III
2443 WARRENVILLE RD. SUITE 210
LISLE, IL 60532-4352

April 23, 2015

Mr. Ernest Harkness
Site Vice President
FirstEnergy Nuclear Operating Company
Perry Nuclear Power Plant
P. O. Box 97, 10 Center Road, A-PY-A290
Perry, OH 44081-0097

SUBJECT: PERRY NUCLEAR POWER PLANT
NRC INITIAL LICENSE EXAMINATION REPORT 05000440/2015301

Dear Mr. Harkness:

On March 11, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed the initial operator licensing examination process for license applicants employed at your Perry Nuclear Power Plant. This examination was extended 3 weeks due to a personal hardship experience by one applicant during the course of taking the operating portion of the license exam where by the applicant was administered a makeup exam. The enclosed report documents the results of those examinations. Preliminary observations noted during the examination process were discussed on February 13, 2015, with Mr. E. Harkness, Site Vice President, and other members of your staff. An exit meeting was conducted by telephone on April 3, 2015, between Mr. Strohl, Operations Training Superintendent–Perry Nuclear Power Plant, and Mr. R. K. Walton, Chief Examiner, to review the proposed final grading of the written examination for the license applicants. During the telephone conversation, NRC resolution of the station's post-examination comment, initially received by the NRC on March 4, 2015, was discussed.

The NRC examiners administered an initial license examination operating test during the weeks of February 2 and 9, 2015, and a makeup exam was administered to one Senior Reactor Operator (SRO), March 9-11, 2015. The written examination was administered by Perry Nuclear Power Plant training department personnel on February 19, 2015. Nine SROs, and four reactor operators (ROs) applicants were administered license examinations. The results of the examinations were finalized on April 3, 2015. Thirteen applicants passed all sections of their respective examinations, eight were issued senior operator licenses, and four were issued operator licenses. The license for one SRO applicant is being withheld pending completion of onsite experience requirements.

The proposed and final written examinations and answer keys will be withheld from public disclosure for 24 months per your request.

E. Harkness

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In accordance with Title 10 of the *Code of Federal Regulations* (10 CFR) 2.390, "Public Inspections, Exemptions, Requests for Withholding," of the NRC's "Rules of Practice," a copy of this letter, its enclosures, and your response (if any) will be available electronically for public inspection in the NRC's Public Document Room or from the Publicly Available Records (PARS) component of the NRC's Agencywide Documents Access and Management System (ADAMS). ADAMS is accessible from the NRC Web site at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Sincerely,

/RA/

Hironori Peterson, Chief
Operations Branch
Division of Reactor Safety

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

Enclosures:

1. Operator Licensing Examination
Report (ER) 05000440/2015301
w/Attachment: Supplemental Information
2. Simulation Facility Report
3. Post Exam Comments and Resolutions

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R. Strohl, Training Manager

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket No: 50-440
License No: DPR-20

Report No: 05000440/2015301

Licensee: First Energy Nuclear Operating Company (FENOC)

Facility: Perry Nuclear Power Plant, Unit 1

Location: Perry, Ohio

Dates: February 2 through March 11, 2015

Inspectors: R. K. Walton, Operations Engineer; Chief Examiner
D. Reeser, Operations Engineer
R. M. Morris, Senior Operations Engineer

Approved by: H. Peterson, Chief
Operations Branch
Division of Reactor Safety

SUMMARY OF RESULTS

Examination Report 05000440/2015301; 02/02/2015-03/11/2015, First Energy Nuclear Operating Company, Perry Nuclear Power Plant, Initial License Examination Report.

The announced initial operator licensing examination was conducted by regional U.S. Nuclear Regulatory Commission examiners, in accordance with the guidance of NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1.

Examination Summary:

All thirteen applicants passed all sections of their respective examinations. Eight applicants were issued senior operator licenses, and four applicants were issued operator licenses. The license for one senior operator applicant is being withheld pending completion of on-site experience requirements. (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 9-Supplement 1, to develop, validate, administer, and grade the written examination and operating test. Members of the facility licensee's staff prepared the outlines and developed the written examination and operating test. The NRC examiners validated the proposed examination during the week of January 12, 2015, with the assistance of members of the facility licensee's staff. During the on-site validation week, the examiners audited three license applications for accuracy. The NRC examiners, with the assistance of members of the facility licensee's staff, administered the operating test, consisting of job performance measures (JPMs) and dynamic simulator scenarios, during the periods of February 2-12, 2015, and a makeup exam was administered to a senior license applicant on March 10-11, 2015. The facility licensee administered the written examination on February 19, 2015.

b. Findings

(1) Written Examination

The NRC examiners determined that the written examination, as proposed by the licensee, 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.

On March 4, 2015, the NRC received the licensee's submittal documentation with one post-examination comment for consideration by the NRC examiners when grading the written examination. The post-examination comment, and the NRC resolution of the comment is included in Enclosure 3 of this report. The final as-administered written examination and answer key (ADAMS Accession Number ML15106A397), will be available in 24 months electronically in the NRC Public Document Room or from the Agencywide Documents Access and Management System (ADAMS). All changes made to the proposed 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."

The NRC examiners graded the written examination on March 30, 2015, 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 originally proposed by the licensee, was within the range of acceptability expected for a proposed operating test. Changes made to the proposed operating test, were made in accordance with

NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," and were documented in "Perry 2015 Operating Test Comments," which will be available electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS.

One applicant was unable to complete the operating exam due to a personal hardship. The individual completed all simulator scenarios and three of fifteen job performance measures (JPMs). In order to preserve exam security, the remaining dozen makeup JPMs had to be either newly written or from the licensee's exam bank. The licensee developed a dozen makeup JPMs that were different from the JPMs that the rest of the class had been administered, and different from the licensee's audit exam. These JPMs met all quality, type code, and safety function attributes from the original operating test. The NRC and licensee validated these makeup JPMs prior to administering these JPMs to the applicant during the week of March 9, 2015.

The final as-administered dynamic simulator scenarios and JPMs will be available electronically in the NRC Public Document Room or from the Publicly Available Records component of NRC's ADAMS.

The NRC examiners completed operating test grading on April 3, 2015.

(3) Examination Results

All thirteen applicants passed all sections of their respective examinations. Eight applicants were issued SRO licenses and four applicants were issued RO licenses. The license for one senior operator applicant is being withheld pending completion of on-site experience requirements. Twelve applicants were issued their respective operating licenses on April 7, 2015.

.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*, Section 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

No findings were identified.

4OA6 Management Meetings

.1 Exit Meeting Summary

Debrief

The chief examiner presented the examination team's preliminary observations and findings on February 13, 2015, to Mr. E. Harkness, Site Vice President, and other members of the Perry Nuclear Power Plant Operations and Training Department staff.

.2 Exit Meetings

The chief examiner conducted an exit meeting, by telephone, on April 3, 2015, with Mr. R. Strohl, Training Manager, and Mr. J. Kelly, Training Supervisor. The NRC's final disposition of the station's post-examination comments were disclosed and discussed during the telephone discussion. The examiners 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

E. Harkness, Site Vice President
D. Hamilton, Plant General Manager
C. Olivier, Operations Manager
R. Strohl, Training Manager
R. Smith, FENOC Fleet Corporate Training
R. Torres, Operations Training Exam Lead
J. Kelly, Operations Training Lead Instructor

U.S. Nuclear Regulatory Commission

J. Nance, Resident Inspector
R. K. Walton, Chief Examiner
D. Reeser, Examiner
R. M. Morris, Examiner

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened, Closed, and Discussed

None

LIST OF ACRONYMS USED

ADAMS	Agency Wide Document Access and Management System
CFR	<i>Code of Federal Regulations</i>
DRS	Division of Reactor Safety
NRC	U.S. Nuclear Regulatory Commission
JPM	Job Performance Measure
RO	Reactor Operator
SRO	Senior Reactor Operator

SIMULATION FACILITY REPORT

Facility Licensee: Perry Nuclear Power Plant

Facility Docket No: 50-440

Operating Tests Validated/Administered: January 12-18 and February 2-12, 2015

Makeup Test Validated/Administered: March 9 and March 10 - 11, 2015

The following documents observations made by the NRC 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 10 CFR 55.45(b). These observations do not affect NRC 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 on-site validation and simulator portion of the operating tests, the following items were observed:

ITEM	DESCRIPTION
Relief Valve Tailpipe Temperature Recorder	During on-site validation week, a relief valve tailpipe temperature recorder continued to trend up in temperature even though the relief valve was closed. The licensee identified an error in the algorithm needed to compute the parameter. The licensee corrected the problem at the conclusion of the exam.
Rosemont Analog Trip Units	During Scenario #3, an applicant noted a difference between the analog trip units used in the plant vs. the analog trip units used in the simulator. Specifically, DW/HPCS pressure analog trip units, in the simulator, were scaled in units of %, whereas in the control room, these units were scaled in psig. This minor detail did not affect exam administration.

POST EXAM COMMENTS AND RESOLUTIONS

There was one Candidate comment regarding the 2015 NRC Written Exam. The comment is for SRO Question No. 5.

QUESTION SRO 5:

The Plant is in a refueling outage.

A contract worker performing an inspection of a twice burnt fuel bundle in the fuel inspection machine received an unexpected exposure of 5105 mrem TEDE when the upper stop failed on the fuel inspection machine.

Not including Events Of Potential Public Interest, what notification to the NRC is required?

- A An Immediate Notification
- B A 4 Hour Notification
- C A 24 Hour Notification
- D A Thirty Day Notification

The correct answer was previously determined to be 'C'.

Candidate Comments:

1. The question asks what NRC notification is required based on an unexpected radiological exposure exceeding 5 rem.
2. Per NOBP-OP-1015, Revision 02, Attachment 19, O1.12, News Release or Notification to Other Government Agency, "The licensee shall notify the NRC as soon as practical and in all cases, within four hours of the occurrence of ... any event or situation, related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned to notification to other government agencies has been or will be made."
3. The licensee is required to notify the Director of Ohio Department of Health in accordance with NOBP-OP-1015, Attachment 45, RP.1 Radiation Exposure of Radioactive Material Release – PY, the 4 hour requirement is valid.
4. Each licensee shall, within 24 hours of discovery of the event, report any event involving loss of control of licensed material possessed by the licensee that may have caused, or threatens to cause any of the following conditions:
 - (1) An individual to receive, in a period of 24 hours –
 - (i) A total effective dose equivalent exceeding 5 remsThe 24 hour requirement is valid.
5. Amend the answer key to list 'B' and 'C' as correct answers.

Candidate Justification for answers:

- A. Incorrect answer – an exposure to >25 rem is immediately reportable.
- B. Correct answer** – Per 10 CFR 50.72(b)(2)(xi), the licensee shall notify the NRC as soon as practical and in all cases, within four hours of the occurrence of any event or situation, related to the health and safety of the public or onsite personnel, or protection of the environment, for which a news release is planned or notification to other government agencies has been or will be made. Such an event may include an onsite fatality or inadvertent release of radioactively contaminated materials.
- A 4-hour NRC notification is required due to notification of the Ohio Department of Health per Ohio Administrative Code 370-1:1-38-21.
- C. Correct answer** – Per 10 CFR 20.2202(b), each licensee shall, within 24 hours of discovery of the event, report any event involving loss of control of licensed material possessed by the licensee that may have caused, or threatens to cause, any of the following conditions:
- (1) An individual to receive, in a period of 24 hours –
 - (i) A total effective dose equivalent exceeding 5 rems
- D. Incorrect answer – This is a requirement for lost or stolen SNM.

Recommendation: Amend the Answer Key to list answer 'B' as a correct answer in addition to answer 'C'.

References: NOBP-OP-1015, Event Notifications, Attachments 19, 34, and 45.

Station Proposed Resolution: The station agrees with the above candidate Comments, Justifications and Recommendation since we have provided “newly discovered technical information that supports a change in the answer key.”

NRC Response: The question as originally written, required the applicants to have knowledge of NRC reporting requirements for an over exposure event. References were provided to the applicants during the written exam since this information was not required to be known from memory. The applicants were expected to recognize that over exposure (5 rem TEDE) was a 24 hour reportable event IAW 10 CFR 20.2202(b). As such, distractor 'C' was considered the correct answer.

However, unknown to either the author or reviewers of this question, some of the applicants identified a 24-hour required notification to the State of Ohio for an exposure exceeding 5 rem (TEDE) (required by Ohio Administrative code 3701:1-38-21), and a subsequent 4 hour notification to the NRC IAW 10 CFR 50.72(b)(2)(xi). This additional requirement, "...notification to other government agencies..." made for a second correct answer.

Upon further NRC review, the third distractor, a 30-day notification, was required by 10 CFR 20.2203(a), and also would be considered a possible correct answer since this too was a notification - a written notification. In hind sight, SRO Question 6 had three possible correct answers.

As allowed by NUREG-1021, Rev 9, Section 403, D.1.c, SRO Question 5 will be deleted from the exam.

E. Harkness

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Sincerely,

/RA/

Hironori Peterson, Chief
Operations Branch
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R. Strohl, Training Manager

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