



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**

REGION IV  
1600 E. LAMAR BLVD.  
ARLINGTON, TX 76011-4511

May 19, 2017

Mr. Ken Higginbotham, Vice President-Nuclear  
and CNO  
Nebraska Public Power District  
Cooper Nuclear Station  
72676 648A Avenue  
P.O. Box 98  
Brownville, NE 68321

**SUBJECT: COOPER NUCLEAR STATION – NRC EXAMINATION  
REPORT 05000298/2017301**

Dear Mr. Higginbotham:

On March 10, 2017, the U.S. Nuclear Regulatory Commission (NRC) completed an initial operator license examination at Cooper Nuclear Station. The enclosed report documents the examination results and licensing decisions. The preliminary examination results were discussed on March 10, 2017, with you and other members of your staff. A telephonic exit meeting was conducted on April 12, 2017, with Mr. J. Florence, Simulator and Training Support Superintendent, who was provided the NRC licensing decisions. A second telephonic exit was conducted on April 21, 2017, with you and other members of your staff.

The examination included the evaluation of five applicants for reactor operator licenses, four applicants for instant senior reactor operator licenses, and three applicants for upgrade senior reactor operator licenses. The license examiners determined that eleven of the twelve applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses have been issued. There were no post-examination comments submitted by your staff. The Enclosure contains details of this report.

No findings were identified during this examination.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice and Procedure," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's

K. Higginbotham

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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/*

Vincent G. Gaddy, Chief  
Operations Branch  
Division of Reactor Safety

Docket No. 50-298  
License No. DPR-46

Enclosure:  
Examination Report 05000298/2017301  
w/Attachment: Supplemental Information

cc w/encl: Electronic Distribution

**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION IV**

Docket: 05000298

License: DPR-46

Report: 05000298/2017301

Licensee: Nebraska Public Power District

Facility: Cooper Nuclear Station

Location: 72676 648A Ave  
Brownville, NE

Dates: March 6 through April 12, 2017

Inspectors: B. Larson, Chief Examiner, Senior Operations Engineer  
K. Clayton, Senior Operations Engineer  
J. Kirkland, Senior Operations Engineer  
C. Steely, Operations Engineer

Approved By: Vincent G. Gaddy, Chief  
Operations Branch  
Division of Reactor Safety

Enclosure

## SUMMARY

ER 05000298/2017301; 03/06/2017 – 04/12/2017; Initial Operator Licensing Examination Report

NRC examiners evaluated the competency of five applicants for reactor operator licenses, four applicants for instant senior reactor operator licenses and three applicants for upgrade senior reactor operator licenses at Cooper Nuclear Station.

The licensee developed the examinations using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 10. The written examination was administered by the licensee on March 16, 2017. NRC examiners administered the operating tests on March 6–10, 2017.

The examiners determined that 11 of the 12 applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses have been issued. Two licenses have been held in abeyance until all requirements have been satisfied.

A. NRC-Identified and Self-Revealing Findings

None.

B. Licensee-Identified Violations

None.

## REPORT DETAILS

### 4. OTHER ACTIVITIES (OA)

#### 4OA5 Other Activities (Initial Operator License Examination)

##### .1 License Applications

###### a. Scope

NRC examiners reviewed all license applications submitted to ensure each applicant satisfied relevant license eligibility requirements. Examiners also audited three of the license applications in detail to confirm that they accurately reflected the subject applicant's qualifications. This audit focused on the applicant's experience and on-the-job training, including control manipulations that provided significant reactivity changes.

###### b. Findings

No findings were identified.

##### .2 Examination Development

###### a. Scope

NRC examiners reviewed integrated examination outlines and proposed examinations submitted by the licensee against the requirements of NUREG-1021. The NRC examination team conducted an onsite validation of the operating tests.

###### b. Findings

NRC examiners provided outline, proposed examination, and post-validation comments to the licensee. The licensee satisfactorily completed comment resolution prior to examination administration.

NRC examiners determined the written examinations and operating tests initially submitted by the licensee were within the range of acceptability expected for a proposed examination.

##### .3 Operator Knowledge and Performance

###### a. Scope

On March 16, 2017, the licensee proctored the administration of the written examinations to all applicants. The licensee staff graded the written examinations, analyzed the results, and presented their analysis to the NRC on March 24, 2017.

The NRC examination team administered the various portions of the operating tests to all applicants on March 6-10, 2017.

b. Findings

No findings were identified.

Eleven of the 12 applicants passed the written examination, and all applicants passed all parts of the operating tests. The final written examinations and post-examination analysis may be accessed in the ADAMS system under the accession numbers noted in the attachment. There were no post-examination comments as indicated in the licensee submittal.

The examination team noted one generic weaknesses associated with applicant senior reactor operator (SRO) performance on the administrative job performance measure (JPM) section of the operating tests. The SRO applicants displayed a knowledge weakness in how to complete NRC Form 361, Reactor Plant Event Notification Worksheet. In one administrative JPM, the applicants were given a set of initial conditions and asked to determine what non-Emergency Action Level notification requirements existed and to complete the required sections of Form 361. Four of seven applicants failed to complete the form in accordance with the answer key.

The licensee identified seven generic weaknesses associated with applicant performance on the written examinations:

1. Reactor power response during RPV level restoration following injection of hot shutdown boron weight – 8 out of 12 missed Question 17 due to knowledge deficiency for this topic.
2. Selecting components to mitigate the effects of a loss of condenser vacuum – 8 out of 12 missed Question 21 due to knowledge deficiency for this topic.
3. Which drywell containment valves reposition upon receipt of a group 6 isolation during containment purge activities – 6 out of 12 missed Question 24 due to knowledge deficiency for this topic.
4. Service air compressor trip and automatic start setpoints – 8 out of 12 missed Question 52 due to knowledge deficiency for this topic.
5. Knowledge of EOP mitigation strategies for high containment hydrogen concentration – 5 out of 7 missed Question 85 due to knowledge deficiency for this topic.
6. Ability to predict the impact of faulty LPRM detector response to APRM operability – 5 out of 7 missed Question 88 due to knowledge deficiency for this topic.
7. Requirements for transferring the on-shift Emergency Director function to the on-call Emergency Director – 5 out of 7 missed Question 100 due to knowledge deficiency for this topic.

Copies of all individual examination reports were sent to the facility Training Manager for evaluation and determination of appropriate remedial training. These generic

weaknesses were entered into the licensee's corrective action program under Condition Report CR-CNS-2017-02953.

.4 Simulation Facility Performance

a. Scope

The NRC examiners observed simulator performance with regard to plant fidelity during examination validation and administration.

b. Findings

No findings were identified.

.5 Examination Security

a. Scope

The NRC examiners reviewed examination security for examination development during both the onsite preparation week and examination administration week for compliance with 10 CFR 55.49 and NUREG-1021. Plans for simulator security and applicant control were reviewed and discussed with licensee personnel.

b. Findings

No findings were identified. However, one minor violation of 10 CFR 55.49, "Integrity of Examinations and Tests," was identified by the NRC during examination administration week. A question was raised by an NRC examiner regarding the ability to access online plant programs and applications from computers located in the simulator during times that examination security was established. The concern expressed was that applicants could potentially gain access to unauthorized materials, such as the out-of-service log, which could aid them during an initial license examination graded scenario. The training department was unaware of this capability and had not put any measures in place to restrict the use of this connectivity during evaluated scenarios. Applicants were not briefed on what they were permitted to access and NRC examiners and booth operators were not made aware to look for any potential misuse of the local area network connectivity. Therefore, the potential for examination security compromise existed during initial license examination training of applicants, and during validation and administration activities. The potential compromise also existed during requalification operating test training and evaluations. The violation is considered minor as initial license examination graded scenarios and simulator job performance measures are proctored activities under constant and direct observations by NRC examiners. It is evaluated that any past attempt to access unauthorized information would have been noticed by an examiner. The licensee contacted Entergy Headquarters (Corporate) who generated Condition Report CR-HQN-2017-00399. Training department staff at Cooper Nuclear Station took timely actions to revise Operations Training Procedure OTP810, "Operations Department Examination Security," which implemented administrative controls for monitoring use of workstations in the simulator control room when access to reference material is allowed under examination security.

## **4OA6 Meetings, Including Exit**

### Exit Meeting Summary

The chief examiner presented the preliminary examination results to Mr. K. Higginbotham, Vice President-Nuclear and CNO, and other members of the staff on March 10, 2017. A telephonic exit was conducted on April 12, 2017, with Mr. J. Florence, Simulator and Training Support Superintendent, who was provided the NRC licensing decisions. A second telephonic exit was conducted on April 21, 2017, with Mr. K. Higginbotham and other members of the staff.

The licensee did not identify any information or materials used during the examination as proprietary.



## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### **Licensee Personnel**

M. Bacon, Training Manager  
J. Florence, Simulator and Training Support Superintendent  
T. Mascareno, Nuclear Instructor

#### **NRC Personnel**

P. Voss, Senior Resident Inspector

### **ADAMS DOCUMENTS REFERENCED**

Accession No. ML17122A087 - FINAL WRITTEN EXAMS (Do Not Release until March 16, 2019)  
Accession No. ML17122A085 - FINAL OPERATING TEST (Do Not Release until March 16, 2019)  
Accession No. ML17122A088 - POST EXAM ANALYSIS (Do Not Release until March 16, 2019)

K. Higginbotham

COOPER NUCLEAR STATION – NRC EXAMINATION REPORT 05000298/2017301 –  
MAY 19, 2017

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