



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION IV  
1600 E. LAMAR BLVD  
ARLINGTON TX 76011-4511

January 20, 2016

Mr. Shane M. Marik  
Site Vice President and Chief Nuclear Officer  
Omaha Public Power District  
Fort Calhoun Station FC-2-4  
P.O. Box 550  
Blair, NE 68023-0550

**SUBJECT: FORT CALHOUN STATION – NRC EXAMINATION REPORT 05000285/2015301**

Dear Mr. Marik:

On December 10, 2015, the U.S. Nuclear Regulatory Commission (NRC) completed an initial operator license examination at Fort Calhoun Station. The enclosed report documents the examination results and licensing decisions. The preliminary examination results were discussed on December 10, 2015, with Mr. L. Cortopassi, Vice President and Chief Nuclear Officer, and other members of your staff. A telephonic exit meeting was conducted on January 13, 2016, with Mr. M. Joe, Initial License Training Supervisor, who was provided the NRC licensing decisions.

The examination included the evaluation of three applicants for reactor operator licenses, four applicants for instant senior reactor operator licenses, and two applicants for upgrade senior reactor operator licenses. The license examiners determined that seven of the applicants satisfied the requirements of 10 CFR Part 55 and the appropriate licenses have been issued. There was one post examination comment submitted by your staff. Enclosure 1 contains details of this report and Enclosure 2 summarizes post examination comment resolution.

No findings were identified during this examination.

In accordance with 10 CFR 2.390 of the NRC's "Rules of Practice," 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 the NRC's

S. Marik

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Sincerely,

*/RA/*

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

Docket No. 50-285  
License No. DPR-40

Enclosures:

1. Examination Report 05000285/2015301  
w/Attachment
2. Post Examination Comment Resolution

cc w/encls: Electronic Distribution

S. Marik

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Letter to Shane M. Marik from Vincent G. Gaddy, dated January 20, 2016

SUBJECT: FORT CALHOUN STATION – NRC EXAMINATION REPORT 05000285/2015301

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**U.S. NUCLEAR REGULATORY COMMISSION**

**REGION IV**

Docket: 05000285

License: DPR-40

Report: 05000285/2015301

Licensee: Omaha Public Power District

Facility: Fort Calhoun Station

Location: Fort Calhoun Station FC-2-4  
P.O. Box 550  
Fort Calhoun, NE 68023-0550

Dates: December 7, 2015, through January 13, 2016

Inspectors: C. Osterholtz, Chief Examiner, Senior Operations Engineer  
M. Bloodgood, Operations Engineer  
N. Hernandez, Resident Inspector  
J. Kirkland, Senior Operations Engineer

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

## SUMMARY

ER 05000285/2015301; 12/07/2015 – 01/13/2016; Fort Calhoun Station; Initial Operator Licensing Examination Report

NRC examiners evaluated the competency of three applicants for reactor operator licenses, four applicants for instant senior reactor operator licenses, and two applicants for upgrade senior reactor operator licenses at Fort Calhoun 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 December 14, 2015. NRC examiners administered the operating tests on December 7-10, 2015.

The examiners determined that seven of the applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses, as well as two denial letters, have been issued

**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 two 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 draft examinations submitted by the licensee against the requirements of NUREG-1021. The NRC examination team conducted an on-site validation of the operating tests.

###### b. Findings

NRC examiners provided outline, draft 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 December 14, 2015, the licensee proctored the administration of the written examinations to all none applicants. The licensee staff graded the written examinations,

analyzed the results, and presented their analysis and post examination comments to the NRC on December 21, 2015.

The NRC examination team administered the various portions of the operating tests to all applicants on December 7-10, 2015.

b. Findings

No findings were identified.

Eight of the nine applicants passed the written examination and eight of the nine applicants passed all portions of the operating test. The final written examinations, and post examination analysis and comments, may be accessed in the ADAMS system under the accession numbers noted in the attachment. There was one post-examination comment as indicated in the licensee submittal.

The examination team noted the following generic weakness:

- A majority of operating crews were unable to successfully isolate a raw water leak prior to exceeding component cooling water temperature reactor trip criteria limits even though there was ample time and resources to do so. The licensee generated Condition Report CR-2015-13846 to address this issue.
- A majority of senior reactor operator applicants were unable to determine that shutdown cooling discharge was unavailable with HCV-347, Shutdown Cooling Loop 2 Isolation Valve, failed closed. The licensee generated Condition Report CR-2015-13845 to address this issue.

.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.

**4OA6 Meetings, Including Exit**

The chief examiner presented the preliminary examination results to Mr. L. Cortopassi, Vice President and Chief Nuclear Office, and other members of the staff on December 10, 2015. A telephonic exit was conducted on January 13, 2016, between Mr. C. Osterholtz, Chief Examiner, and Mr. M. Joe, Initial License Training Supervisor.

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

## **SUPPLEMENTAL INFORMATION**

### **KEY POINTS OF CONTACT**

#### **Licensee Personnel**

L. Cortopassi, Site Vice President  
T. Barry, Manager, Operations Services  
A. Berck, Examination Author  
B. Blume, Manager, Regulatory Assurance  
M. Chambers, Initial License Training Instructor  
S. Dean, Plant Manager  
R. Hugenroth, Manager, Nuclear Oversight  
M. Joe, Manager, Operations Training  
R. Peter, Initial License Training Instructor  
R. Rem, Initial License Training Instructor  
S. Swanson, Operations Director  
T. Uehling, Manager, Training

#### **NRC Personnel**

M. Schneider, Senior Resident Inspector

### **ADAMS DOCUMENTS REFERENCED**

Accession No. ML16012A362 - FINAL WRITTEN EXAMS (withheld two years)  
Accession No. ML16012A365 - FINAL OPERATING TEST  
Accession No. ML16012A367 - POST EXAM ANALYSIS-COMMENTS

NRC Resolution to the Fort Calhoun Station Post Examination Comments

A complete text of the licensee's post examination analysis and comments can be found in ADAMS under Accession Number ML16012A367.

**SRO QUESTION # 83**

Given the following conditions:

- Refueling Operations are underway in the Spent Fuel Pool.
- An irradiated Fuel Assembly is being moved from the Upender to its storage location.
- During transition, bubbles are seen rising from the Fuel Assembly. □ AOP-08, Fuel Handling Incident, has been entered.

As the Fuel Handling Supervisor, where will you direct this Fuel Assembly be stored?

Stored in...

- A. ...a new fuel storage rack.
- B. ...the Region 2 storage location designated in the core offload sequence.
- C. ...the horizontal position in the Upender.
- D. ...the lowered position of the New Fuel Elevator.

Answer: C

**LICENSEE COMMENT:** This question addresses the appropriate and approved storage locations for a damaged fuel assembly when moving fuel in the spent fuel pool. The question contains 2 correct answers in accordance with OI-FH-1 Precaution 21. Both B and C choices are equally correct, as they are both listed in the procedure's precautions. This procedure list 3 possible locations to place the damaged fuel assembly, but one of the locations (any location in Region 1) is included in the second option (any empty storage location in the spent fuel pool). Choice B is an empty location in Region 2, which is located in the Spent Fuel Pool, which makes it a subset of "any empty cell in the Spent Fuel Pool"; this is supported by Precaution 21 of OIFH-1. Choice C is still a correct answer, since the horizontal position of the Upender is also listed as an acceptable storage location; this is supported by Precaution 21 of OI-FH-1. Neither choice conflicts with the other and both are supported by the procedure. The procedure (OI-FH-1) is applicable to the conditions in the stem and is not in conflict with any other station procedural guidance. It is recommended that both choices are accepted as equally correct and the exams regraded accordingly. Additionally, the stem of the question does not state where

the fuel assembly is located when the bubbles are seen; this omission from the stem prevents either of the correct choices from being “more appropriate” than the other answer. The question is otherwise clearly stated, supported by lesson material and procedures, is objective based, and operationally valid. The question will be modified before addition to the exam bank. Additionally, the procedures could be made more clear by eliminating “Any empty cell in Region 1” from the list of storage locations, since it is included in the second option. The procedure does not state that the listed acceptable locations are in order of preference. A procedure enhancement is recommended, and has been entered into the corrective action program.

**NRC RESOLUTION:** Question #83 asks the applicant to determine, in the context of a core offload in progress, where an irradiated fuel assembly should be placed once it is discovered to be potentially damaged while “being moved from the Upender to its storage location.” Distractors A & D can be immediately eliminated as the new fuel equipment is reserved for the storage and handling of new fuel only. The applicant must then determine which location, either the predesignated Region 2 location in the Spent Fuel Pool or the horizontal position in the Upender, is where the applicant would “direct this Fuel Assembly be stored.”

The independent review team determined that the question stem is ambiguous and lacks sufficient detail to formulate a valid written examination question. Specifically, the information as to the location of the fuel assembly at the time it was discovered to be damaged is not provided. This information would be considered essential when determining which location is the correct location for the given situation, as it is expected that the Fuel Handling Supervisor would, at least initially, direct that the assembly be placed in the closest safe location until further evaluation could be conducted. While it may be procedurally acceptable for a damaged fuel assembly to be placed in either location, the question does not ask which of the answer choices identifies an acceptable fuel storage location for a damaged assembly. The question presents a specific scenario and asks where the applicant would direct the damaged assembly to be stored. The fuel assembly cannot be placed in both locations, and each location could be considered either correct or incorrect depending on the initial location of the assembly, therefore two correct answers cannot be accepted. The determining factor that would provide distinction between the two answers is not made available in the stem. Therefore the question cannot be answered as written and should be deleted from the examination.

Ultimately, the applicants were forced to make an assumption to answer the question. Applicants are directed during the NUREG 1021 Appendix E brief to not make any assumptions when answering a written examination question and to ask clarifying questions if necessary. In the case of Question #83, no questions were asked by any applicants. Considering that the question stem was ambiguous and no clarifying questions were asked by any applicants, the independent review team concluded that Question #83 be deleted from the examination.