



**UNITED STATES  
NUCLEAR REGULATORY COMMISSION**  
REGION IV  
1600 EAST LAMAR BOULEVARD  
ARLINGTON, TEXAS 76011-4511

April 30, 2025

Fadi Diya, Senior Vice President  
and Chief Nuclear Officer  
Ameren Missouri  
Callaway Plant  
8315 County Road 459  
Steedman, MO 65077

SUBJECT: CALLAWAY PLANT – NRC EXAMINATION REPORT 05000483/2025301

Dear Fadi Diya:

On April 23, 2025, the U.S. Nuclear Regulatory Commission (NRC) completed an initial operator license examination at Callaway Plant. The enclosed report documents the examination results and licensing decisions. The preliminary examination results were discussed on March 13, 2025, with Travis Hart, Senior Director, Nuclear Operations, and other members of your staff. A telephonic exit meeting was conducted on April 23, 2025, with Clay Cottingham, Exam Supervisor, who was provided the NRC licensing decisions.

The examination included the evaluation of four applicants for reactor operator licenses, five applicants for instant senior reactor operator licenses, and one applicant for an upgrade senior reactor operator license. The license examiners determined that nine of the ten 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.

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 10 CFR 2.390, "Public Inspections, Exemptions, Requests for Withholding."

Sincerely,



Signed by Gepford, Heather J.  
on 04/30/25

Heather J. Gepford, Ph.D., Chief  
Operations Branch  
Division of Operating Reactor Safety

Docket No. 05000483  
License No. NPF-30

Enclosures:

1. Examination Report 05000483/2025301
2. NRC Post-Examination Comment Resolution

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DOCUMENT NAME: CALLAWAY PLANT – NRC EXAMINATION REPORT 05000005000483/2025301

ADAMS ACCESSION NUMBER: **ML25118A239**

☒ SUNSI Review: ADAMS: ☐ Non-Publicly Available ☒ Non-Sensitive Keyword:  
By: NAH ☒ Yes ☐ No ☒ Publicly Available ☐ Sensitive NRR-079

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**U.S. NUCLEAR REGULATORY COMMISSION**  
**Examination Report**

Docket Number: 05000483

License Number: NPF-30

Report Number: 05000483/2025301

Enterprise Identifier: L-2025-OLL-0013

Licensee: Union Electric Company

Facility: Callaway Plant

Location: Steedman, Missouri

Inspection Dates: March 10, 2025, to April 23, 2025

Inspectors: N. Hernandez, Senior Operations Engineer, Chief Examiner  
J. Kirkland, Senior Operations Engineer  
C. Harrington, Operations Engineer  
P. Breidenbach, Operations Engineer

Approved By: Heather J. Gepford, Ph.D., Chief  
Operations Branch  
Division of Operating Reactor Safety

Enclosure

## SUMMARY

Examination Report 05000483/2025301; March 10 – April 23, 2025; Callaway Plant; Initial Operator Licensing Examination Report

The NRC examiners evaluated the competency of four applicants for reactor operator licenses, five applicants for instant senior reactor operator licenses, and one applicant for an upgrade senior reactor operator license at Callaway Plant.

The NRC developed the examinations using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 12. The written examination was administered by the licensee on March 19, 2025. The NRC examiners administered the operating tests on March 10-13, 2025.

The NRC examiners determined that nine of the ten applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses have been issued.

A. NRC-Identified and Self-Revealing Findings

None.

B. Licensee-Identified Violations

None.

## REPORT DETAILS

### OTHER ACTIVITIES – INITIAL LICENSE EXAM

#### .1 License Applications

##### a. Scope

The NRC examiners reviewed all license applications submitted to ensure each applicant satisfied relevant license eligibility requirements. The NRC 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

The NRC examiners developed the outlines, operating tests, and written examinations using the requirements of NUREG-1021, Revision 12. The NRC examiners conducted an onsite validation of the operating tests the week of February 3, 2025.

##### b. Findings

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

The 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 19, 2025, the licensee proctored the administration of the written examinations to all ten applicants. The licensee staff graded the written examinations, analyzed the results, and presented their analysis and post-examination comments to the NRC on March 27, 2025.

The NRC examination team administered the various portions of the operating tests to all applicants from March 10-13, 2025.

b. Findings

No findings were identified.

Nine applicants passed the written examination and all parts of the operating test. The final examinations and post-examination analysis and comments may be accessed in the ADAMS system under the accession numbers noted in the attachment.

The examination team noted no generic weaknesses associated with applicant performance on the administrative, dynamic scenario, simulator job performance measures, or in-plant job performance measures sections of the operating tests. Post-examination analysis revealed seven generic weaknesses associated with applicant performance on the written examination. The weaknesses were associated with plant status control, use of post-accident instrumentation, pressurizer level control during abnormal operations, high temperatures in the containment iodine removal system, accidental liquid radwaste releases, control room evacuation during an alert, and technical specification bases for safety limits. These weaknesses were captured in the licensee's training program as training requests 2025-118, 2025-119, 2025-120, 2025-121, and 2025-122. Copies of all individual examination reports were sent to the facility training manager for evaluation and determination of appropriate remedial training.

.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.

## **EXIT MEETINGS AND DEBRIEFS**

### Exit Meeting Summary

The chief examiner presented the preliminary examination results to Clay Cottingham, Exam Supervisor, on April 22, 2025. A telephonic exit was conducted on April 23, 2025, between Nicholas Hernandez, chief examiner, and Clay Cottingham, Exam Supervisor.

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

## **ADAMS DOCUMENTS REFERENCED**

Accession No. ML25115A256 - FINAL WRITTEN EXAMS

Accession No. ML25115A254 - FINAL OPERATING TEST

Accession No. ML25115A258 - POST-EXAMINATION ANALYSIS-COMMENTS



## NRC Resolution to the Callaway Plant Post-Examination Comment

A complete text of the licensee's post-examination analysis and comments can be found in ADAMS under Accession Number ML25115A258.

### **SRO QUESTION # 77**

**COMMENT:** The facility's recommendation is to remove Question 77 from the examination on the basis that per NUREG 1021, Rev 12, ES-4.4 C.3.c first bullet, "a question with an unclear stem that confused the applicants or did not provide all the necessary information" is grounds for NRC consideration for exam changes. Per ES-4.2 section O.15.a, distractors should follow grammatically from the stem. In this case the keyed answer and two distractors did not follow this rule.

The stem of the question asks, "What actions are required per Tech specs?" Three of the four available answers, including the correct keyed answer, only provide ONE action, not two or more as indicated by the stem (by the word "actions"). The applicant who answered incorrectly (based on the key) selected the one available answer that provided TWO actions which grammatically follows what the stem asked.

This difference in plural vs singular tense resulted in [an] applicant misunderstanding the intent of the question and the validity of the answer choices, leading the applicant to select the only choice with two actions. Proper stem wording would have been "What action(s) ... " The question has been revised in Callaway's Exam Bank.

**NRC RESOLUTION:** The NRC disagrees with the licensee's position that question 77 should be removed from the examination due to an unclear stem that confused applicants.

The full context of the facility's partially quoted first bullet of NUREG 1021, Revision 12, ES-4.4, Section C.3.c. is: "The NRC will consider examination changes for the following types of errors, if identified and adequately justified by the facility licensee or an applicant: a question with an unclear stem that confused the applicants or did not provide all the necessary information **(to assist in determining whether an unclear stem confused the applicants, closely evaluate any applicant questions asked during the examination; also evaluate the question stem to determine whether the information provided could reasonably result in the applicant misunderstanding the intent of the question or the validity of the answer choices).**" [Emphasis added.]

The NRC notes that the applicants were briefed on the guidelines for taking NRC exams specified in NUREG 1021, ES-1.2. Specifically, ES-1.2, B.7, states, "If you have any questions concerning the intent or the initial conditions of a question, do not hesitate to ask them before answering the question... The questions that you asked during the examination and the answers you were given are documented and taken into consideration during the grading process." Additionally, B.8 states, "...answer all questions based on actual plant operation, procedures, and references."

Only one question was asked during exam administration regarding question 77, and that question asked for clarification on indicating lights on the attached reference. Additionally, the applicant did not ask any questions regarding question 77 during exam administration. Five of six applicants correctly answered the question, demonstrating that the stem provided the

necessary information to understand the intent of the question as well as the validity of the answer choices.

The licensee pointed out that, based on NUREG 1021, ES-4.2, section D., "Instructions for Construction Multiple-Choice Questions," bullet 15.a, distractors should follow grammatically from the stem. In this case the keyed answer and two distractors did not follow this rule with respect to subject-verb agreement. The NRC agrees with the NUREG 1021 guidance that questions should avoid "specific determiners" that give clues to the final answer and that the question stem would have been better stated as, "What action(s) is/are required by technical specifications?" However, the NRC disagrees that the grammatical construct of the stem misled applicants about the intent of the question in relation to the answer choices.

The NRC believes that when asking the question, "What actions are required?" and some answer choices have singular actions, it is readily apparent that an answer with singular actions could be a correct answer, especially when three of the four answer choices have singular actions. The question was designed to test knowledge of technical specification actions based on given plant conditions. Five of six applicants correctly weighed the technical information in the stem and answered the question correctly, which demonstrates the question was not significantly flawed. Additionally, if an applicant had concerns that the answer they believed to be correct based on their knowledge of the subject matter seemed incorrect based on the subject-verb agreement of the stem and that answer, a clarifying question should have been asked.

As a result, the NRC concluded that the unintended subject-verb agreement discrepancy between the stem and the answer choices should not have reasonably resulted in an applicant misunderstanding the technical intent of the question or the validity of the answer choices. Therefore, question 77 will remain a valid question on the examination, with answer choice A as the correct answer.