



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

June 13, 2013

Mr. Adam C. Heflin, Senior Vice
President and Chief Nuclear Officer
Union Electric Company
P.O. Box 620
Fulton, MO 65251

SUBJECT: CALLAWAY PLANT - NRC EXAMINATION REPORT 05000483/2013301

Dear Mr. Heflin:

On March 26, 2013, 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 operating test results were discussed on March 22, 2013, with Mr. M. Hall, Director Nuclear Operations; Ms. S. Banker, Director Training; and other members of your staff. A telephonic meeting was conducted on May 1, 2013, with Mr. B. Cox, Senior Director Nuclear Operations, and other members of your staff who were provided preliminary examination results and the NRC-identified violation. A telephonic exit meeting was conducted on May 2, 2013, with Mr. L. Wilhelm, Operations Supervisor - Training, who was provided the NRC licensing decisions.

The examination included the evaluation of four applicants for reactor operator licenses, three applicants for instant senior reactor operator licenses, and three applicants for upgrade senior reactor operator licenses. The license examiners determined that three of the applicants satisfied the requirements of 10 CFR Part 55. One license has been issued and two licenses are being held in abeyance by NRC Region IV until the resolution of a written examination appeal. 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.

Additionally, an NRC-identified Severity Level IV violation is listed in Section 40A5 of this report. The NRC is treating this violation as a non-cited violation consistent with Section 6.4 of the NRC Enforcement Policy because it is a Severity Level IV violation and because it is entered into your corrective action program. If you contest the violation or the significance of the non-cited violation, you should provide a response within 30 days of the date of this inspection report, with the basis for your denial, to the U.S. Nuclear Regulatory Commission, ATTN: Document Control Desk, Washington, D.C. 20555-0001, with copies to the Regional Administrator,

A. Heflin

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U.S. Nuclear Regulatory Commission, Region IV, 1600 E. Lamar Blvd, Arlington, Texas, 76011-4125; the Director, Office of Enforcement, U.S. Nuclear Regulatory Commission, Washington, D.C. 20555-0001; and the NRC Resident Inspector at the facility.

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 NRC's document 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: 50-483
License: NPF-30

Enclosures:

1. NRC Examination Report 05000483/2013301
w/Attachment: Supplemental Information
2. Examination Comments

cc: Electronic Distribution for Callaway Plant

ADAMS Accession No.: **ML13165A107**

SUNSI Review Completed: <u> BTL </u> ADAMS: <input checked="" type="checkbox"/> Yes <input type="checkbox"/> No Initials: <u> BTL </u>					
<input checked="" type="checkbox"/> Publicly Available <input type="checkbox"/> Non-Publicly Available <input type="checkbox"/> Sensitive <input checked="" type="checkbox"/> Non-Sensitive					
KEYWORD: SUNSI REVIEW COMPLETE					
OE:OB	OE:OB	OE:OB	SOE:OB	C:PBB	C:OB
GApger	TFarina	DStrickland	BLarson	NOKeefe	VGaddy
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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket: 50-483

License: NPF-30

Report: 05000483/2013301

Licensee: Union Electric Company

Facility: Callaway Plant

Location: Junction Highway CC and Highway O

Dates: March 18, 2013 – May 2, 2013

Inspectors: B. Larson, Chief Examiner, Senior Operations Engineer
G. Apper, Operations Engineer
T. Farina, Operations Engineer
D. Strickland, Operations Engineer

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

SUMMARY OF FINDINGS

ER 05000483/2013301; March 18, 2013 – May 2, 2013; Callaway Plant; Initial Operator Licensing Examination Report.

NRC examiners evaluated the competency of four applicants for reactor operator licenses, three applicants for instant senior reactor operator licenses, and three applicants for upgrade senior reactor operator licenses at Callaway Plant.

The licensee developed the examination and test using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1. The written examination was administered by the licensee on March 26, 2013. NRC examiners administered the operating test from March 18 through 22, 2013.

The examiners determined that three of the applicants satisfied the requirements of 10 CFR Part 55. One license has been issued and two licenses are being held in abeyance by NRC Region IV until the resolution of a written examination appeal.

A. NRC-Identified and Self-Revealing Findings

Cornerstone: Mitigating Systems

- Severity Level IV. The examination team identified a Severity Level IV, non-cited Violation (NCV), of Title 10 CFR Part 55.49, "Integrity of Examination and Tests." Specifically, the licensee failed to ensure that Door 143, Entrance to Simulator Instructor Booth, remained closed/latched upon personnel exiting the simulator. This resulted in the failure to ensure examination security requirements were met as required by procedures TDP-ZZ-00019, NRC License Examination Security and Integrity, Revision 019, and TDP-ZZ-00019, Appendix A, Simulator Security Guidelines, Revision 027. The examination compromise existed because personnel not signed onto the examination security agreement could have gained access to the simulator where examination materials were in plain view. Therefore, unauthorized personnel could have gained knowledge of initial license examination materials during the conduct of the operating test portion of the initial license examination.

The failure to ensure the requirements of procedures TDP-ZZ-00019 and TDP-ZZ-00019, Appendix A, were met resulted in the failure to establish proper examination security. Failure to meet the requirements of approved examination security procedures is a performance deficiency. This performance deficiency was determined to be Severity Level IV because it fits the SL-IV example of Enforcement Policy Section 6.4.d, "Violation Examples: Licensed Reactor Operators." This section states, "Severity Level IV violations involve, for example: a non-willful compromise ... of an application, test, or examination required by 10 CFR Part 55." The performance deficiency could have impacted the regulatory process if licensing decisions were made with applicants having prior knowledge of examination materials. However, since the simulator door was only unlatched for a short period of time and all applicants were sequestered under the supervision of licensee examination team personnel, it is deemed that there was no actual effect on the equitable and consistent administration of the

exam as a result of the compromise. This is a violation of 10 CFR 55.49, "Integrity of Examination and Tests." There are no cross-cutting aspects assigned to traditional enforcement violations.

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 four 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 developed the written exam outline and reviewed all other outlines, draft examination, and test submitted by the licensee against the requirements of NUREG-1021. The NRC examination team conducted an onsite validation of the operating test.

b. Findings

No findings were identified.

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 examination and operating test initially submitted by the licensee were within the range of acceptability expected for a proposed examination. However, it was noted that both the proposed written examination and operating test contained many administrative errors and the licensee must improve their draft submittals in the future.

.3 Operator Knowledge and Performance

a. Scope

The NRC examination team administered the various portions of the operating test to all applicants on March 18-22, 2013.

On March 26, 2013, the licensee proctored the administration of the written examination to all ten applicants. The original written examination administration date was March 25, 2013, but was delayed one day due to inclement weather. The licensee requested, and NRC Region IV management approved, the one day delay via email. The licensee staff graded the written examinations, analyzed the results, and presented their analysis to the NRC on March 28, 2013.

b. Findings

No findings were identified.

Eight applicants passed the written examination and five applicants passed all parts of the operating test. The final written examination, final operating test, and post examination analysis and comments may be accessed in the ADAMS system under the accession numbers noted in the Supplemental Information attachment. (Public release of the final written examination has been delayed for 24 months from the date of administration at the request of the licensee.) There was one post examination comment submitted by the licensee. The post examination comment recommendation was rejected by the NRC and no changes were made to the written examination answer key. See Enclosure 2 for the question, licensee comment and recommendation, and the NRC resolution.

The examination team noted the following generic weaknesses during administration of the operating test:

- (1) One of four RO applicants, two of three SRO-Instant applicants, and two of three SRO-Upgrades failed one or more portions of the operating test.
- (2) The majority of SRO applicants demonstrated weak performance on one Administrative Job Performance Measure; "Review Shiftly Logs."
- (3) Performance of the applicant crews in successfully accomplishing Critical Tasks (CT's) was weak, including SRO-Upgrades. Specifically, crew performance was weak on the following CT's:
 - a. Establishing Auxiliary Feedwater prior to meeting bleed and feed criteria.
 - b. Isolating feedwater to a ruptured steam generator.
 - c. Starting an Emergency Diesel Generator during a loss of all AC event.

While not a generic weakness, the examination team did note that the licensee failed to retain the original simulator performance data (e.g., system pressures, temperatures, and levels) generated during the dynamic operating test until the examination results are final. This requirement is identified in NUREG-1021, Section ES-302, as well as the Notification of NRC Initial Operator Licensing Examination letter sent to Callaway Plant.

The examination team noted the following generic weakness on the written examination:

- (1) Of the three RO applicants that passed the written examination, two received a score of 81 percent and one received a score of 80 percent.

Copies of all individual examination reports were sent to the facility Training Director 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 during both the onsite validation 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

1. Failure to Maintain Initial Operator Licensing Examination Integrity

A compromise of examination security occurred during administration of the simulator scenario portion of the operating test that resulted in the NRC-identified non-cited violation documented in this section. The finding is being treated under traditional enforcement because the violation, if not found or corrected, had the potential to impact the ability of the NRC to perform its regulatory oversight function. Specifically, licensing decisions could have been made based on a compromised examination.

Introduction. The examination team identified a Severity Level IV, non-cited violation (NCV), of Title 10 CFR Part 55.49, "Integrity of Examination and Tests." Specifically, the licensee failed to ensure that Door 143, Entrance to Simulator Instructor Booth, remained closed/latched upon personnel exiting the simulator. This resulted in the failure to ensure examination security requirements were met as required by procedures TDP-ZZ-00019, NRC License Examination Security and Integrity, Revision 019, and TDP-ZZ-00019, Appendix A, Simulator Security Guidelines, Revision 027. The examination compromise existed because personnel not signed onto the examination security agreement could have gained access to the simulator where examination materials were in plain view. Therefore, unauthorized personnel could have gained knowledge of initial license examination materials during the conduct of the operating test portion of the initial license examination.

Description. On March 20, 2013, the NRC examination team was conducting the simulator scenario portion of the operating test. During a break for lunch, an NRC examination team member found Door 143, Entrance to Simulator Instructor Booth, was not fully closed/latched. When the team member entered the simulator through the unsecured door, he observed the simulator instructor booth and floor unmanned. He also observed examination material laid out in the simulator instructor booth. The team member then informed the NRC chief examiner of the examination security compromise. The chief examiner immediately informed licensee personnel who assumed control of the simulator door. The licensee entered this issue into their corrective action program as Callaway Action Request 2013-01940.

Analysis. The failure to ensure the requirements of procedures TDP-ZZ-00019 and TDP-ZZ-00019, Appendix A, were met resulted in the failure to establish proper examination security. Failure to meet the requirements of approved examination security procedures is a performance deficiency. This performance deficiency was determined to be Severity Level IV because it fits the SL-IV example of Enforcement Policy Section 6.4.d, "Violation Examples: Licensed Reactor Operators." This section states, "Severity Level IV violations involve, for example: a non-willful compromise ... of an application, test, or examination required by 10 CFR Part 55." The performance deficiency could have impacted the regulatory process if licensing decisions were made with applicants having prior knowledge of examination materials. However, since the simulator door was only unlatched for a short period of time and all applicants were sequestered under the supervision of licensee examination team personnel, it is deemed that there was no actual effect on the equitable and consistent administration of the exam as a result of the compromise. This is a violation of 10 CFR 55.49, "Integrity of Examination and Tests." There are no cross-cutting aspects assigned to traditional enforcement violations.

Enforcement. Title 10 CFR Part 55.49, "Integrity of Examination and Tests," states, in part, "Applicants, licensees, and facility licensees shall not engage in any activity that compromises the integrity of any application, tests, or examination required by this part. The integrity of a test or examination is considered compromised if any activity, regardless of intent, affected, or, but for detection, would have affected the equitable and consistent administration of the test or examination." Contrary to the above, the licensee engaged in an activity that compromised the integrity of an application, test, or examination required by this part. Specifically, the licensee failed to ensure the requirements of procedures TDP-ZZ-00019, NRC License Examination Security and Integrity, Revision 019, and TDP-ZZ-00019, Appendix A, Simulator Security Guidelines, Revision 027, were met during administration of the simulator scenario portion of the operating test. If not for detection, this could have affected the equitable and consistent administration of the operating test. This violation is being treated as an NCV, consistent with Section 6.4, "Licensed Reactor Operators," of the NRC Enforcement Policy and is designated as Severity Level IV, NCV 05000483/2013301-01, "Failure to Maintain Initial Licensing Examination Integrity." The performance deficiency was entered into the licensee's corrective action program as AR-2013-01940.

40A6 Meetings, Including Exit

Exit Meeting Summary

The chief examiner presented the preliminary operating test results to Mr. M. Hall, Director Nuclear Operations, Ms. S. Banker, Director Training, and other members of the staff on March 22, 2013. A telephonic meeting was conducted on May 1, 2013, with Mr. B. Cox, Senior Director Nuclear Operations; Mr. M. Hall, Director Nuclear Operations; Ms. S. Banker, Director Training; and other members of the staff who were provided preliminary examination results and the NRC identified violation. A telephonic exit meeting was conducted on May 2, 2013, with Mr. L. Wilhelm, Operations Supervisor - Training, who was provided the NRC licensing decisions.

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

ATTACHMENT: SUPPLEMENTAL INFORMATION

SUPPLEMENTAL INFORMATION

KEY POINTS OF CONTACT

Licensee Personnel

S. Banker, Director Training
L. Wilhelm, Operations Supervisor - Training

NRC Personnel

T. Hartman, Senior Resident Inspector

ADAMS DOCUMENTS REFERENCED

Accession No. ML13160A004 - FINAL WRITTEN EXAM (Delayed Release for 24 Months)
Accession No. ML13160A003 - FINAL OPERATING TEST
Accession No. ML13160A002 - POST EXAM ANALYSIS AND COMMENTS

LIST OF ITEMS OPENED, CLOSED, AND DISCUSSED

Opened and Closed

05000483/2013301-01 SL-IV Failure to Maintain Initial Operator Licensing Examination Integrity (Section 40A5.5.b.1)

NRC Review of Callaway Plant Post Written Examination Comments

Note: A complete text of the licensee's post examination analysis and comments can be found in ADAMS under Accession Number ML 13160A002.

Question 83:

The plant is operating at 100% when the Shift Manager enters OTO-ZZ-00001, Control Room Inaccessibility, due to heat and smoke in the Control Room.

The Control Room Supervisor (CRS) will direct the Control Room Operators to _____ (1) _____ before they leave the Control Room to go to the _____ (2) _____.

- A. (1) trip the main turbine
(2) Auxiliary Shutdown Panel
- B. (1) trip all reactor coolant pumps
(2) Auxiliary Shutdown Panel
- C. (1) trip the main turbine
(2) Auxiliary Feedwater Pump rooms
- D. (1) trip all reactor coolant pumps
(2) Auxiliary Feedwater Pump rooms

Key Answer: D

Licensee Comments for Question 83:

It is agreed that the answer to part (1) of the question is "Trip all Reactor Coolant Pumps" which eliminates answers "A" and "C".

It is agreed that if the students assume there is a Fire in the MCR then the CRS would go to the Auxiliary Feedwater Pump Rooms, so answer "D" is correct as validated.

However, if the students do NOT assume there is a Fire in the MCR then OTO-ZZ-00001 step 4 RNO would direct the CRS and Balance of Plant Operator to perform Attachment G. This attachment sends both of these operators to the Auxiliary Shutdown Panel. This would make answer "B" correct.

- Justification for assuming there is no fire: When determining EAL's, the students are trained that smoke without indication of a fire is classified as a "Toxic gas" which is separate from the classification of "Fire or Explosion".
- Without the stem explicitly stating the MCR was being evacuated due to a "FIRE" the students that missed the question assumed there was no fire.

NRC Resolution of Question 83:

The NRC reviewed the explanations for the correct answer and distracters from the question worksheet. In addition, procedure OTO-ZZ-00001, Control Room Inaccessibility, was also reviewed in detail.

The issue to the licensee's comment is whether the question provides sufficient information for the applicant to reasonably determine whether or not a fire exists in the Control Room. The NRC agrees with the licensee that Step 4 (Response Not Obtained) of the procedure would direct the CRS to the Auxiliary Shutdown Panel if it were determined that the Control Room evacuation was NOT due to a fire. However, the NRC has concluded that the information in the stem of the question that states procedure OTO-ZZ-00001 was entered "due to heat and smoke in the Control Room" is sufficient for the applicant to reasonably determine that a fire exists in the Control Room. Therefore, the NRC rejects the licensee's recommendation to accept "B" as a correct answer. No changes to the written examination answer key were made as a result of this comment.