UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
612 EAST LAMAR BLVD, SUITE 400
ARLINGTON, TEXAS 76011-4125

August 7, 2009

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

SUBJECT: CALLAWAY PLANT - NRC EXAMINATION REPORT 05000483/2009301

Dear Mr. Heflin:

On June 25, 2009, the U.S. Nuclear Regulatory Commission (NRC) completed an initial operator license examination at Callaway Plant. The enclosed report documents the examination findings and licensing decisions. The preliminary examination findings were discussed on June 25, 2009, with Mr. David Neterer, Plant Director, and other members of your staff. A telephonic exit meeting was conducted on July 7, 2009, with Mr. Ricky Tiefenauer, who was provided the NRC licensing decisions.

The examination included the evaluation of five 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 ten of the eleven applicants satisfied the requirements of 10 CFR Part 55, and the appropriate licenses have been issued. There were two post examination comments submitted by your staff. Enclosure 1 contains details of this report and Enclosure 2 summarizes post examination comment resolution.

No findings of significance 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 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/

Ryan E. Lantz, Chief
Operations Branch
Division of Reactor Safety

Docket: 50-483
License: NPF-30

Enclosure: 1. NRC Examination Report 05000483/2009301
2. NRC Post Examination Comment Resolution

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SUNSI Review Completed: __GWA__ ADAMS: ☒ Yes ☐ No Initials: __GWA__
☒ Publicly Available ☐ Non-Publicly Available ☐ Sensitive ☒ Non-Sensitive

OE:OB	SOE:OB	SOE:OB	SOE:OB	C:PBB	C:OB
GApger	BLarson	TMcKernon	SGarchow	VGaddy	RLantz
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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket:	50-483
License:	NPF-30
Report:	05000483/2009301
Licensee:	AmerenUE
Facility:	Callaway Plant
Location:	Junction Highway CC and Highway O Fulton, Missouri
Dates:	June 19 - July 7, 2009
Inspectors:	G. Apger, Chief Examiner B. Larson, Senior Operations Engineer T. McKernon, Senior Operations Engineer S. Garchow, Senior Operations Engineer
Approved By:	Ryan Lantz, Chief Operations Branch Division of Reactor Safety

SUMMARY OF FINDINGS

ER05000483/2009301; June 19 - July 7, 2009; Callaway Plant; 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 two applicants for upgrade senior reactor operator licenses at Callaway Plant.

The licensee developed the examinations using NUREG-1021, "Operator Licensing Examination Standards for Power Reactors," Revision 9, Supplement 1. The written examination was administered by the licensee on June 19, 2009. NRC examiners administered the operating tests on June 22-25, 2009.

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

A. NRC-Identified and Self-Revealing Findings

No findings of significance were identified. However, the senior reactor operator written examination was outside the acceptability range expected by the NRC. This is documented in the Examination Development section of this report.

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. The 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 of significance 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 onsite 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.

After reviewing the draft written examination, nine of the twenty-five senior reactor operator (SRO) questions were determined to not meet the acceptance criteria for SRO-only questions. This exceeds the twenty percent threshold identified in NUREG 1021 for an unsatisfactory written examination submittal. The questions were re-written and determined to be satisfactory prior to exam administration. Additionally, one question was deleted from the examination following exam administration. Therefore, there were ten unsatisfactory questions for the senior reactor operator written examination. Future examination submittals should incorporate any lessons learned.

.3 Operator Knowledge and Performance

a. Scope

On June 19, 2009, the licensee proctored the administration of the written examinations to all eleven applicants. The licensee staff graded the written examinations, analyzed the results, and presented their analysis and post examination comments to the NRC on June 24, 2009.

The NRC examination team administered the various portions of the operating tests to all eleven applicants on June 22-25, 2009.

b. Findings

No findings of significance were identified.

All of the applicants passed all parts of the operating test. Ten applicants passed the written examination. One instant senior reactor operator failed the written examination. 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.

The examination team noted the following generic weaknesses:

- The instant senior reactor operators did not demonstrate a thorough understanding of manual valve operations. Operations of air- and solenoid-operated valves and of gate and globe valves were observed.

- All crews showed hesitation to manually trip the reactor when the reactor protection system had unsuccessfully initiated a trip signal due to an instrument malfunction. One crew waited fifty-five seconds.

- Most of the applicants did not demonstrate proper control of auxiliary feedwater. Specifically, the crews either overcooled the plant or overfilled the steam generators. One crew overfilled and lifted the safety valve on a ruptured steam generator.

.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 of significance were identified.

.5 Examination Security

a. Scope

The NRC examiners reviewed examination security 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 of significance were identified.

4OA6 Meetings, Including Exit

The chief examiner presented the preliminary examination results to Messrs. David Neterer, Plant Director, Robert Barton, Training Manager, David Lantz, Operations Training Superintendent, and other members of the staff on June 25, 2009. A telephonic exit was conducted on July 7, 2009, between Ms. Laura Hurley and Ricky Tiefenauer.

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
Larry Wilhelm, ILT Exam Developer
Ricky Tiefenauer, ILT Class Lead
Scott Maglio, Regulatory Affairs

NRC Personnel
David Dumbacher, Senior Resident Inspector

ADAMS DOCUMENTS REFERENCED

Accession No. ML091811181 - FINAL WRITTEN EXAMS
Accession No. ML091811186 - POST EXAM ANALYSIS [AND COMMENTS]

NRC Resolution to the Callaway Plant Post Examination Comments

A complete text of the licensee's post examination analysis and comments can be found in ADAMS under Accession Number ML091811186.

SRO QUESTION # 80

Given the following plant conditions:

- The unit is at 100% power
- The Callaway Plant has just experienced a loss of all off site power
- Both "A" and "B" Diesel Generators failed to start and cannot be started

Which ONE of the following Control Room controls or indications will remain usable to control the initial response and the impact on the event classification?

A. Digital Rod Position Indication (DRPI)
   Declare a Site Area Emergency

B. Steam Generator ASD Controllers
   Declare an Alert

C. Digital Rod Position Indication (DRPI)
   Declare an Alert

D. Steam Generator ASD Controllers
   Declare a Site Area Emergency

COMMENT: The question asks the student to determine power supplies and to make an Emergency Action Level (EAL) declaration given the conditions:

- Offsite power is lost
- Both emergency diesel generators did not start automatically and cannot be started

The power supply portion of the question leads to answers B and D due to the Steam Generator ASD Controllers being supplied by NN01/NN04.

The EAL for loss of power requires a greater than 15 minute loss which is implied for the diesels but not given for the offsite power. This makes the question unclear. If all offsite power is restored in less than 15 minutes there is no EAL classification. If a single offsite power source is restored, the classification would be an Alert. If no offsite source is restored, the classification would be a Site Area Emergency.

In addition, the lesson plan objective in the Radiological Emergency Response operations lesson plan for EAL classification states "Determine the emergency classification for given indications and/or symptoms per EIP-ZZ-00101." The applicable sections of this procedure were not provided.

The KA reference for this question is for the power supply portion only.

Based on the stated information, both B and D are acceptable answers.

NRC RESOLUTION: Based on the sentence, "The Callaway Plant has just experienced a loss of all offsite power," and based on the fact that both diesel generators were lost and would not be restored, the applicant is asked to make an immediate EAL classification. The procedure governing EAL classification, EIP-ZZ-00101, states that EAL SS1.1, loss of offsite and both class 1E 4KV buses, is not applicable until 15 minutes has elapsed. The stem of the question is not clear as to when the applicant should make the classification in that it is asking what the impact will be on the event classification. Immediately following the loss of offsite power, there is no impact since no EAL is in effect until 15 minutes has elapsed. Presumably, the operators would use this time to contact dispatch to determine when power would be restored. This information is not given. Additionally, the stem should have asked what the impact would be if the conditions were to not change during a 15 minute interval.

Based on this, there is no correct answer for the question, and the question has been removed from the examination. Two of the six SRO applicants missed this question.

SRO QUESTION # 96

Callaway Plant is in Mode 2 when the following equipment problems occur:

- The "B" CCP is declared inoperable at 1200 on 11/25/08
- The "A" SI pump is declared inoperable at 1200 on 11/26/08

Which ONE of the following actions satisfies Technical Specifications?

A. Restore the "B" CCP and the "A" SI pump by 1200 on 11/28/08

B. Restore the "B" CCP or the "A" SI pump by 1200 on 11/28/08

C. Restore the "B" CCP and the "A" SI pump by 1200 on 11/29/08

D. Immediately enter TS LCO 3.0.3

COMMENT: The question has the B CCP out of service. Twenty-four hours later, the A SI pump is declared inoperable. The students are then required to decide what action satisfies Technical Specifications.

Students are required to have knowledge of any Technical Specification action statements that are one hour or less per K/A 2.2.39. The question is given for the ability to apply the Technical Specifications for a system (K/A 2.2.40). This condition is a 72 hour action statement. Applicable reference material was not provided.

Lesson plan objectives for the ECCS and Technical Specifications require knowledge of the LCO but not the actions.

Based on the stated information, question 96 should be deleted from the examination.

NRC RESOLUTION: Although 72 hours is one of the completion times, specifically for Condition A, it is the required completion time for answers A, B and C. Therefore, there was no discrimination of the allowed completion time.

The question focuses on what satisfies the LCO based on Technical Specification bases. In this case, answer A is stating that no separate entry has occurred, and the LCO would be satisfied when both pumps are returned to service. Distracter B states that no separate entry has occurred, and the LCO would be satisfied when one train is returned to service. Distracter C states that a separate entry is allowed, and the LCO would be satisfied when both trains are returned to service 72 hours after the second train became inoperable. Distracter D states that the condition given in the stem does not meet any condition of the LCO and LCO 3.0.3 would apply.

Given the information in the stem, the applicant needs to know that there is full ECCS flow from the combination of both trains (Condition A). The applicant also needs to know that separate entries are not allowed for this LCO. Based on this, the applicant can choose answer A without knowing the completion time.

Additionally, this question was validated by the facility, and determined to be a valid question. The lack of a facility learning objective does not invalidate the question.

The question will remain on the exam, and answer A is the only correct answer.