

ENCLOSURE

U.S. NUCLEAR REGULATORY COMMISSION  
REGION IV

Docket No.: 50-483  
License No.: NPF-30  
Report No.: 50-483/97-06  
Licensee: Union Electric Company  
Facility: Callaway Plant  
Location: Junction Hwy. CC and Hwy. O  
Fulton, Missouri  
Dates: May 19-23, 1997  
Inspectors: T. O. McKernon, Reactor Inspector, Operations Branch  
M. E. Murphy, Reactor Engineer, Operations Branch  
F. Brush, Resident Inspector, Callaway Plant  
Approved By: J. L. Pellet, Chief, Operations Branch  
Division of Reactor Safety

ATTACHMENT: Supplemental Information

## EXECUTIVE SUMMARY

### Callaway Plant NRC Inspection Report 50-483/97-06

This inspection included a review of the licensed operator requalification program. The inspection covered the period of May 19-23, 1997.

#### Operations

- Good communication practices were used by the operators during the dynamic simulator scenarios (Section O4.1).
- Licensee evaluators were consistent and objective in their evaluations. Critiques effectively identified crew and individual strengths and weaknesses (Section O5.2).
- The training feedback system was effective in providing input to upgrade the requalification training program (Section O5.2).
- The remedial training program was well administered (Section O5.3).
- The licensee was effectively maintaining operator licenses and documentation (Section O5.4).
- Plant housekeeping and material conditions observed coincident with plant walkthroughs were good (Section F8.1).

## Report Details

### Summary of Plant Status

The plant remained at 100 percent power during this inspection period. No major equipment problems or transients were experienced.

## I. Operations

### **O4 Operator Knowledge and Performance**

#### **O4.1 Operator Performance on Annual Regualification Examinations**

##### **a. Inspection Scope (71001)**

The inspectors observed the performance of one shift crew and one composite crew during their annual requalification evaluations. Each crew was composed of four licensed operators and a shift technical adviser. The annual requalification examination included simulator dynamic performance evaluations and five job performance measures for each licensed operator.

##### **b. Observations and Findings**

The inspectors observed the third week of the 1997 annual operating requalification examinations. Both crews observed passed all portions of their evaluations. However, some individuals were passed with remediation for errors made during the dynamic simulator scenarios or during the performance of the job performance measure tasks.

The cause of the remediations was primarily due to a shift supervisor making an overly conservative emergency action level declaration when it was not required. Other individuals were remediated for not performing a step in a procedure while performing a job performance measure task.

The inspectors observed good communication practices being used by the operators during the examination. While formal three-legged communications were not always used, the operators attempted to always use repeat backs and made their annunciator alarm announcements audible for the entire crew to hear. The crews met all critical tasks, diagnosed event conditions well, and mitigated the simulated events.

##### **c. Conclusions**

Crews evaluated practiced good communications during the dynamic simulator scenarios. Crews met all planned critical tasks and successfully passed the requalification examination.

## O5 Operator Training and Qualification

### O5.1 Review of Requalification Examinations

#### a. Inspection Scope (71001)

The inspectors performed a review of the annual requalification examinations, including operating tests and a draft biennial written examination planned for the next training cycle, to evaluate general quality, construction, and difficulty level. The inspectors also reviewed the methodology for developing the requalification examinations.

#### b. Observations and Findings

The operating examinations consisted of job performance measures and dynamic simulator scenarios. The scenarios followed the guidelines of NUREG-1021, "Operator Licensing Examiner Standards," Revision 7, Supplement 1, in complexity and quantitative event requirements. The scenarios were written with clearly identifiable objectives, critical tasks, expected operator actions, and competency standards for evaluation. The job performance measures were adequate in scope and depth and appropriately covered a range of topics required by the requalification training program and the regulations. The job performance measures also clearly identified critical steps in the job tasks.

The inspectors determined that the draft written examination reflected adequate sample plan coverage, depth of knowledge, and discriminated at the appropriate level.

#### c. Conclusions

The inspectors concluded that the requalification examinations were well constructed and discriminated at the appropriate knowledge level.

### O5.2 Requalification Examination Administration

#### a. Inspection Scope (71001)

The inspectors observed the administration of the simulator scenarios and the job performance measures to determine the evaluators' abilities to administer an examination and assess adequate performance through measurable criteria. The inspectors also observed the plant simulator to support examination administration. Three licensed operator requalification training evaluators and two operations management evaluators were observed participating in one or more aspects of administering the examinations, including pre-examination briefings, observations of operator performance, individual and group evaluations, techniques for job performance measure cuing, and final evaluation documentation. Additionally, the

training feedback system for inputting information into the requalification training program was reviewed. This included student course evaluations, the training action tracking system, instructor critiques, lesson plans, and the central action tracking system.

b. Observations and Findings

The licensee evaluators conducted the examinations professionally and thoroughly documented their observations for subsequent evaluation. Job performance measure cues were provided, as needed, with no inadvertent cuing observed.

During the requalification examination observed, the operations and assistant operations managers were used as evaluators. The operations management involvement provided a balance to the training department evaluators' assessments. The evaluators were effective in identifying strengths and weaknesses of the crews and individuals and the licensee held the remediation criteria for job performance measures at a high level. For example, the licensee had implemented a zero-tolerance practice for job performance measures, in that, if the examinees missed a procedure step or operated equipment incorrectly, it became a criterion for failure of the task regardless of whether the performance step was a critical task. A formal evaluation method was used that reviewed crew and individual critical tasks following the scenario observations and then competencies for the crew and individuals when appropriate. The post-scenario evaluations were well organized and conducted. The inspectors noted that the operations manager conducted the evaluation critiques with the crews.

The inspectors observed that the performance of the simulator in supporting examination process was good. However, some delay in conducting one scenario was experienced when an annunciator panel power supply became inoperable. The scenario was halted at that point. The crew was sequestered until the repair was made and the scenario continued. No simulator modeling problems were experienced.

During the review, the inspectors noted that the training department provided feedback to the student's course evaluations. This was evidenced by copies of the responses attached to the evaluations. Also, instructors identified weaknesses in operator knowledge as well as a procedure deficiency during simulator training. The weaknesses were tracked using the training action tracking system and addressed in requalification training. The procedure deficiency was tracked using the central action tracking system and promptly corrected.

c. Conclusions

Licensee evaluators were consistent and objective in their evaluations. Critiques effectively identified strengths and weaknesses. The inspectors concluded that the licensee was effective in developing and using feedback from employees involved in the licensee's operator training program.

05.3 Review of Remedial Training Program

a. Inspection Scope (71001)

The inspectors reviewed the remedial training program to evaluate compliance with licensee program guidance contained in Section 5 of Procedure TDP-ZZ-00022 and to determine the effectiveness of the program. This review included remedial training documentation from the 1995, 1996, and 1997 requalification cycles.

b. Observations and Findings

The licensee recently implemented a significant change in the acceptance criteria for the operating tests. It is now the policy to fail any individual or crew who fails to perform any step of a job performance measure or scenario regardless of it being a critical step or not. In support of this change, the licensee now has three levels of remediation, each with specific entry criteria and specific levels of remediation. Only Level 3 requires formal removal from and return to licensed duties.

The documentation from the 1995 and 1996 training cycles of requalification failures with training and operations staff analysis of the individuals or crew weaknesses were sufficiently detailed and directed an appropriate means of remediation. When appropriate, individual operators were removed from licensed operator duties until successful completion of remediation training and a subsequent evaluation. As of this inspection, there have been no failures during the 1997 requalification training or examination cycle. The individuals who passed with remediation have been properly remediated and retested in accordance with the new guidelines. Interviews with selected licensed operators indicated that the remediation process was thorough and comprehensive in addressing weaknesses in operator and crew performance.

c. Conclusions

The inspectors concluded that the remedial training program was well administered.

#### O5.4 Review of Conformance with Operator License Conditions

##### a. Inspection Scope (71001)

The inspectors evaluated the adequacy of the requalification program's compliance with 10 CFR 55.53, "Conditions of License." The inspectors interviewed operators, training management, and examined the licensee's records to determine compliance for conditions to maintain an active operator license, reactivation of licenses, and medical fitness.

##### b. Observations and Findings

Operator license conditions were being accurately identified and tracked. Records were maintained current and stored in a protected vault. The inspectors observed that, for those operators with conditioned licenses for corrective lenses, the licensee had obtained special framed prescription glasses for self-contained breathing apparatuses. The operators kept these glasses in a designated storage cabinet in the control room. Additionally, other operators with permanent medical conditions had their licenses conditioned. It was also verified that operators with reactivated licenses had received the prerequisite training prior to resuming shift duties.

##### c. Conclusions

The inspectors concluded that the licensee was effectively maintaining operator licenses and documentation.

#### IV. Plant Support

#### **F8 Miscellaneous Fire Protection Issues**

##### F8.1 General Comments

The inspectors observed general plant housekeeping incident to administration of the inplant job performance section of the operating test. The facility was clean, well lighted, and the floors were clear and free of debris.

#### V. Management Meetings

#### **X1 Exit Meeting Summary**

The inspectors presented the inspection results to members of the licensee management at the conclusion of the inspection on May 23, 1997. The licensee acknowledged the findings presented.

The licensee did not identify as proprietary any information or materials examined during the inspection.

ATTACHMENT

SUPPLEMENTAL INFORMATION

PARTIAL LIST OF PERSONS CONTACTED

Licensee

R. Affolter, Manager, Callaway Plant  
G. Czechin, Superintendent of Training  
J. Dampf, Shift Supervisor, Operations Training  
J. Davis, Quality Assurance  
G. Hamilton, Supervising Engineer, Quality Assurance  
R. Lamb, Superintendent, Operations  
J. Laux, Manager Quality Assurance  
S. Putthoff, Operating Supervisor, Training  
M. Redmeyer, Quality Assurance Engineer

NRC

F. Brush, Resident Inspector

INSPECTION PROCEDURE USED

IP 71001: Licensed Operator Requalification Program Evaluation