

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Licensed Operator Qualification Program Inspection

Licensee: Commonwealth Edison Company
Quad Cities Nuclear Station

Facility Name: Quad Cities Nuclear Station

Inspection At: Cordova, Illinois

Inspection Conducted: September 18-22, 1995

Inspector: E. A. Plettner
E. A. Plettner

10/16/95
Date

Lead Inspector: T. M. Burdick
R. L. Doornbos

10/16/95
Date

Approved By: T. M. Burdick
T. M. Burdick, Chief
Operator Licensing

10/16/95
Date

Inspection Summary

Inspection Conducted September 18-22, 1995 (Report No. 50-234/95008(DRS))

Areas Inspected: Special, announced inspection of licensed operator requalification programs to include a review of training administrative procedures, requalification training records, operating and written examination material; observation and evaluation of operator performance and licensee evaluators during requalification operating examinations; an evaluation of program controls to assure a systems approach to training; and an assessment of simulator fidelity. The inspectors used the guidance in Licensed Operator Requalification Program Inspection Procedure, IP 71001.

Requalification Inspection Results: The inspectors concluded that the licensee's overall implementation of the licensed operator requalification training program was conducted in accordance with 10 CFR Part 55 requirements.

Strengths:

- Scenario evaluations were conservative. (See Section 2.3)
- Training department was proactive in the implementation of competency grading criteria for Job Performance Measures (JPMs). (See Section 2.1.3)

Weaknesses

- Site quality verification not performing training and staffing audits in the area of reactor operator requalification during the years of 1993, 1994, and 1995. (See Section 2.7)
- The quality of the written questions in the LSRO program. (See Section 2.1.3)

REPORT DETAILS

1.0 PERSONS CONTACTED

- *L. Pearce, Station Manager
- *J. Kudalis, Support Services Director
- *D. Cook, Operations Manager
- *A. Chernick, Training Supervisor
- *R. Armitage, License Training Supervisor
- *M. Hayse, SQV Audit Supervisor
- *C. Dieckmann, LO Requal Trng Supervisor
- *R. Baumer, NRC Coordinator - RA
- *B. Svaleson, Operations Shift Operations Supervisor
- *C. Symonds, NLO Training Supervisor
- *A. Becker, Training Instructor
- *L. Schmeling, Site VP Asst.
- *B. Ganser, IDNS
- *C. Miller, NRC, Senior Resident, Quad Cities

*Present at the exit meeting on September 22, 1995

2.0 INTRODUCTION

The purpose of the inspection was to assess the licensee's requalification programs for licensed operators in order to determine whether the programs incorporated 10 CFR 55 requirements for evaluating operator mastery of training objectives and revisions to the program. The licensed operator requalification program assessment included a review of training administrative procedures, requalification training records, operating and written examination materials, and interviews with various operations and training personnel. The inspectors conducted an evaluation of operator performance and the ability of licensee evaluators to administer and objectively evaluate operators during requalification operating examinations. An evaluation of the effectiveness of the program controls to assure a systems approach to training (SAT) and remediation training was conducted. The inspectors also assessed simulator fidelity.

2.1 Licensed Operator Requalification Programs Assessment

2.1.1 Program Administration

The inspectors identified the following strengths regarding requalification program administration:

- The evaluators were conservative in the evaluation of crews and individuals.

- The training department was proactive in the implementation of competency grading criteria for Job Performance Measures (JPMs).
- The LSRO/RO/SRO feedback process was good.
- Placement of a Training Request icon on the company Local Area Network (LAN) to make it easy for anyone to submit a training request.
- Management support of the LSRO program.

Weaknesses

- Site quality verification not performing training and staffing audits in the area of reactor operator requalification during the years of 1993, 1994, and 1995.
- The quality of written questions in the LSRO program.

2.1.2 Requalification Training Records Review

The inspectors reviewed requalification training and attendance records for a sampling of active licensees and concluded that licensed operators had attended or made up all scheduled requalification training as required by the program.

2.1.3 Requalification Examination Material Review

The inspectors reviewed the operating and written exams that were given one week prior to the inspection and those given during the inspection week and the most recent LSRO written exam. The RO/SRO LSRO examinations generally followed the guidelines of Revision 7 of the Examiner Standards, NUREG 1021. The following is being provided for review and evaluation by your approved Systematic Approach to Training (SAT) program. No written response is required. The inspectors made the following observations regarding the examination material:

Written Exams

The RO and SRO written exams within the same week had a 10% difference in questions. The inspectors noted that the difficulty level of the questions had increased when compared to previous year examinations. There are, however some questions at the memory and direct look-up level. The questions on the static portion of the RO/SRO written exam all required the use of the simulator to determine the correct answer.

Written questions reviewed from the most recent LSRO examination and some developed for incorporation into the LSRO exam bank

needed improvement. Questions for improvement include: (1) simple memory, (2) a series of True/False statements, (3) stems requesting which is the BEST answer, (4) use of an implausible distractor such as "... boron degrades sufficiently so a nuclear explosion could occur." While not all questions were of this quality, there is a marked difference between the quality of questions in the LSRO exam bank and those found in the RO/SRO exam bank.

Operating Examination

Job performance measures (JPMs) were of good quality. They involved tasks important to safety and appropriate steps were designated as critical for the successful completion of the task.

The Training Department was proactive in obtaining and implementing competency evaluation criteria from another Commonwealth Edison site for use in JPM evaluations.

The majority of the scenarios presented a challenge to the operators. There were times when scenario malfunctions were repeated within a scenario set. However, the overall difficulty level and areas encompassed by the set was good.

Integration of the Boiling Water Reactor Owners Group (BWROG) templates into the scenarios was done without causing the specificity of the individual evaluation of each operator to be degraded. However, more attention is necessary to fine tune the crew critical task to the scenario being performed.

2.2 Operator Performance Evaluation

Overall crew performance was good. Crew communications generally followed established operations and training requirements throughout all scenario conditions. Crew briefs during events were given, however, brief quality varied greatly between SROs. For example, some of the SROs would inform the crew of the start of the brief, provide information in the brief but never close the brief, while others would start the brief, provide information, and then in the middle of the brief begin giving directions to control the plant, again, never formally ending the brief. The inspectors did see one of the six SROs perform the brief as expected by Operation's management. It is understood by the NRC that Operations had identified these difficulties previously and, in cooperation with the Training Department, are working to resolve this issue. Overall, individual operator performance during the operating and written examination was good.

2.3 Evaluation of Licensee Evaluators

The administration of RO/SRO requalification examinations was observed by the inspectors. The process was effective. The inspectors considered the quality of the evaluations to be conservative. One crew

had the potential to fail a Crew Critical Task, however, upon discussions within the evaluation context, evaluators concluded that the critical task was completed but that the crew's performance to achieve the task was less than operation's and training expectations and that the crew would pass with remediation. Therefore, the crew would be remediated prior to returning to license duties. The lead evaluators' approach to the evaluation process encouraged open communications. Each crew critical task and competency was thoroughly discussed and scrutinized to assure the crew and the individuals were fairly evaluated.

The inspectors concluded that the licensee evaluators could adequately administer the requalification examinations and objectively evaluate the performance of the operators.

2.4 Systems Approach to Training Controls

Development of a Training Request (TR) icon into the main company computer system was determined to be an effective way for any individual to request training in any area.

Review of the feedback systems proved them to be effective. Student feedback, verbal or written, was evaluated and as appropriate, entered into the TR program. Review of TRs identified that they were resolved in an adequate and timely manner and feedback to the originator was being provided.

2.5 Personnel Interviews

The inspectors conducted interviews with a cross section of management and staff from both operations and requalification training groups. Results indicated that: plant, training and operations management frequently observed and participated in requalification evaluations of licensed personnel in dynamic simulator scenarios and JPMS; operations management exhibited joint ownership of the requalification training program; and training management and staff continued to be responsive to operations requests.

Training department personnel had increased their involvement in the "Mentor Program." This program was changed to assign additional instructors to specific crews. Operations and training management support of the program was evident and the results achieved were beneficial. Operating crews identified this program to be of great benefit because they felt they had direct control of the training they would receive.

2.6 Simulator Fidelity

The simulator model handled all phases of the dynamic scenarios. No fidelity problems were identified.

2.7 Site Quality Verification Audits

While reviewing the facilities operating history records the inspectors noted that the licensee, while conducting training and staffing audits of maintenance and system engineering to meet technical specification requirements, had not conducted a training and staffing audit in the area of reactor operator licensing and requalification programs for the years of 1993, 1994, and 1995. The inspectors have identified this as a weakness in the site quality verification auditing process.

The safety significance is minimal as the NRC performed examinations and inspections in the reactor operator licensing and requalification area over the past three years with no significant findings. The inspectors also noted that the licensee had performed a surveillance of the reactor operator program during requalification exams on December 9, 10, and 16, 1993, documented in report #QAS 04-93-014. The licensee performed a second surveillance of the operator program during July 17 and August 4, 1995, when Unit 2 started up from the refueling and maintenance outage documented in report #QAS 04-95-016. The result was a corrective action report requiring operations management to address five areas where improvements in performance were necessary.

3.0. LICENSEE ACTION ON PREVIOUSLY IDENTIFIED ITEMS (92702)

The following previously identified item was reviewed to ensure that corrective actions were accomplished in accordance with the technical specifications.

3.1 LERs Reviewed:

(Closed) LER 254/94015: "Single Loop Operation in an Unanalyzed Condition Due to Management System Deficiency". The inspectors verified that corrective actions were completed. This item is closed.

4.0 EXIT MEETING

The exit meeting was completed on September 22, 1995. Present were plant management and training staff as listed in Section 1.0 of this report. The inspectors discussed the major areas reviewed during the inspection, strengths and weaknesses observed, and the inspection results. No documents or processes were identified as proprietary.

Attachment: Simulation Facility Fidelity Rpt

SIMULATION FACILITY FIDELITY REPORT

Facility Licensee: Quad Cities Nuclear Power Station

Facility Licensee Docket Nos. 50-254, 50-265

Operating Tests Administered: September 18-22, 1995

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of noncompliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information that may be used in future evaluations. No licensee action is required in response to this observation.

While conducting the simulator portion of the operating tests, the following item was observed:

ITEM

DESCRIPTION

NONE