

U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Docket Nos: 50-454; 50-455

Licenses No: NPF-37; NPF-66

Reports No: 50-454/96011(DRS); 50-455/96011(DRS)

Licensee: Commonwealth Edison Company (ComEd)

Facility: Byron Generating Station, Units 1 & 2

Location: 4448 North German Church Road
Byron, IL 61010-9750

Dates: November 4 - 8, 1996

Inspectors: R. M. Bailey, Reactor Inspector
P. C. Cataldo, Inspector-in-Training

Approved by: Melvyn Leach, Chief, Operator Licensing Branch
Division of Reactor Safety

EXECUTIVE SUMMARY

Byron Generating Station, Units 1 & 2
NRC Inspection Reports 50-454/96011; 50-455/96011

The inspection included aspects of licensee operations, training, and plant support. The report covers a 1-week, announced inspection which included a review of administrative training procedures and operating examination material; observation and evaluation of facility evaluators during an operating examination; an assessment of simulator fidelity; an assessment of programmatic controls to ensure systematic approach to training; and a review of requalification training records.

The inspectors used the guidance contained in inspection procedure (IP) 71001 and no violations of NRC requirements were identified during this period.

Operations

A lack of formal controls to limit examination material overlap was a weakness (Section 05.2).

The requalification training feedback system was good (Section 05.4).

Implementation of the licensed operator requalification training program was in accordance with 10 CFR Part 55 requirements (Section 05.7).

Report Details

I. Operations

O5 Operator Training and Qualification

O5.1 Operating History

a. Inspection Scope (71001)

The inspectors reviewed the following to assess the licensed operator requalification training program's effectiveness regarding operator performance:

- Most recent inspection report (95006) related to operator training.
- Resident inspector observations and reports (96003, 96004, 96005, 96007 and 96008) regarding operator performance.
- Licensee event reports (6/95 - 10/96).
- Licensed Operator Requalification training schedule.
- Interviews with licensed operators and facility trainers.

b. Observations and Findings

The inspectors determined that plant and industry events relating to ineffective operator performance were included in the licensed operator requalification training program. The program incorporated lessons learned such that operator skills and knowledge needed to safely operate the Byron Nuclear Power Station were emphasized.

O5.2 Requalification Examinations

a. Inspection Scope (71001)

The inspectors reviewed the following to assess the licensee's examination materials' quality and content:

- Examination banks (written, dynamic scenario, and job performance measure).
- Current sample plan.
- Comprehensive written exams (8/95 - 10/96).
- Annual operating tests.

b. Observations and Findings

The operating examinations consisted of a set of dynamic scenarios on the plant specific simulator involving a 5-member crew of licensed operators. Additionally, the operators were administered a plant specific walkthrough consisting of five Job Performance Measures (JPMs).

The written examinations were administered prior to this inspection period and were operationally oriented with a moderate level of difficulty. No direct look-up questions were identified. The inspectors compared the most recent written examinations with previously administered ones and determined that the examinations had improved in quality and content.

The JPMs addressed operationally important tasks and provided criteria for successful completion. However, one JPM did not provide sufficient evaluator cues to ensure complete and correct performance of the task standard. Additionally, the inspectors identified a program weakness in that JPMs were routinely repeated over subsequent weeks. The amount of overlap increased from week-to-week such that a total of 80% of the subsequent JPMs were repeated by the fifth week of examinations. The inspectors determined that no programmatic control was in place to limit JPM overlap and ensure operating examination integrity during subsequent examinations.

The dynamic simulator scenarios were challenging and provided a good tool for evaluating operator mastery of training objectives. The content of each scenario was consistent with the program's sample plan and contained minimal repeat from previously administered scenarios.

O5.3 Regualification Examination Administration Practices

a. Inspection Scope (71001)

The inspectors performed the following to assess the licensee's policies and practices regarding regualification examination administration, simulator fidelity, and examination security:

- Observed regualification examination administration (operating test).
- Interviewed licensee personnel (licensed operators, instructors/evaluators, and supervisors).
- Observed simulator fidelity performance.
- Reviewed the licensee's administrative procedures (BTP 100-16 and BTP 400-12) regarding examination administration and control.

b. Observations and Findings

The facility evaluators adequately identified operator performance errors during the operating examinations. The facility evaluated the crew and all individuals as satisfactory as all critical tasks were accomplished. One senior licensed operator was evaluated as unsatisfactory on one JPM and assigned remediation training to improve the command and control function. The inspectors agreed with the licensee's evaluation results and need for remediation.

No simulator fidelity deficiencies were observed and no simulation fidelity report is attached.

O5.4 Regualification Training Program Feedback System

a. Inspection Scope (71001)

The inspectors performed the following to assess the licensee's training program feedback system effectiveness:

- Reviewed employee (trainee) comments to the feedback system.
- Interviewed licensee personnel (licensed operators, instructors/evaluators, and supervisors).
- Reviewed licensee conducted requalification program quality assurance/quality control inspections (SQV Audit No. 06-95-07).

b. Observations and Findings

The licensee's feedback program incorporated a tracking system to capture procedural revisions, plant modifications, and other significant changes affecting plant operations. The training material was routinely updated to ensure current values were used during requalification training. Additionally, the training department monitored performance by tracking incorrect responses to written questions and placing frequently missed questions into a review process. Also, observation of performance deficiencies during operating tests were documented and referenced in continuing training. Licensed operator feedback into the training process was consistent with licensee's expectations.

O5.5 Remedial Training Program

a. Inspection Scope (71001)

The inspectors performed the following to assess the licensee's remedial training program effectiveness:

- Reviewed individual operator and crew performance evaluations.
- Reviewed remediation training plans.
- Interviewed licensee personnel (licensed operators, instructors/evaluators, and supervisors).

b. Observations and Findings

The inspectors reviewed two previously administered and one current remediation training plan. The previously identified performance deficiencies were addressed in a remediation plan which were determined to be effective in correcting the specific deficiency.

O5.6 Conformance with Operator License Conditions

a. Inspection Scope (71001)

The inspectors reviewed the following documents to assess the facility and operator licensees' compliance with 10 CFR 55.53 license condition requirements:

- Records pertaining to maintaining active operator licenses.
- Records pertaining to reactivated licenses (none this period).
- Individual operator medical record report.

b. Observations and Findings

The inspectors determined that the licensee's controls to ensure licensed operators were conforming to the requirements of 10 CFR 55.53, conditions of license, were good.

O5.7 Conclusions on Operator Training and Qualification

The inspectors concluded the following:

- The licensee's overall implementation of the licensed operator requalification training program was in accordance with 10 CFR Part 55 requirements.
- The licensee's informal controls to limit examination material overlap is considered a program weakness.
- The licensee's controls to revise the program based on audits, industry and plant events, system and procedure modifications, and operator feedback were good.

V. Management Meetings

X1 Exit Meeting Summary

The inspectors presented the preliminary inspection results to members of licensee management on November 8, 1996. The licensee acknowledged the findings presented.

The inspectors asked the licensee whether any materials examined during the inspection could be considered proprietary. No proprietary information was identified.

PARTIAL LIST OF PERSONS CONTACTED

Licensee

T. K. Higgins, Support Services Director
T. Schmidt, Training Manager
S. W. Pettinger, Operations Training Supervisor
R. G. Brown, Principle Instructor - Requal Program
E. Bendis, Shift Operations Supervisor
R. Wagner, Shift Operations Supervisor
P. DiGiovanna, PWR Operations Training Supervisor - PTC

NRC

*S. Burgess, Senior Resident Inspector
*N. Hilton, Resident Inspector

(*) Personnel not in attendance at the exit meeting on November 8, 1996.

INSPECTION PROCEDURES USED

IP 41500: Training and Qualification Effectiveness
IP 71001: Licensed Operator Requalification Program Evaluation

ITEMS OPENED, CLOSED, AND DISCUSSED

Opened

NONE

Closed

NONE

Discussed

NONE