

U. S. NUCLEAR REGULATORY COMMISSION
REGION III

Report No. 50-346/94007(DRS)

Packet No. 50-346

License No. NPF-3

Licensee: Centerior Energy Company
c/o Toledo Edison Company
300 Madison Avenue
Toledo, OH 43652-0001

Facility Name: Davis-Besse Nuclear Power Station

Inspection At: Oak Harbor, OH

Inspection Conducted: June 13 - 17, 1994

Lead Inspector:

C. Osterholtz
C. Osterholtz

6/30/94
Date

Approved By:

T. Burdick
T. Burdick, Chief
Operator Licensing Section 2

6/30/94
Date

Inspection Summary

Inspection conducted on June 13 - 17, 1994 (Report No. 50-346/94007(DRS)).

Areas Inspected: Announced inspection of the licensed operator requalification program to include a review of training administrative procedures, requalification training records and examination material; observation and evaluation of operator performance and of licensee evaluators during requalification examination administration; an evaluation of the program controls to assure a systems approach to training; and an assessment of simulator fidelity. The inspectors used the guidance in Inspection Procedure 71001.

Results: Simulator scenarios, job performance measures (JPMs) and written examinations were determined to be adequate (Section 2.1.3). Operator performance was satisfactory during the dynamic simulator and in-plant JPMs (Section 2.2). Licensee evaluators were considered adequate (Section 2.3). The requalification program contained evidence of being based on a systems approach to training (SAT) (Section 2.4).

Strengths: Scenario de-briefs, the Operations Training Council, the establishment of training on evaluation techniques, exam sequestering, crew's choice training, examination overlap, and licensed operator physical examination verification (Section 2.1.1); the tracking system incorporated for requalification training attendance (Section 2.1.2); student feedback (Section 2.4).

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Weaknesses: Training feedback on evaluation scenarios (Section 2.1.1); two JPM material problems (Section 2.1.3); crew communications during the simulator scenarios and operators not observing proper radiological controls (Section 2.2); time spent in-plant by training evaluators and JPM cuing (Section 2.3 and 2.5).

Additionally, training department personnel interviewed desired more frequent audits and observations from senior training management (Section 2.5).

REPORT DETAILS

1.0 Persons Contacted

Licensee Representatives

- +J. Wood, Plant Manager
- *+E. Bergner, Manager, Nuclear Training
- +G. Bradley, Licensing Representative
- +D. Eshelman, Operations Superintendent
- * G. Hillebrecht, Simulator Instructor
- * J. House, Qualification Instructor
- +S. Jain, Nuclear Services Director
- +S. Laeng, Simulator Instructor
- *+D. Lange, Qualification Instructor
- *+R. Patrick, Requalification Lead Instructor
- +J. Syrowski, Nuclear Training Support

Nuclear Regulatory Commission

- +S. Stasek, Senior Resident Inspector

*Denotes those present at the training management exit meeting on June 16, 1994.

+Denotes those present at the management inspection exit meeting on June 17, 1994.

Other persons were contacted as a matter of course during the inspection.

1.1 Introduction

The purpose of this inspection was to assess the licensee's requalification program for licensed operators to determine whether the program incorporated 10 CFR Part 55 requirements for evaluating operator mastery of training objectives and revising the program. The licensed operator requalification program assessment included a review of training administrative procedures, requalification training records, and examination material. The inspectors conducted an evaluation of operator performance and the ability of licensee evaluators to administer and objectively evaluate during requalification examinations. In addition, an evaluation of the effectiveness of the program controls to assure a systems approach to training was conducted. Further, the inspectors assessed simulator fidelity.

2.0 Followup of Previous Inspection Findings

(Closed) Violation (346/93021-01(P.S.)): This item pertained to a licensed operator exceeding two years prior to receiving a medical examination, as required by 10 CFR Part 55.53(i). Specifically, during the period from January 29, 1991 to November 5, 1993, one operator, licensed pursuant to 10 CFR Part 55, did not receive a medical examination. During this period of time, the subject operator performed licensed duties at Davis-Besse Nuclear Power

Station as authorized under license number SOP 30971, issued effective June 27, 1989.

The licensee utilized a manual tracking system which provided for a monthly check of individual operator records to determine if any physical examinations needed to be scheduled. The need to schedule a physical examination for the operator in question was apparently missed on the monthly check due to administrative error.

The licensee has established a computerized tracking system for future determination of medical examination scheduling. The tracking system listed the licensed operators by their physical due date, and is checked monthly to determine if any operator is within 60 days of the physical expiration date. When an operator is identified as being within the 60 day window, the operator should be notified in writing to schedule a physical examination. Additionally, the operator's supervisor should be notified in writing that the individual needs to schedule the examination. The operator should then notify the training department in writing when the physical examination will take place. Once the examination is performed and confirmed by the health center, the new date should be incorporated into the tracking system.

This item is now closed.

2.1 Licensed Operator Regualification Program Assessment

2.1.1 Program Administration

The inspectors concluded that the licensee was implementing the licensed operator regualification training program in accordance with the licensee's administrative procedures. The inspectors identified the following strengths regarding regualification program administration:

- The establishment of an Operations Training Council to provide regular interface between operations and training management to determine present and future training needs.
- The establishment of annual training on evaluation and cuing techniques for personnel who administer in-plant JPMs. Additionally, training management indicated that performing routine, random audits of in-plant JPMs would be a priority.
- The de-brief following scenario administration tasked the crew with describing the sequence of events that was administered, encouraging crew participation and interaction during the de-brief.
- The tracking system incorporated for operator medical examinations appeared well organized, able to list operators in the order their next physical is due, and providing for a monthly verification to ensure program compliance.

- The utilization of simulator time each cycle for crew's choice training, giving the crews an opportunity to participate in their training's direction.
- The sequestering methods applied during the examination ensured no undue personnel contact occurred.
- Little or no overlap was observed on examinations administered to different crews at different times.

The following weakness regarding requalification training program administration was noted:

- Operators were not provided with oral feedback by the training staff on scenarios administered for the purpose of requalification evaluation.

The training staff was concerned about providing oral feedback on an evaluation scenario because of the potential adverse effect that information could have on a candidate's stress level for the remaining portions of the examination. The training department indicated they would explore possibilities on de-briefing candidates after all portions of the examination have been administered.

2.1.2 Requalification Training Records Review

The inspectors reviewed requalification training records of selected licensed operators for the current requalification cycle and concluded that the operators had satisfied the attendance requirements and performed the necessary reactivity manipulations as required by their program.

The following strength regarding requalification training records was noted:

- The tracking system incorporated for requalification training attendance appeared well organized, able to identify any missed training and/or quizzes over the course of an entire requalification cycle.

2.1.3 Requalification Examination Material Review

The inspectors reviewed the simulator scenarios and job performance measures administered during the week of June 13, 1994. The written examinations for the entire requalification cycle was also reviewed. The licensee was determined to have addressed adequate safety focus in their training program as evidenced by the depth of material covered concerning safety systems and in the emphasis on operator actions that are required in the event of a plant emergency. For example, station blackout, loss of primary coolant, excessive primary plant cooldown, and an anticipated transient without scram (ATWS) were all covered during the course of the examination.

The following weaknesses regarding requalification examination material were noted:

- JPM 113, "Perform Required Actions for a Dropped Rod", had errant initiating conditions describing two annunciators actuated (5-1-E, 5-3-E) that should not have been actuated for the given initial conditions.
- JPM 60, "Clearing an Asymmetry Fault", listed callouts for asymmetry bypass switch positions that would be unavailable to the candidate performing the JPM.

The licensee committed to revising both JPMs to correct the deficiencies.

2.2 Operator Performance Evaluation

The inspectors observed and evaluated the operators' performance during the job performance measures and the dynamic simulator operational examination. The inspectors concluded that operator performance was satisfactory. However, two failures were identified on the written examination by both the facility and the NRC when an independent grading was performed.

The following weaknesses regarding operator performance were noted:

- Communications in the dynamic simulator were sometimes sporadic and disjointed. Several instances occurred when the SRO had to repeat orders before they were acknowledged or carried out. Some board operators did not keep the SRO informed on plant status.
- One operator was observed placing an object in his mouth in a radiologically controlled area during the in-plant JPMs.

The licensee indicated that good communication techniques would continue to be emphasized during training. Additionally, the practice of having the candidate's run the scenario de-briefs should contribute to the crews interaction with one another and enhance their communication skills.

2.3 Evaluation of Licensee Evaluators

The licensee evaluators agreed with or were more conservative than the NRC inspectors on the overall assessment of operator performance. The inspectors concluded that the licensee evaluators could adequately administer the requalification examinations and objectively evaluate the performance of the operators.

The following weaknesses regarding licensee evaluators were noted:

- Licensee evaluators have no requirements concerning time spent in-plant. Several evaluators appeared uncomfortable entering and exiting the radiologically controlled area. Additionally, several evaluators had to be prompted by their candidates' to have examination materials frisked out prior to leaving the radiologically controlled area.

- During JPM 108, "Respond to a High Component Cooling Water Surge Tank Level", an evaluator cued a candidate that radiation monitors indicate "two times the current reading" instead of using an actual number or indication.

The licensee was concerned about scheduling specific in-plant time for training personnel based on the work load the training staff is already tasked with. However, training management indicated that they would explore possibilities that would result in more in-plant time being acquired by evaluators. Training management also indicated that performing routine audits of evaluators during in-plant JPMs would be a priority. Additionally, the licensee has initiated annual training on cuing techniques when administering JPMs.

2.4 System Approach to Training Controls

The inspectors concluded that the licensee's program had controls in place to revise the training program as needed based on industry events (LERs), system and procedure modifications, and student feedback.

Additionally, the inspectors reviewed the last QA licensee audit report of requalification training. The audit appeared to use performance based techniques including audit of ongoing requalification training and critiques.

The following strength regarding student feedback was noted:

- Student critique forms and comments are routinely reviewed by the training staff and any suggestions are incorporated as appropriate. The requalification lead instructor documents negative comments or suggestions for change and an instructor contacts the individual directly to report on the comment's disposition.

2.5 Staff Interviews

The inspectors conducted interviews with four members of the training staff and four members of the operations staff to both acquire information and gain perspective on the staff's perceptions.

Generally, both operations and training personnel believed there was a good relationship between the two groups. Operations personnel interviewed expressed a desire to receive more simulator training on routine plant operations, such as startups and shutdowns. Several personnel thought there was sufficient "dead time" between classroom training presentations to accommodate this request.

Operations personnel also stated that the training department was very accommodating to their requests. However, several operators indicated that training personnel do not spend enough time in-plant to maintain adequate operational expertise.

Training personnel interviewed indicated that they were not being audited on a regular basis by senior management and expressed a desire for more frequent audits and observations from senior training management.

2.6 Simulator Fidelity

Simulator discrepancies were identified. These discrepancies are noted in Enclosure 2.

3.0 Exit Meeting

The inspectors conducted exit meetings on June 16, 1994, with the training staff and on June 17, 1994, with plant management at the Davis-Besse Nuclear Power Station to discuss the major areas reviewed during the inspection, the strengths and weaknesses observed, and the inspection results. Licensee representatives in attendance at the exit meetings are documented in Section 1 of this report. The team also discussed the likely informational content of the inspection report with regard to documents reviewed by the inspectors during the inspection. The licensee did not identify any documents or processes as proprietary.

SIMULATION FACILITY REPORT

Facility Licensee: Davis-Besse Nuclear Power Station

Facility Licensee Docket No. 50-346

Operating Tests Administered On: Davis-Besse Plant Specific Simulator

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 these observations.

While conducting the simulator portion of the operating tests, the following items were observed:

<u>ITEM</u>	<u>DESCRIPTION</u>
SPDS	Cooldown screen could not be accessed.
IRPI	Some IRPI indicators stuck on the rod drop JPM.
Radiation Monitors	Radiation monitor indicators had grease marks for specific values that are not present in the control room.