U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Reports No. 50-315/95002(DRS); 50-316/95002(DRS)

Docket Nos. 50-315; 50-316 Licenses No. DPR-58; DPR-74

Licensee: Indiana Michigan Power Company
1 Riverside Plaza
Columbus, OH 43216
Indiana Michigan Power Company

Facility Name: D. C. Cook Nuclear Plant - Units 1 and 2

Inspection At: Bridgman, MI

Inspection Conducted: January 23 - 27, 1995

Lead Inspector: R. Bailey 2/9/95 Date

Approved By: T. Burdick, Chief 2/9/95 Date
Operator Licensing Section 2

Inspection Summary

Inspection conducted on January 23 - 27, 1995 (Reports No. 50-315/95002(DRS); No. 50-316/95002(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 NRC Inspection Procedure 2515/71001.

Results: The inspectors concluded that the licensee was implementing the licensed operator requalification training program in accordance with 10 CFR Part 55 requirements. (Section 3.1). Remediation training administered was good (Section 3.2). Simulator scenarios and job performance measures (JPMs) were determined to be adequate (Section 3.3).

Operator performance was satisfactory during the annual examination (Section 3.4). Licensee evaluators were considered satisfactory (Section 3.5). The requalification program contained evidence of being based on a systems approach to training (SAT) (Section 4.0). Maintaining conformance to operator license conditions was good (Section 5.0). Simulator fidelity was adequate (Section 6.0).

Strengths:

- Examination schedule was well planned to minimize delays for the operators and maximize the utilization of the evaluators.
- The job performance measures (JPM) and dynamic scenarios used in the annual evaluation were not published or used for training purposes during the program cycle.

Weaknesses:

- No formal process or procedural guidance exits to address duplication of examination material on subsequent annual examinations.

REPORT DETAILS

1.0 Persons Contacted

Licensee Representatives

+A. A. Blind, Site Vice President/Plant Manager
+L. Gibson, Assistant Plant Manager
+K. R. Baker, Assistant Plant Manger - Production
+P. F. Carteaux, Training Superintendent
+J. S. Joel, Quality Assurance & Control Superintendent
+B. Nichols, Operations Superintendent - Acting
*+J. Stubblefield, Operations Training Supervisor
+R. Perrine, Operations Training Specialist
*+D. Seipel, Requal Program Administrator
* B. Davidson, Senior Training Instructor
* R. Scott, Senior Training Instructor

Nuclear Regulatory Commission

*+T. M. Burdick, Operator Licensing Section Chief
+J. P. Isom, Senior Resident Inspector

*Denotes those present at the training exit meeting on January 27, 1995.
+Denotes those present at the management exit meeting on January 27, 1995.

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

2.0 Inspection Scope and Objectives

The licensed operator requalification program evaluation included a review of training administrative procedures, examination material, systems approach to training (SAT) controls, examination administration practices, training feedback system, remedial training program, and conformance with operator license conditions. Additionally, the inspectors observed and coevaluated operator performance on the annual requalification examination. Further, the inspectors assessed simulator fidelity. The inspection's primary objectives were to:

- verify the licensee's requalification program for licensed operators ensures safe plant operation by adequately evaluating operators' skills;

- assess the licensee's effectiveness in evaluating and revising the licensed operator requalification program based on operational performance, including requalification examinations;

- assess the licensee's effectiveness in ensuring that the individuals licensed to operate the facility satisfy the conditions of their licenses as specified in 10 CFR 55.53.

3.0 Licensed Operator Requalification Program Assessment

3.1 Program Administration

The inspectors concluded that the licensee was implementing the licensed operator requalification training program in accordance with the licensee's administrative procedures with some exceptions.

The inspectors identified the following strengths regarding requalification program administration:

- Operations management appeared to give training a high priority as evidenced by Operations' Production Supervisor observing and leading the team evaluation of the crew's dynamic scenario examination observed by the inspectors.

- Security during the examinations appeared adequate to prevent compromise of the examination and was not overly restrictive or stressful for the operators.

- The schedule was well planned to minimize delays for the operators and maximize the utilization of the evaluators.

- Operations management stated that the training department was responsive to their needs and that training administered during this cycle gave them what they requested.

The following weaknesses regarding requalification training program administration were noted:

- Training procedure TAM-3.03, "Licensed Operator Requalification Training," Revision 7, specifies that waivers may be granted to individuals developing or validating the annual requalification examination. With a change in the program to administer the written examination on a biennial basis, this waiver policy could result in a licensee not receiving a written examination during the requalification program cycle of 24 months. The inspectors determined that no waivers were given on the last written examination.

- A weakness in the area of management's auditing of evaluator techniques and skills during the performance of job performance measures (JPM) was noted in inspection report number 50-315/93025(DRS) and number 50-316/93025(DRS). A review of selected training instructors' records revealed that they were not routinely observed in all types of training/evaluation settings and that a majority of the instructors were not observed by management while performing JPM evaluations. Training

administrative procedure TAM 2.05 states that each instructor should be evaluated annually in each of the training settings (i.e. classroom, simulator and JPM). This is a continuing program weakness since training instructors are the primary evaluators during annual examinations and no evidence of appropriate management auditing was presented.

- A weakness in the area of examination material overlap was noted in inspection report number 50-315/93025(DRS) and number 50-316/93025(DRS). Training procedure TAM-3.03, "Licensed Operator Requalification Training," Revision 7, still specifies that weekly administered quizzes shall have no more than 50% overlap. However, the inspectors determined that no formal program was in place to track and prevent excessive duplication among annual examinations for individuals. In addition, the inspectors identified two licensed operators that had received more than 50% repeat among their annual operating examination from the previous year. Even though no other evidence of excessive overlap was found among the weekly quizzes or annual examinations reviewed, the inspectors determined that a lack of program guidance could lead to a violation of 10 CFR Part 55 (i.e. integrity of examinations and tests) requirements.

The licensee's training management, being informed of these concerns, acknowledged the need to review each issue for future program revision.

3.2 Remediation Training

The inspectors reviewed the remediation process. The licensee's program provided written documentation of individual and crew weaknesses. The documents included the required remediation and retest requirements for the individual and crew. The licensee appeared to make appropriate conservative calls to remediate individuals and crews. The inspectors concluded that the remediation program met the intent of 10 CFR Part 55.

3.3 Requalification Examination Material Review

The inspectors reviewed the simulator scenarios and job performance measures administered during the week of January 23, 1995. Additionally, the examinations administered for the previous two requalification years were reviewed for safety system coverage and overlap between the evaluation periods. The licensee's training program addressed adequate safety focus as evidenced by the depth of material covered concerning safety systems and the emphasis on operator actions that are required in the event of a plant emergency. For example, loss of primary coolant requiring residual heat removal (RHR) system operation, steam generator tube rupture plus a faulted steam generator, and a loss of all AC power with selected vital equipment failures were all covered during the course of the examination. The inspectors concluded that the examination material met the intent of 10 CFR Part 55.

The following strength regarding requalification examination material was noted:

- The JPMs and dynamic simulator examination scenarios were not published or used for training purposes during the training cycle. This allowed for a more valid examination.

3.4 Requalification Examination Administration

The inspectors observed and evaluated the operators' performance during the job performance measures and the dynamic simulator portions of the operational examination. The inspectors concluded that licensed operator performance was satisfactory.

The following strength regarding requalification examination administration was noted:

- The Shift Technical Advisor (STA) position, which is a non-licensed degreed individual, was evaluated by his immediate supervisor and was included in the crew evaluation.

The following weaknesses regarding requalification examination administration were noted:

- The operating crew was given a plant turnover in a classroom setting located outside of the plant specific simulator. Following this turnover, the crew was allowed to walk down the control panels for approximately five minutes; the lead evaluator asked if they were ready, then stated out loud that "We will begin the evaluation at this time" or words to that affect. This form of setup, while acceptable to the crew, does not enhance realism and is inconsistent with a statement made by the licensee's training staff that the operators are expected to treat the simulator setting the same as the actual control room.

- During the performance of dynamic scenario RQ-E-1710, "Loss of All AC with Diesel," and following the main event initiation, the crew was attempting to recover electrical power and restore vital loads. One of these loads was the component cooling water supply, which had one of it's two pumps out of service for maintenance due to an earlier problem. The crew conferred and decided to attempt to start the out of service pump. The inspectors questioned the crew's lack of aggressive action regarding personnel safety. No attempt to notify plant personnel to stand clear of equipment being remotely operated was observed. The licensee's representative informed the inspectors that the normal practice during emergency procedure implementation was for the affected unit to contact the unaffected unit, which would make any plant announcements. Since that did not occur in this case, the inspectors addressed their concern to the licensee's management for action.

- Two of the three dynamic scenarios required unplanned restoration of plant equipment to allow termination of the scenario as written. These were not identified within the scenario description as being required. Additionally, the scenario termination points were not accomplished, as stated, due to concern over duration of scenario (not to exceed sixty minutes) run time. Examination validation and setup should have identified most of these items.

3.5 Evaluation of Licensee Evaluators

The NRC inspectors agreed with the licensee evaluators 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 strength regarding requalification examination administration was noted:

- During the performance of a JPM, AE-O-E209, "Place Carbon Dioxide (CO2) Vaporizers in service to Purge Unit 1 Main Generator," the first operator being evaluated pointed out a problem in the system's lineup. The evaluator was able to quickly adapt to this change in system status and provided the correct cues to all subsequent operators being evaluated.

The following weakness regarding licensee evaluators was noted:

- With a crew compliment of six operators and a shift technical advisor (STA), the three assigned evaluators were not always in a position to monitor the extra operators' actions on the main control board rear panels. Typically, these extra operators (one RO and one SRO) would be tasked to assist in restoration of equipment or system lineup. One evaluator was assigned to monitor the primary and secondary board operators at the front panels, another evaluator was assigned to monitor the unit supervisor and shift supervisor at the center deck, and the lead operations management evaluator performed an overall team evaluation. With a high pace of evolutions occurring during the main event, the inspectors observed that the licensee's evaluators were not always in a position to effectively monitor the performance of the extra operators at all times. This was especially evident during evolutions that involved operator action at the rear panels of the control room (i.e. ventilation operations).

3.6 Staff Interviews

The inspectors conducted interviews with members of the training staff and members of the operations staff in order to acquire information and gain perspective on the staff's perceptions of the requalification training program.

Generally, both operations and training personnel believed there was a good working relationship between the two groups. Training management stated that the newly implemented shift liaison program, where a training instructor was assigned to interface with a specified crew and to be their point of contact with training, would help to improve the requal training program feedback process.

4.0 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. The licensee's program was evaluated as meeting the Systems Approach to Training concept in accordance with 10 CFR Part 55.

5.0 Conformance of Operator License Conditions

A review of the licensee's program to ensure that individuals licensed to operate the facility satisfied the conditions of their licenses as specified in 10 CFR 55.53(i) was conducted.

5.1 Licensed Operator Medical Examinations

A review of current medical examination dates indicated that all of the licensed operators met the requirements regarding their license. The licensee's medical program which governs licensed operator renewals meets the intent of 10 CFR Part 55.

5.2 Maintenance of Operators License Status

The licensee's program to track and verify the status (active/inactive) of individual operator's licenses was adequate. A current list of active and inactive licenses was verified to be up to date with no evidence of error detected. The licensee's program meets the intent of 10 CFR Part 55.

5.3 Requalification Attendance

Licensed individual requalification training attendance records were reviewed. The inspectors considered this to be adequate and concluded that attendance at requalification training was satisfactory.

6.0 Simulator Fidelity

Simulator discrepancies were identified. During the performance of scenario RQ-E-1712, "Large Break Loss of Coolant Accident (LOCA) with Residual Heat Removal (RHR) system leak," the simulator experienced a locked up some fifteen minutes into a loss of coolant accident due to an unknown reason. The simulator was restored using a backtrack snapshot following a seven minute delay. This had a minimal impact on the crew's performance. These discrepancies are noted in Enclosure 2.

7.0 Exit Meeting

The inspectors conducted exit meetings on January 27, 1995, with the training staff and with plant management at the Cook Nuclear Power Plant 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 inspectors 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.

ENCLOSURE 2

SIMULATION FACILITY REPORT

Facility Licensee: D. C. Cook Nuclear Power Plant

Facility Licensee Docket Nos. 50-315; 50-316

Operating Tests Administered On: D. C. Cook 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:

ITEM		DESCRIPTION
1.	Simulator Lock Up	During Scenario RQ-E-1712, "Large Break LOCA with RHR Leak," a simulator process failure resulted in a delay of some seven minutes during the scenario's main event. Reason unknown.
2.	Improper Pump Indication	During Scenario RQ-E-1707, "Large Break LOCA with Recirculation," the ESF pumps were being aligned for cold leg recirculation when the West Containment Spray (CTS) pump inappropriately indicated no discharge pressure and low amps. This was determined to be caused by improper modeling during a recent upgrade.