

U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 50-317/83-21
50-318/88-21

Docket No. 50-317, 50-318

License No. DPR-53
DPR-69

Licensee: Baltimore Gas and Electric Company

Facility Name: Calvert Cliffs Nuclear Power Plant, Units 1 and 2

Inspection At: Lusby, Maryland

Inspection Conducted: August 31 and September 1, 1988

Inspector: Edward Yachimiak 10/4/88
E. Yachimiak, Operations Engineer date

Approved by: P. Eselgroth 10/7/88
P. Eselgroth, Chief, PWR Section, date
Operations Branch, DRS

Inspection Summary: A routine announced inspection was conducted at the Calvert Cliffs Nuclear Power Plant to evaluate the content, implementation, and effectiveness of the Licensed Operator Training Program. All of the areas which were reviewed by the inspector appear to have been performed in accordance with their respective program requirements. No violations or deviations were identified.

DETAILS

1.0 Persons Contacted

- *J. Hill - Supervisor Operations Training, QASD
- *R. Douglass - Manager, QASD
- J. Yue - Senior Instructor
- C. Andrews - Senior Instructor
- D. Dunham - Instructor
- M. Coon - Instructor
- M. Wasem - Reactor Operator (RO)
- R. Holt - Reactor Operator (RO)
- M. Junge - Senior Reactor Operator (SRO), STA
- D. Zyriek - Senior Reactor Operator (SRO), SS
- R. Shiele - Reactor Operator (RO)

*Denotes those persons present at the exit meeting on September 1, 1988.

2.0 Licensed Operator Training

The Licensed Operator Training (LOT) Program is addressed by Calvert Cliffs Instruction (CCI) 604-I, "Licensed Operator Training." A review of this and other related Training Instructions (TI) was performed to verify that the provisions of 10 CFR Part 55.59 were being properly addressed and to ensure that adequate program guidance was being provided to the LOT staff. This was accomplished through a review of the following performance based activities completed during the last two (2) years by the LOT staff.

2.1 Reactivity Manipulations

All Licensed personnel must be part of a requalification program that includes on-the-job training such that each individual either manipulates the plant controls (RO) or directs the activities of individuals during plant control manipulations (SRO) for the specific activities outlined in 10 CFR 55.59.

A review of the "Record of Reactivity Control Manipulations" forms for the last requalification cycle, 1987, was performed and no discrepancies were found. The review consisted of a sampling of approximately fifteen (15) forms out of the total number of Licensed personnel, approximately 70. When control manipulations are not performed in the plant, credit is taken for actions which are performed on the simulator. Also, credit is taken for individuals who supervise or direct the actions in the simulator. This is in accordance with the Regulations. In addition, most personnel are performing all the activities specified by the Regulations annually instead of on the allowable two-year cycle.

2.2 Scheduled Lecture Attendance

The LOT Program must contain regularly scheduled classroom lectures for all Licensed individuals for the areas specified by the Regulations. This requirement was verified by reviewing the 1987 and 1988 requalification records. No discrepancies were found in this area.

Individuals must sign an attendance sheet to receive credit for classroom participation. Missed lectures must be made up by the individual by an independent review of the respective Lesson Plans or by discussion of the lecture material with the responsible instructor. While documentation for the completion of this remedial training is not documented, the results of all quizzes were documented and showed that individual quiz failures were promptly corrected. This process was also verified through interviews with staff and Licensed personnel.

2.2 Lecture Content and Written Exam Performance Results

To evaluate the effectiveness of the training which the licensed operators receive, weekly quizzes and an annual exam are used by the LOT staff. Six (6) quizzes from the 1987 and 1988 requalification cycles were reviewed and found to adequately test the knowledge and information which was disseminated during the associated week of training. Important training for specific tasks such as complicated surveillance tests, refueling, and emergency operating procedures was found to have been scheduled into the program. Results from the 1987 requalification quizzes and annual exam were extremely good with an overall average near 90%.

The results of all quizzes and the annual exam are discussed in the first training session following the taking of that exam/quiz.

2.3 Simulator Training Content and Exam Performance Results

Simulator training is typically designed so that a shift crew of four (4) people are placed into an environment that (1) mimics conditions normally seen in the plant, and (2) tests their ability to use abnormal and emergency procedures. This training accomplishes two (2) tasks. First, it enables the crew to complete the manipulation requirements specified in the Regulations. Second, it places the crew into scenarios which normally do not occur at the plant and allows them to improve their skills and abilities for handling these situations.

All licensed individuals are evaluated once a year in the simulator to ensure that they maintain the appropriate level of skill and ability needed for their respective job. Evaluators use a formalized checklist to grade the operators performance. Each operating crew member is examined by one evaluator during one or more scenarios which are similar in format to that which are used during the weekly training classes.

After a review of approximately six (6) annual simulator exams it was found that two (2) of the evaluators were using the checklists in an inconsistent manner. These two (2) discrepancies, however, did not affect the overall evaluations of the individuals being examined. These inconsistencies have been corrected by a training session on the proper use of the checklists. In addition, to ensure a high degree of consistency among the evaluators, instructors have been given formalized training on the techniques of evaluation.

All licensed individuals successfully passed their respective 1987 annual simulator examinations. Generic weaknesses among the operating crews were identified after all the exams had been administered. These weaknesses were then presented to the crews during the first session of training following the exam in order to collectively discuss and resolve any problems. Feedback from the operating crews on their weaknesses has been found to increase the awareness of the operators and improve the training atmosphere.

2.4 Incorporation of Operating Events Into Training

The incorporation of recent operating events into the training program allows operators to learn lessons from the mistakes of others. This process has been well established in the LOT program. All LERs, SOERs, and site specific Performance Improvement Reports (PIRs) are analyzed by members of the LOT staff. The disposition of each event is documented and when additional training has been determined to be necessary, a change in the respective Lesson Plan is authorized.

In an attempt to reduce the number of human error related operating events at the plant, the facility held an LER Workshop with all the licensed and non-licensed operators. On March 7, 1988, the results from a LER Workshop were disseminated to these operators.

2.5 Plant Changes

When the design of systems or components in the plant are to be modified, the LOT staff performs the same type of review process which is used for the incorporation of operating events into

training. These changes are presented to the operators before the changes are made to the plant. This prepares the operators for the changes so that less time is needed to review the change in the control room prior to its installation in the plant. Updates to the changes are routed to the operators when the use of additional classroom training time is not practical.

3.0 Findings and Observations

No violations, unresolved items, or open items were identified during this inspection. All of the areas which were reviewed by the inspector appear to have been performed in accordance with their respective program requirements.

During the conduct of interviews with the licensed operators, however, a generic concern over the length of time spent in training was expressed. The three (3) days per weekly cycle currently scheduled for requalification training is apparently just enough time to cover the minimum requirements. Operators stated that additional scheduled time would enable them to focus their attentions in areas of interest that are not covered during the classroom, and would allow them to spend more time on the simulator to sharpen their manipulative skills and abilities.

4.0 Exit Meeting

The inspector met with the licensee's representatives (identified in paragraph 1.0) at the conclusion of the inspection on September 1, 1988 to summarize the scope and findings as detailed in this report.

During this inspection, the inspector did not provide any written material to the licensee.

Attachment A

Documents Reviewed

1. CCI-604I, "Licensed Operator Training"
2. TI-1D, "Training and Certification of Instructors"
3. BG&E SER on Operator Training for INPO, 2/26/88
4. Memorandum from E.A. Chrzanowski, Jr. on General Observations from LER Workshop
5. Lesson Plan (LP) LOR-48-1-87
6. LP LOR-212-1-88
7. L-88-004
8. LER-88-005
9. LER-88-007
10. L-88-03
11. SOER-81-4
12. FCR-88-3000,3001
13. LP LOR-210-1-88