

U.S. NUCLEAR REGULATORY COMMISSION REGION I
OPERATOR LICENSING REQUALIFICATION PROGRAM EVALUATION REPORT

REQUALIFICATION PROGRAM EVALUATION REPORT NO. 50-443/90-22 (OL-RQ)

FACILITY DOCKET NO.: 50-443
FACILITY LICENSE NO.: NPF-67
LICENSEE: Public Service of New Hampshire
P. O. Box 300
Seabrook, New Hampshire 03874
FACILITY: Seabrook
EXAMINATION DATES: October 15 - 26, 1990

CHIEF EXAMINER:

Paul Bissett
Paul Bissett, Senior Operations Engineer

12/21/90
Date

APPROVED BY:

Larry E. Bings
Peter Yselgroth, Chief, PWR Section Chief
Operations Branch, Division of Reactor Safety

12/21/90
Date

SUMMARY: The licensed operator requalification training program was rated as satisfactory. Written requalification examinations and operating tests were administered to thirteen senior reactor operators (SROs) and three reactor operators (ROs). The examinations were graded concurrently and independently by the NRC and the facility training staff. As graded by the NRC, twelve of the thirteen SROs and the three ROs passed all portions of the examination. One SRO failed the operating portion (job performance measures) of the examination. Facility grading paralleled that of the NRC in all aspects of the examination.

DETAILS

TYPE OF EXAMINATIONS: Requalification

EXAMINATION RESULTS:

NRC Grading	RO Pass/Fail	SRO Pass/Fail	TOTAL Pass/Fail
Written	3/0	13/0	16/0
Simulator	3/0	13/0	16/0
Walk-through	3/0	12/1	15/1
Overall	3/0	12/1	15/1

Facility Grading	RO Pass/Fail	SRO Pass/Fail	TOTAL Pass/Fail
Written	3/0	13/0	16/0
Simulator	3/0	13/0	16/0
Walk-through	3/0	12/1	15/1
Overall	3/0	12/1	15/1

1.0 PERSONNEL CONTACTED DURING THE EXAMINATION/EVALUATION

CHIEF EXAMINER AT SITE:

P. Bissett, Senior Operations Engineer/Examiner (1,2,3,4)

OTHER NRC PERSONNEL:

P. Eselgroth, Chief, PWR Section (1)
 N. Dudley, Senior Resident Inspector (4)
 N. Maguire Moffitt, PNL (2,3)
 M. Lintz, PNL (2,3)

PUBLIC SERVICE OF NEW HAMPSHIRE:

S. Bass, Training Instructor	(3,4)
L. Carlsen, Operations Training Supervisor	(1,2,3,4)
B. Drawbridge, Executive Director of Nuclear Production	(4)
J. Grillo, Operations Manager	(3,4)
R. Hanley, Operations Training Manager	(4)
L. Hubbard, Senior Simulator Training Instructor	(1,3,4)
S. Kirchhoff, EOP Coordinator	(1,3,4)
D. Moody, Station Manager	(4)
J. Peterson, Assistant Operations Manager	(1,2,3,4)
P. Richardson, Training Group Manager	(4)
J. Smith, Training Instructor	(3,4)

LEGEND:

- (1) Attended entrance meeting on August 15, 1990 at Region I, NRC
- (2) Participated in examination development
- (3) Participated in examination administration
- (4) Attended exit meeting on October 26, 1990 at the Seabrook Training Center

2.0 PROGRAM EVALUATION RESULTS

Overall rating: Satisfactory

The program for licensed operator requalification training at Seabrook was rated as satisfactory in accordance with the criteria established in the Revision 5 of NUREG-1021, ES-601. Those criteria are:

- a. A pass/fail decision agreement between the NRC and facility grading of 90% for the written and operating examinations, with the licensee not being penalized for holding a higher standard of operator performance.

NRC grading resulted in sixteen operators passing the written examination. Facility grading also resulted in sixteen operators passing the written examination. This satisfies criterion a.

NRC grading resulted in fifteen of sixteen operators passing the job performance measures of the examination. Facility grading resulted in the same fifteen operators passing the job performance measures of the examination. This also satisfies criterion a.

NRC grading resulted in sixteen operators passing the simulator portion of the examination. Facility grading resulted in sixteen operators passing the simulator examination. This also satisfies criterion a.

- b. At least 75% of all operators pass the examination.

NRC grading is the only consideration for this criterion. Fifteen of sixteen operators passed the examination overall. This satisfies criterion b.

- c. Failure of no more than one crew during the simulator portion of the operating examination.

Again, NRC grading is the only consideration for this criterion. Four crews were evaluated and all four crews passed the simulator portion of the operating examination. This satisfies criterion c.

3.0 SCENARIO EVALUATION

The following weaknesses were noted during the scenario portion of the operating examinations. This information is being provided to aid the licensee in upgrading licensed operator training and requalification training programs.

- Control board operations involving Emergency Feedwater throttling criteria and steam dump operation.
- Communications was marginally adequate. The licensee acknowledged that there is significant room for improvement, and subsequently initiated the formation of a task force, led by the Assistant Operations Manager, to address this problem.

4.0 WRITTEN EXAMINATION EVALUATION

The following weaknesses were noted during the review and administration of the written examination. This information is being provided to aid the licensee in upgrading licensed operator and operator requalification training programs.

- Although not explicitly stated in ES-601, the static examination (Part A) is to consist of two distinctly different plant emergencies, with one of the emergencies being a plant transient resulting in an ESF initiation. The licensee had been previously testing with the second emergency being a continuation of the first.
- To ensure consistency of static conditions between examinations for different groups of individuals, an evaluation should be made of possible ways for saving any one particular simulator setup. Duplication of exact plant conditions is not always attainable as evidenced during the examination process. As a result, considerable time and effort was spent after the fact in reviewing plant conditions and subsequently modifying the answer key.

- Quality control techniques must be strengthened to ensure that simulator plant conditions are exactly as stated and that questions being asked are appropriate for the given simulator setup.
- Quality assurance reviews must be strengthened to ensure that all questions, both Part A and B, elicit the desired response.
- Many questions had to be revised during the preparation week. The majority of problems encountered dealt primarily with the following:
 - Questions were direct look ups.
 - Questions were TRUE/FALSE.
 - Questions involved double jeopardy situations.
- Determination of overall individual grades for Section A and B is calculated by summing the points credited to the individual on both sections of the examination and dividing by the total points available. The licensee had previously been adding the percentage scores for both sections and then dividing by two to obtain the average.

5.0 JOB PERFORMANCE MEASURES EVALUATION

The following weaknesses were noted during the review and administration of the job performance measures (JPM) portion of the examination. This information is being provided to aid the licensee in upgrading licensed operator and operator requalification training programs.

5.1 JPM PERFORMANCE

During the conduct of JPM 0043, "Shutdown Margin Calculation," only one of eight individuals correctly calculated the required shutdown margin. Upon further evaluation of this JPM, it was determined that most individuals had misinterpreted some of the steps in RX 1707D "Shutdown Margin Determination - Immovable, Untrippable or Dropped Rod(s)."

It was brought to the NRC's attention, following the performance of JPM 0043, that a procedure change had been initiated on October 17, 1990, which clarified some of the steps in the procedure that had apparently caused some operator confusion. An Operations representative stated that they had attempted over a year ago to formally change the procedural steps in question, but Reactor Engineering had not acted upon their request. The NRC stated that problems of this sort must be acted upon and corrected without undue delay. The NRC also stated that it is extremely important that other internal organizations become involved in the review process of proposed procedural changes; however, the Operations department must stress the importance of acting upon these changes in a timely manner.

Also, it was apparent that licensed operators need more training in the area of JPM performance during examinations. There were significant disparities between individuals as to how they performed any one particular JPM.

5.2 JPM EVALUATION

Facility evaluators were identified as satisfactory in their evaluations of operator's during the performance of JPMs. However, a few generic deficiencies in their performance were identified during the conduct of these evaluations during the first week of examinations. Prior to the start of the second week of examinations, the NRC met with the licensee evaluators to discuss with them performance weaknesses and strengths previously observed. Weaknesses, as stated below, were subsequently corrected during the second week of examination; however the NRC stated that emphasis in this area should continue.

- Inappropriate verbal cues were given in some cases.
- The manner in which any JPM was conducted varied often from evaluator to another.
- Evaluators often failed to provide necessary feedback to the examinee for those JPMs that were simulated.
- Non-verbal cues were occasionally provided, i.e., facial expressions.

5.3 JPM STRUCTURE

Several JPMs were considered by the NRC as not being complex enough to sufficiently evaluate the competency of a licensed operator. Although all of these tasks were important, the JPMs were comprised of only a couple of manipulative steps. Since the majority of these JPMs were, in actuality, subtasks of a larger task, the NRC stated that it would be more appropriate to develop JPMs focused around the larger task at hand.

Additional problems noted included the JPM followup question area. Examples included questions being direct lookups; double jeopardy situations; and one word answer type questions, i.e., "What is(are) the trip setpoint(s)...." For future consideration during the development and/or revision of JPM followup questions, the NRC stated that Revision 6 of ES-603-1 provides more specific guidance as to what constitutes an appropriate JPM question, i.e., questions require responses of 2 to 3 sentences.

6.0 SUMMARY OF COMMENTS MADE AT EXIT MEETING ON OCTOBER 26, 1990

- a. The NRC expressed appreciation for the level of effort expended by the training department representatives in accommodating the NRC examination team. This level of effort, which included providing an

adequate working area, appropriate reference materials, locked storage capabilities, plant access badging, etc., helped in expediting the review process and the conduct of the exam. Appreciation was also expressed for the cooperation and level of effort expended by all those involved in the process, especially the facility team members who administered the examination.

- b. The NRC discussed the topics addressed in Paragraphs 2 thru 5 above. The licensee stated that the one individual who failed the JPM portion of the examination would not be permitted to assume shift operational duties until he had completed remedial training and successfully passed a reexamination of that area.
- c. Examination scheduling was satisfactory. Minor delays were encountered during the execution of the JPMs performed on the simulator. These delays could have been alleviated had the administrative JPMs been scheduled for performance in the control room or classroom. Also, the simulator scenarios should be reviewed to ensure that they take approximately 50 minutes to complete. Several scenarios took much longer than 50 minutes which contributed to excessively long days when the simulator scenarios were conducted.
- d. The licensee needs to continue to apply Quality Control examination techniques to written examination and JPM questions in much the same manner that QC techniques were applied during the written exam review performed by the NRC during the exam preparation review week.
- e. Although not specifically discussed at the exit meeting, the reference material supplied by the licensee to the NRC for examination preparation was excellent. All material was well indexed and tabbed which allowed rapid access to specific topics and component information.

Attachment: Public Service Company of New Hampshire Letter (T.C. Feigenbaum to T.T. Martin) Dated November 15, 1990