

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-155/OL-89-02

Docket No. 50-155

License No. DPR-6

Licensee: Consumers Power Company  
Big Rock Point Nuclear Power Plant  
10269 U.S. 31 North  
Charlevoix, MI 49720-9458

Facility Name: Big Rock Point Nuclear Power Plant

Examination Administered At: Big Rock Point Nuclear Power Plant  
Charlevoix, Michigan

Examination Conducted: November 1-19, 1989

Examiners:

G. M. Neffelt  
G. M. Neffelt, Chief Examiner

01-02-90  
Date

Michael E. Bielby, Sr.  
M. E. Bielby, Sr.

1/2/90  
Date

Eddie Rau  
E. Rau

1/2/90  
Date

G. M. Neffelt for  
M. Riches

01-02-90  
Date

H. Peterson  
H. Peterson

01-02-90  
Date

Approved By:

M. W. Jordan  
M. W. Jordan, Chief, Operator  
Licensing Section No. 1

1-2-90  
Date

EXAMINATION SUMMARY

Examination administered on November 1-19, 1989 (Report No. 50-155/OL-89-02):  
Written and operating requalification examinations were administered to eight  
Senior Reactor Operators (SROs) and four Reactor Operators (ROs). In  
conjunction with the simulator portion of these examinations, two shift crews  
and one staff crew were evaluated.

Results: One RO failed the written examination. In that 92% of the licensed

operators (11 of 12) passed the NRC Requalification Examination both by the facility and NRC independent grading as required by NUREG-1021, Operator Licensing Examiner Standards, Revision 5, ES-601, the Big Rock Point Requalification Program is considered satisfactory.

Significant Strengths:

- ° Operators generally performed well on the GE Dresden simulator modified for the Big Rock Point Unit for the scenarios given (i.e., Loss of Instrument Air and Major Loss of Cooling Accident (LOCA)).
- ° The operators were well prepared for the examination.
- ° The Training Staff was very responsive to correct difficulties found during the development of requalification material in that material that was not initially reviewed was corrected.

Significant Weaknesses:

- ° None.

## REPORT DETAILS

### 1. Examiners

G. Nejjfelt, Chief Examiner, USNRC  
E. Rau, USNRC  
M. Riches, Battelle - Pacific Northwest Laboratories (PNL)  
H. Peterson (under instruction), USNRC

### 2. Exit Meeting

An exit meeting was conducted on November 19, 1989. The following personnel attended this exit meeting:

#### Facility Representatives

T. W. Elward, Plant Manager  
C. R. Abel, Production and Performance Superintendent  
\*D. G. LaCroix, Training Administrator  
W. J. Trubilowicz, Operations Supervisor  
\*J. R. Hutchison, Senior Training Instructor

#### NRC Representatives

\*M. Jordan, Section Chief, USNRC  
\*G. M. Nejjfelt, Chief Examiner, USNRC  
E. Plettner, Senior Resident Inspector, USNRC  
E. Rau, Examiner, USNRC  
H. Peterson, Examiner, USNRC  
M. Riches, Examiner, PNL

\*Attended regional meeting in March 1989, with Big Rock Point representatives to provide direction needed to comply with the Requalification Program provided in Operator Licensing Examiner Standards, NUREG-1021, Revision 5.

The following items were discussed during the exit meeting:

- a. The examiners were favorably impressed by the overall knowledge level and demeanor of the candidates.
- b. Security and radiological accesses for examiners to the plant were excellent. No delays occurred.
- c. The general plant appearance and housekeeping observed at the Big Rock Point Facility were excellent based upon the numerous occasions that the examination team was in the plant.



- d. Both the requalification material quantity and quality were acceptable. However, it was recognized that difficulties encountered during the preparation of this requalification examination need to be applied to the materials in the Requalification Question and Scenario Test Banks prior to its use or new material development.

Since the training staff was very responsive to correct difficulties found during the development of requalification material, the following comments are provided to document specific areas of difficulties to be avoided in the future.

(1) Scenario Development:

- (a) Scenario Critical Steps need to be properly established and identified;
- (b) Scenarios needed to be in sufficient detail to keep track of the expected operator actions (i.e., the first scenarios checked with the GE Dresden simulation on October 21, 1989, stated general tasks to be performed).
- (c) Scenario development should reflect the current procedural and management policy to definitively support an expected course of action, rather than permitting various options (i.e., to close or to keep open main steam line isolation valves during an ATWS given the parameters established by the scenario).

(2) Job Performance Measures (JPMs):

- (a) Job Performance Measures (JPMs) need to be walked down thoroughly to be consistent with procedures and equipment (i.e., it was physically not possible to, as indicated in JPM "JBNA270901," to bypass a clogged filter without placing the standby filter train into service; and two JPMs had incorrect alarm responses and alarm panel designators). This process also entails that a time validation be done in all cases (i.e., six of 32 JPMs that were reviewed did not indicate a time validation);
- (b) JPMs did not initially provide sufficient details for an observer to independently determine, if the operator's actions were correct (i.e., did not provide labelling of switch, valve, pump, etc.);
- (c) JPMs are required to be self contained units. It is not appropriate nor practical to include into a JPM the associated surveillance prior to doing the desired task. Two JPMs had surveillances required as performance steps;

- (d) JPMs Critical Steps need to be properly established and identified (11 of 32 JPMs Critical Steps that were reviewed were reevaluated); and
- (e) JPMs Questions need to be relevant to the task being performed (i.e., nine of 65 JPMs Questions were replaced).

(3) Written Examination Questions:

- (a) Although not a generic concern, Written Examination Questions need to be principally analytic or to involve decision making, rather than simply looking up a fact in the documentation available.
- (b) Static Simulator Questions require the assimilation of information that is necessary to answer the questions. In lieu of a simulator for the Big Rock Point NRC Requalification Examination, a comprehensive table of information was provided at various times ( i.e., time zero, +5 minutes, +15 minutes, etc.) to achieve this objective. The effort and results obtained by the training staff is commendable.
- (c) Because of the Chief Examiner's insistence, the entire written examination was presented in a multiple choice format. The benefits of removing possible grading bias and of facilitating grading markedly offset the preparation to prepare these multiple choice questions, as noted by the training staff.
- (d) Until more definitive information is available, the question structures should parallel the guidance provided in NUREG-1021, ES-401, which is used for Replacement Examinations.

e. Use of GE Dresden Simulator:

Overall, the crews performed well. However, it was noted for the ATWS Scenario that various approaches were taken by each crew (i.e., various applications of Emergency Operating Procedure (EOP)-1 RC-Q and ATWS contingency). To establish a consistent conduct among the crews, the Training Administrator committed to:

- (1) emphasis EOP usage for all operating shifts in the 1990 Requalification Sessions; and
- (2) retrain the crews on the use of EOP-1RC-Q and ATWS contingency utilizing team scenarios either through in plant walkthroughs or use of the mock-up simulator that will be available for use during the 1990 requalification examination cycle.



Although the Big Rock Point operators are shown differences in the pre-simulator familiarization sessions at the GE Dresden Simulator, operator error resulted due to significantly different controls between the units at Big Rock Point and GE Dresden Simulator. In one instance, a scenario was stopped and restarted to preclude spending excessive time to recover from an "unexpected" causality immediately after initially loading the main generator. The "unexpected" event was due to a protective feature on the GE Dresden Simulator to prevent motorizing the main generator. This protective feature is not used at Big Rock Point. To address similar items, the Training Administrator committed to continue incorporating into the training program simulator fidelity concerns; and will evaluate the feasibility of making additional modification to the GE Dresden Simulator.

f. Preparation Work by NRC:

The Chief Examiner with other personnel made two trips to the facility on October 10-13, 1989, and on October 23-27, 1989, prior to the NRC Requalification Examination administration on November 16-20, 1989, to review the requalification material.

g. Medical Records:

Approximately twenty percent of the currently active licensed operator medical records were reviewed and were found to be within the two year interval between medical examinations required by Title 10, Code of Federal Regulations (CFR), Part 55.21.

There was no discrepancy.

h. Video Taping:

The NRC Requalification Scenarios at the GE Dresden Simulator were video taped. These video tapes were erased at the end of each day with the permission of the Chief Examiner in accordance with NUREG-1021, Revision 5, ES-601.

Note:

The Initial NRC Examination Exit Meeting was conducted in conjunction with the NRC Requalification Exit Meeting on November 19, 1989 (See Examination Report No. 50-155/OL-89-01).

3. Examination Results Comparison

A comparison of the written examination results between the facility and the NRC grading was identical, because the examinations were entirely in a multiple choice format. Also, the facility and NRC evaluations for the simulator and operating portions of the examination were consistent.

4. Overall Regualification Program Evaluation

The requalification program was assigned an overall program rating of satisfactory. The evaluation criteria of NUREG-1021, Revision 5, was met.

# REQUALIFICATION PROGRAM EVALUATION REPORT

Facility: Big Rock Point Nuclear Power Station

Chief Examiner: G. M. Nejfelt

Dates of Evaluation: November 1, 6, 11, and 17-19, 1989

Areas Evaluated:   X   Written   X   Oral   X   Simulator

## Examination Results:

	<u>RO</u> <u>Pass/Fail</u>	<u>SRO</u> <u>Pass/Fail</u>	<u>Total</u> <u>Pass/Fail</u>	<u>Evaluation</u> <u>(S, M, or U)</u>
Written Examination	<u>  3/1  </u>	<u>  8/0  </u>	<u> 11/1 </u>	<u>    S    </u>
Operating Examination				
Oral	<u>  4/0  </u>	<u>  8/0  </u>	<u> 12/0 </u>	<u>    S    </u>
Simulator	<u>  4/0  </u>	<u>  8/0  </u>	<u> 12/0 </u>	<u>    S    </u>

Evaluation of facility written examination grading: The facility grading identically matched the NRC grading. The examinations used multiple choice type questions.

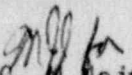
Crew Examination  
Results:

	<u>CREW 1</u> <u>Pass/Fail</u>	<u>CREW 2</u> <u>Pass/Fail</u>	<u>CREW 3</u> <u>Pass/Fail</u>	<u>Evaluation</u> <u>(S, M, or U)</u>
Operating Examination	<u>  Pass  </u>	<u>  Pass  </u>	<u>  Pass  </u>	<u>    S    </u>

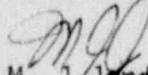
## Overall Program Evaluation

Satisfactory   X  

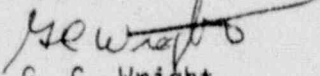
Submitted:

  
G. M. Nejfelt  
Chief Examiner

Forwarded:

  
M. J. Jordan  
Section Chief

Approved:

  
G. C. Wright  
Branch Chief