

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-155/OL-86-01

Docket No. 50-155

License No. DPR-6

Licensee: Consumers Power Company  
212 West Michigan Avenue  
Jackson, MI 49201

Facility Name: Big Rock Point Nuclear Power Station

Examination Administered At: Big Rock Point

Examination Conducted: May 6, 7, and 8, 1986

Examiner: *RD Pauls for*  
T. L. Morgan

*6/19/86*  
Date

Approved By: *T M Burdick*  
T. M. Burdick, Chief  
Operating Licensing Section

*6/19/86*  
Date

Examination Summary

Examination administered on May 6, 7, and 8, 1986 (Report No. 50-155/OL-86-01))

Examinations were administered to four senior reactor operator candidates.

Results: All four senior reactor operator candidates passed the written and operating examinations.

## REPORT DETAILS

### 1. \*Examiners

\*T. L. Morgan, INEL  
\*Chief Examiner

### 2. Examination Review Meeting

At the conclusion of the written examination, the questions and answers were given to the facility training staff for review and comment. At the exit meeting the facility supplied the examiner with their comments to the SRO written examination. On the following pages are the facility comments and the examiner's resolution to each.

### 3. Exit Meeting

At the conclusion of the site visit the examiner met with representatives of the plant site to discuss the results of the examinations. Those individuals who clearly passed the oral examinations were identified in this meeting. The examiner noted no discrepancies.

FACILITY EXAMINATION COMMENTS AND EXAMINER RESOLUTION

FOR BIG ROCK POINT EXAMINATION ON MAY 6, 1986

1. Question 5.05B

Facility Comment:

The candidates will not be able to answer the question about shallow rods, because Big Rock does not have them. However they should be able to discuss the high flux peaks, causing a unit derate, to prevent exceeding thermal limits.

Resolution:

Comment is accepted, answer key will be modified to delete the shallow rod discussion and include the discussion on thermal limits and the derating. Point value remains the same.

2. Question 5.10A

Facility Comment:

MAPLHGR: The candidates answer will vary slightly from the answer key. The candidates will state that the MAPLHGR limit decreases initially due to densification. They will state that the pellet first shrinks axially, and radially increasing the gas gap. (See Attached Reference A) then the students answer will follow the answer key.

Resolution:

Comment is accepted, answer key will be modified to include decrease due to densification and the remainder of the answer will remain and point value is unchanged.

3. Question 5.10B

Facility Comment:

The candidates will answer that MAPLHGR limits prevent clad temperature from reaching 2200°F during a L.O.C.A. to prevent clad failure (See Attached References B)

Resolution:

Comment is accepted, answer key will be modified to accept limiting fuel temp to 2200°F during a LOCA. The point value remains unchanged.

4. Question 6.03D

Facility Comment:

The candidate may be very specific about the differences in the Yarway Steam Drum level sensors. In that one utilizes an 50 inch or 25 inch using 0 as a midpoint reference column. While the other has an 80 inch or 40 inch with 0 as a midpoint reference column.

Resolution:

Comment noted, no change to the answer key required.

5. Question 6.04B

Facility Comment:

Technical Specification state two reasons for the 120 sec. timer. Full consideration should be given both. (See Attached Reference C).

Resolution:

Comment is accepted, the answer key will be modified to add the second answer. Both answers will be required for full credit. Point value will remain the same, each answer will be worth 0.25 each.

6. Question 6.04D

Facility Comment:

This question asks what operation ACTION, but the answer key only gives full credit for three separate responses, any one of which meets the question criterion. Full credit should be given any correct singular response.

Resolution:

Comment is accepted, due to the miss wording of the question. The answer key will be changed to accept any one of the three possible answers for full credit. The point value will remain unchanged.

7. Question 6.05B

Facility Comment:

Candidate may answer three of three switches all below the  $125 \times 10E-5\%$  range (See Attached Schematic Reference D)

Question 6.05C

Facility Comment:

Candidate may answer three of three switches below the  $125 \times 10E-7\%$  range (See Attached Schematic Reference D)

Resolution:

Comments are noted. This is stating the same thing as the answer key. No changes required.

8. Question 6.08

Facility Comment:

There does not appear to be adequate information given to answer this question. The examiner references question bank question No. 13, Technical Data Book 15.5.f.7 and ch. 29 Reactor Systems pg 29-5 and 29-6 (all have been attached and marked E). These reference all discuss an open from the thermocouple. The question is about a short. We took the question to the Plant Instrument and Control staff, and their answer to us was that they could not answer the question as to the reading produced by the thermocouple. It is our position that since this is a three part question, with each part depending on a correct response in part one, the question should be eliminated from this test.

Resolution:

Comment noted. The question will not be deleted, because it is already taken into account that the subparts of this question are dependent upon the answers to the previous portion. Part a's answer is being changed to 2 or 3. This is due to examiner error when developing the question and miss wording of choices. Part a remains as is because, any where that the short is assumed to be the temperature will be lower than at the thermocouple. If the candidate answers part a as 2 then part b is 2 and c is 2. The answer key will be added to reflect these changes. The point value remains the same.

9. Question 6.09B

Facility Comment:

In September 1985 the Emergency Condenser Outlet Valves power supplies were moved to the Alternate Shutdown system 125 VDC battery. The change was due to Appendix R requirements. The new power now is Alternate Shutdown battery BKR 72-2D11 and 72-2D12 (BKR No. not necessary in answer).

Resolution:

This comment is for Question 6.09A not part B, as indicated initially. The comment is accepted and the answer key will be modified to indicate batteries vis DC MCC. The point value will remain as is.

10. Question 6.11

Facility Comment:

Students may respond in BRP common lingo:

1. No Comment
2. Recirc Valve Closure
3. M.S.I.V. (Main Steam Isolation Valve Closure)
4. No Comment
5. Low Condenser Vacuum

Resolution:

Comment noted, this is stating the same thing as the answer key.  
No modification is required.

11. Question 7.04

Facility Comment:

Candidates may answer if deliberately poisoning all poison must be injected with no termination.

Resolution:

Comment noted. This is paraphrasing the answer key. Exact wording is not required for full credit. No change to the answer key or point value.

12. Question 7.06A

Facility Comment:

There are additional actions that the candidates might list.

Resolution:

Comment accepted, the additional actions will be added to the answer key. The point value will remain the same but will be equally divided between all possible responses.

13. Question 7.08

Facility Comment:

When the Scram dump tank is bypassed: Candidates may say when the mode switch is in bypass dump tank position (BDTP).

Resolution:

Comment noted. Exact wording is not required to get full credit, paraphrasing is acceptable.

14. Question 7.09B

Facility Comment:

The Recirc pump discharge butterfly valves have no position indication. (They have been electrically disabled and locked in the open position.)

Resolution:

Comment accepted. Due to the valve being disabled and no indication available part b will be deleted from question. The point value will be decreased by 0.5. Section and test totals will be adjusted accordingly.

15. Question 7.11

Facility Comment:

The candidates may also include Item 1: of E.M.P. 3.3 as part of the answer. (See Attachment F)

Resolution:

Comment not accepted. Reference F only applies to the Loss of Coolant Procedure while the question refers to all the emergency procedures and there guidelines. Answer key and point value remains unchanged.

16. Question 8.01

Facility Comment:

Candidates may also answer temporary change no change of intent. (See Attachment G Admin. Procedure and Tech. Specs.)

Resolution:

Comment noted. The question specifically asks about revisions not temporary changes. If the candidate answers for revision and temporary change full credit will be given if only temporary change is discussed then partial credit will be given. Answer key and point value will remain unchanged.

17. Question 8.03

Facility Comment:

The candidate may answer On Call Technical Advisor instead of S.T.A. or Shift Engineer. (Big Rock change to a O.T.A. in 1982)

Resolution:

Comment accepted. The title of O.T.A. or On Call Technical Advisor will be added as an alternate title. The point value will remain as is.

18. Question 8.10

Facility Comment:

The candidate may answer that a trip must be placed in on an affected channel. This action produces a scram should a trip occur on one of the remaining two (See Attachment H)

Resolution:

Comment accepted. The answer key will be modified to include this statement. The question did not ask how the conditions were accomplished but what was required condition.

19. Question 8.13b

Facility Comment:

The candidate will probably answer using the entire vacuum relief train. (See Attachment I) Also the integrity of Containment is more than just protecting the structure. So the closing and reclosing after vacuum relief may appear in the candidates answer. (See Attachment J)

Resolution:

Comment partially accepted. The candidate answer using the entire vacuum relief operation as described in Attachment I answers the question. (Attachment I exceeds the requirements for full credit) The second portion of the comment referring to what integrity is and when it is required is not asked for in the question and, therefore, will not be accepted. The answer key and point value will not be changed.

20. Question 8.14

Facility Comment:

Big Rock uses a 30 day interval  $30 \text{ days} \times 1.25 = 37.5 \text{ days}$  not 7.75.

Resolution:

Comment is accepted. Due to examiners error 31 days was used for the monthly interval vis 30. The answer key will be modified to 7.5 vis 7.75 and 1.5 vis 1.75 respectively. Point value will remain the same.



## EXAMINER COMMENTS

<u>Section</u>	<u>Corrections Made During Grading</u>
5.06	Will is misspelled in the second line of part B.
6.07	A should be 4 vis 3, typo.
6.09	C changed "circuit does not indicate open" top "circuit is not open." Examiners misinterpretation of the reference material.
8.08	Answer: The "or above" was not asked for in the question, therefore, it is assumed to be implied when the candidate states the E plan level or entry. Only the entry point is required for full credit.