

U.S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-454/OL-89-2

Docket Nos. 50-454; 50-455

Licenses No. NPF-37; NPF-66

Licensee: Commonwealth Edison Company
Post Office Box 767
Chicago, IL 60690

Facility Name: Byron Station

Examination Administered At: Byron Station and PTC Simulator

Examination Conducted: Week of November 27, 1989

RIII Examiners: K. Shembarger
K. Shembarger

12/20/89
Date

V. Loughney
V. Loughney

12/20/89
Date

Chief Examiners: J. Lennartz
J. Lennartz

12/20/89
Date

T. Reidinger
T. Reidinger

12/20/89
Date

Approved By: Thomas M. Burdick
Thomas M. Burdick, Chief
Operator Licensing Section 2

12/20/89
Date

Examination Summary

Examination administered during the week of November 27, 1989
(Report No. 50-454/OL-89-2):

Consisted of written and operating examinations administered to two reactor operator candidates, three senior reactor operator candidates and one limited senior reactor operator candidate. In addition, a written examination was administered to one senior reactor operator candidate and operating examinations were administered to two senior reactor operator candidates.

Results: All candidates passed the examinations.

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REPORT DETAILS

1. Exit Meeting

- a. On December 1, 1989, an exit meeting was held. The following personnel were present at this meeting:

T. Reidinger - Chief Examiner
K. Shembarger - NRC Examiner
V. Loughney - NRC Examiner
R. Pleniewicz - Byron Station Manager
R. Ward - Technical Superintendent
G. Schwartz - Production Superintendent
J. Kudalls - Services Director
T. Chasensky - Production Training Center
A. Chernick - Training Supervisor
L. Bunner - Training
T. Glenick - U-2 Operating Engineer

- b. The following generic weaknesses were identified by the examiners and discussed with the utility:

- (1) During the simulator portion of the operating examination, it was identified that communications amongst the crew members needs improvement.
- (2) During the simulator portion of the operating examination, it was identified that abnormal and emergency procedure execution needs improvement.

The following generic weaknesses were identified on the written examinations:

- (3) Question No. 30 in Section 3 of the RO written examination required the candidates to state the conditions that allow a temporary lift of an out of service component. Both RO candidates failed this question.
 - (4) Question No. 17 in Section 5 of the SRO written examination required the candidates to determine the person responsible for determining if a containment evacuation is required due to high radiation during fuel movement. Seventy-five percent (75%) of the SRO candidates failed this question.
 - (5) Question No. 17 in Section 6 of the SRO written examination required the candidates to demonstrate knowledge of the SLOW ZONE INTERLOCKS associated with the Refueling Machine. Seventy-five percent (75%) of the SRO candidates failed this question.
- c. The following generic strength was identified by the examiners and discussed with the utility:

- (1) During the operating examination, the candidates exhibited good knowledge of Technical Specification Limiting Conditions for Operations Action Statements.

2. NRC Concerns

The majority of the candidates failed to review the radiological survey maps prior to entering the radiologically controlled area. Review of the survey maps is required by the Byron Site Specific Radiological Protection Training.

NRC RESOLUTIONS - SRO EXAMINATION

Category 5

Question 02:

A high radiation condition on the Fuel Handling Building Crane area radiation monitor (ORE-AR039)
(Choose one)

- A. prevents upward movement of the crane hoist.
- B. prevents downward movement of the crane hoist.
- C. prevents all movement of the crane.
- D. prevents lateral movement of the crane.

Answer 02:

D. (1.0)

Reference 02:

Process Monitoring System Description, Rev 4, pg. 38 BOA RAD-2, pg. 3.

Byron Comment/Recommendation 02:

The correct answer is A. . . . prevents upward movement of the crane hoist. This appears to be a typographical error. This same question is on the SRO(L) exam Section P, Question 08. The answer key lists "A." as the correct answer. Recommend the answer for question 02 be changed to A.

References: BOA RAD-2, pg. 3
BFP FH-20, pg. 3

NRC Resolution 02:

The examination answer key was revised to reflect "A" as the only correct answer.

Question 37:

Upon notification of a fire, the fire brigade members shall (choose one):

- a. Assemble at the Fire Protection Equipment Area nearest the fire location prior to proceeding to the fire location.
- b. Proceed to the fire location, notify the Control Room, and then pick up fire protection equipment.

- c. For fire in High-High radiation areas, obtain proper dosimetry from Rad Protection prior to proceeding to fire location.
- d. Proceed to fire location, determine nature and extent of fire and if local fire equipment is insufficient or inappropriate, retrieve appropriate Fire Protection equipment.

Answer 37:

- a. (1.0)

Reference 37:

BAP 1100-11, pg. 1

Byron Comment/Recommendation 37:

BAP's 1100-11 and 1100-13, pg 1, state that the fire brigade shall proceed to the primary fire equipment cage located on elevation 401' and if the fire location is such that proceeding to the primary cage would be hazardous, then proceed to the back-up fire cage located on 451' elevation of the Turbine Building. Therefore, answer a. is incorrect. Recommend deleting the question.

Reference: BAP 1100-11 and 1100-13, page 1

NRC Resolution 37:

The question was deleted from the examination.

Question 41:

Which ONE of the following is a correct statement concerning Type II RWP's:

- a. Are valid for one (1) week.
- b. Work area dose rates must be verified once per shift.
- c. Current survey sheets shall be attached to all active Type II RWP's.
- d. Requires the Operating Unit Shift Supervisor's approval.

Answer 41:

- c. (1.0)

Reference 41:

BRP 1000A1, page 17

Byron Comment/Recommendation 41:

BRP 1000A1, page 16, states "Operating Supervision shall . . . sign and date the "Operating Approval" section." Therefore, answer d. is also correct. Recommend deleting Question 41.

NRC Resolution 41:

Comment not accepted. "Operating Supervision" is not synonymous with "Shift Supervisor". Although it is true that a supervisor in the Operations Department must approve Type II RWPs, personnel other than a Shift Supervisor can provide the approval. Since Byron does not have a formal position designated as "Shift Supervisor", the question was deleted from the examination.

NRC RESOLUTION - LSRO EXAMINATION

Category N:

Question N.06:

Fill in the blanks:

The spent fuel pool provides storage for up to (a) FAILED FUEL assemblies with a center-to-center distance of (b) between the racks. (Use appropriate units where applicable.)

ANSWER N.06:

- a. 10 (0.5)
- b. 22 inches (0.5)

REFERENCE N.06:

Fuel Handling System Description, Rev 2, page 17, Objective 3

Byron Comment/Recommendation N.06:

Byron Station installed High Density Fuel Racks in the Spent Fuel Pool per Modification 6-85-0-692 in September 1989. As part of this modification, the failed fuel rack was changed from 10 storage locations to 6. Center-to-center distance between failed fuel assemblies was changed from 22 to 21 inches. Recommend the answer to question N.06 be revised to:

- a. 6 (0.5)
- b. 21 inches (0.5)

References:

Licensing Report on High Density Spent Fuel Racks for Byron Units 1 and 2.
Fuel Handling System Description Chapter 51, Figure 51-4.

NRC Resolution N.06:

The examination answer key was revised to reflect 6 for part a. and 21 inches for part b. as the only correct answers.

SIMULATION FACILITY REPORT

Facility Licensee: Commonwealth Edison Company

Facility Licensee Docket No. 50-454; 50-455

Operating Tests Administered At: PTC Simulator

During the conduct of the simulator portion of the operating tests, the following items were observed (if none, so state):

| <u>ITEM</u> | <u>DESCRIPTION</u> |
|---|--|
| RCP Seal Leakoff Flow High Annunciator, 7B3 | Simulator Annunciator came in at 5.5 gpm. Procedure states a setpoint of 4.8 gpm. |
| CST low level Annunciator, 37C1 | With a CST leakrate of 35,000 GPM for 30 minutes, the CST low level annunciator failed to actuate (actual setpoint is 11%) |
| Containment Radiation Monitors | Indicating abnormally high radiation levels with a letdown heat exchanger rupture in containment. |
| Auxiliary Feedwater Flow | When flow is cut back to zero on the "pot", spurious flow signals result. |