

**BOSTON EDISON**

Pilgrim Nuclear Power Station
 Rocky Hill Road
 Plymouth, Massachusetts 02360

November 20, 1992
 BECo Ltr. 92-129

Roy A. Anderson
 Senior Vice President - Nuclear

Mr. Thomas T. Martin, Regional Administrator
 U.S. Nuclear Regulatory Commission
 475 Allendale Road
 King of Prussia, PA 19406

Docket No. 50-293
License No. DPR-35

Subject: Written Comments on Reactor Operator and Senior
 Reactor Operator NRC Examinations

Dear Mr. Martin:

In accordance with NUREG-1021, Rev. 7, Section ES-402, Attachment 3, Boston Edison's Operator Training Staff has prepared the enclosed comments on the NRC Reactor and Senior Reactor Operator examinations for your review and consideration. The NRC written examination was administered to seven (7) Reactor Operator and three (3) Senior Reactor Operator license candidates on November 16, 1992.

Should you have questions regarding the enclosed comments please do not hesitate to contact Mr. Harrison R. Balfour of my staff, at (508) 747-8602.

R. A. Anderson
 R. A. Anderson *RA*

RLC/bal

Enclosure

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E0013/1

Boston Edison Company
Pilgrim Nuclear Power Station
November, 1992 Examination

R.O. WRITTEN EXAMINATION COMMENTS

* General Comments are provided on the following page

* Specific Comments were made on questions #003, #009, #011, #024, #038, #048

GENERAL EXAMINATION COMMENTS
(R.O. LICENSING EXAMINATION)

1. The topics selected for testing on the written examination were found to be consistently valid and appropriate. Additionally, the answers to the posed questions were generally found to be technically accurate. However, we found both the question stems and the available answer options to be notably wordy and indirect, which served to increase the probability of misinterpretation. As a result of this finding, we would like to respectfully express our concern regarding the questioning style/technique utilized throughout this closed-reference, time critical examination. The probability of an individual responding incorrectly to a question on a topic with which he is familiar and knowledgeable has been exaggerated due to the questioning style/technique utilized on this particular examination. (Even if the license candidate clearly knew the correct response to a given question, it was typically difficult and time consuming to find the correct response among the four answer options).
2. It is a requirement for the written examinations to provide questions of various types, inclusive of fact memory/recall, problem solving, analytical, and comprehension. On this examination, the blend of the various question types was notably skewed toward the higher difficulty analytical and comprehension style. For example, questions 37, 40, and 97 on the RO Licensing Examination could each be broken down into two or three individual learning objective based questions.

References for the above comments:

- a. NUREG/BR-0122
 - 1) Note on page 3-3
 - 2) Page 3-5
 - 3) Page 4-2
 - 4) Page 4-3
 - 5) Page 4-4
- b. NUREG-1021
 - 1) Section ES-401, pages 1 and 2
- c. Review of the last 6 NRC Licensing Examinations administered at Pilgrim Station

QUESTION: 003 (1.00)

A 23 year old radiation worker with a current Form NRC-4 needs to perform work in an area with general radiation levels of 75 mR/hr. The worker's exposure history is:

Lifetime: 24.5 Rem
Current year: 1400 mR
Current quarter: 225 mR

WHICH ONE of the following is the maximum time that the worker can stay in the area without exceeding any PNPS Exposure Control Levels? (Assume no special authorization)

- a. 20 minutes
- b. 1 hour and 20 minutes
- c. 6 hours and 40 minutes
- d. 7 hours

ANSWER:

c.

COMMENTS:

We recommend that answer b. be selected as the correct response to this question. The PNPS yearly exposure limit of 1500 mR leaves the individual in question with only 100 mR of remaining allowed exposure without special authorization. (This is more limiting than the difference between current quarter exposure and the PNPS quarterly limit) 100 mR allowable exposure in a 75 mR/hr field yields a stay time of one hour and twenty minutes.

REFERENCES:

- PNPS Instructor Guide C-GT-02-02-02, "Exposure Limits" pages 13 and 14

QUESTION: 009 (1.00)

WHICH ONE of the following specifically describes the electrical equipment controlled by REMVEC?

- a. All equipment \geq 4.16 kV
- b. All equipment \geq 115 kV
- c. All equipment \geq 230 kV
- d. All equipment \geq 345 kV

ANSWER:

b.

COMMENTS:

We recommend this question also include answer d. as a correct response. This question requires the examinee to make an assumption as to whether it is being asked what equipment is controlled by REMVEC as governed by administrative controls at all Boston Edison generating stations, or what equipment at the PNPS switchyard is under REMVEC control.

The handwritten modification "specifically" in the question raises two concerns. One is that the question is already known to be inadequate by the examiner, hence the need for clarification. The other is that the term "specifically" will cause the examinee to analyze the question in terms of his own power plant's equipment, and not in terms of the administrative controls governing all Boston Edison equipment under REMVEC control. If the former is assumed, the examinee will identify that all switchyard equipment at PNPS under REMVEC control is 345 KV equipment, therefore answer d. is correct.

NUREG/BR-0122, Rev. 5, section 4.3, "Development of Written Test Items" gives guidance to:

- Avoid ambiguity
- Be concise, but provide all necessary information
- Ensure the candidates will clearly know what they are expected to do
- Avoid the need for assumptions to be made on behalf of the examinees

REFERENCES:

- NUREG/BR-0122, Rev. 5, "Examiner's Handbook for Developing Operator Licensing Written Examinations".

E0013/14

QUESTION: 011

(1.00)

WHICH ONE of the following describes the meaning of this icon when implementing the EOPs?

- a. The CS/RHR pumps may not be operated below the vortex limit.
- b. The CS/RHR pumps may be operated irregardless of the vortex limit.
- c. The CS/RHR pumps may not be operated below the NPSH limit.
- d. The CS/RHR pumps may be operated irregardless of the NPSH limit.

ANSWER:

d.

COMMENTS:

We recommend this question also include answer b. as a correct response, along with the given answer, d. The PNPS concern about operating pumps with less than desired suction conditions is based on NPSH and vortex limits. Although PNPS still uses curves to represent various conditions affecting NPSH (figures 9 and 11), vortex curves from previous revisions of EOPs were simplified to a limit of 35 inches torus water level. This establishes that both answers, b and d, are correct.

REFERENCES:

- PNPS PSTG/EPG Differences, Attachment Two
- OEI Doc. 8390-4A, pages A-37, 38 and A-47, 48
- PNPS EOP Instructor Guide, O-RO-03-04-02, pages IG-24, 25, 74, 75 and TP-10

QUESTION: 024

(1.00)

WHICH ONE of the following describes the restrictions on HPCI operation while implementing the EOPs?

- a. HPCI may NEVER be operated below 1000 RPM because this is the minimum speed required to maintain adequate cooling and lubrication.
- b. HPCI may NEVER be operated below 2000 RPM because this is the minimum speed required to generate sufficient control oil pressure for control valve operation.
- c. HPCI may be operated below 1000 RPM only at NOS/NWE direction because low turbine exhaust pressure could create a cyclic steam hammer which could damage the exhaust check valve.
- d. HPCI may be operated below 2000 RPM, but greater than 1000 RPM only as directed by the EOPs because operation at these speeds could cause excessive turbine vibration or oscillating flow rates.

ANSWER:

c.

COMMENTS:

We recommend that this question (#024) be deleted for the Reactor Operator (RO) Candidates and be retained for the Senior Reactor Operator (SRO) Candidates. The identified student learning objective (322 of IG O-RO-03-04-02) requires both the RO and SRO Candidates to describe the basis for the HPCI/RCIC turbine minimum speed limitations (see attached). The same instructor guide (O-RO-03-04-02) requires the SRO to specifically utilize cautions and icons (learning objective #3).

REFERENCES:

PNPS Instructor Guide EOP Development and Use, O-RO-03-04-02, Pages 6, 7, and 26.

QUESTION: 038

(1.00)

Control rods are being withdrawn with reactor power on IRM range 4, in accordance with the attached Control Rod Sequence Sheet. Rod Group No. 8 is latched. WHICH ONE of the following manipulations will result in a RWM select error?

- a. Rod 14-39 is at position 08
Rod 38-39 is at position 06
Rod 38-15 is at position 04
Rod 14-15 is at position 14
Rod 14-39 is selected

- b. Rod 14-39 is at position 10
Rod 38-39 is at position 12
Rod 38-15 is at position 06
Rod 14-15 is at position 06
Rod 38-39 is selected

- c. Rod 14-39 is at position 04
Rod 38-39 is at position 06
Rod 38-15 is at position 04
Rod 14-15 is at position 12
Rod 38-15 is selected

- d. Rod 14-39 is at position 14
Rod 38-39 is at position 08
Rod 38-15 is at position 10
Rod 14-15 is at position 04
Rod 14-15 is selected

ANSWER:

a.

COMMENTS:

We recommend this question also include answer d. as a correct response. Any time an error signal results in an insert block or a withdraw block, selection of a non-error rod will result in a select error.

REFERENCES:

- PNPS RWM Reference Text, Rod Worth Minimizer, pages RWM-5, 15 through 17
- PNPS RWM Instructor Guide O-RO-02-06-03, Control Rod Drive System, pages IG-33 and IG-34
- PNPS Procedure 2.2.90, Rod Worth Minimizer (Rev. 9), pages 7, 13 and 23

QUESTION: 048

(1.00)

The Standby Gas Treatment (SGT) System initiated on a valid initiation signal 3 minutes ago. Prior to the initiation, both SGT trains were in the normal standby lineup. No operator action has been taken and the initiation signal is still present. The SGT train A heater just tripped due to high temperature. WHICH ONE of the following describes the expected response of the SGT System?

- a. SGT train A fan will trip. SGT train A inlet and outlet dampers will close. SGT train B fan will continue to run. SGT train B inlet and outlet dampers will remain open.
- b. SGT train A fan will trip. SGT train A inlet and outlet dampers will close. SGT train B fan will start. SGT train B inlet and outlet dampers will open.
- c. SGT train A fan will continue to run. SGT train A inlet and outlet dampers will remain open. SGT train B fan will continue to run. SGT train B inlet and outlet dampers will remain open.
- d. SGT train A fan will continue to run. SGT train A inlet and outlet dampers will remain open. SGT train B fan will not start. SGT train B inlet and outlet dampers will remain closed.

ANSWER:

b.

COMMENTS:

We recommend this question be deleted from the examination. The question does not ask for the best or most correct answer, it asks for the "expected response of the SGT System". None of the answers provided is a correct one. SGT B fan will not start before the inlet damper opens, therefore the sequence of events in answer b. is incorrect, making b. an incorrect answer.

REFERENCES:

- PNPS System Reference Text, "Standby Gas Treatment System", pages SGTS-6-5/89 and -11-5/89.
- PNPS Procedure 2.2.50, "Standby Gas Treatment", pages 8 and 21.

Boston Edison Company
Pilgrim Nuclear Power Station
November 1992, Examination

S.R.O. WRITTEN EXAMINATION COMMENTS

* General Comments are provided on the following page

* Specific Comments were made on questions #003, #016, #048, #055 and
#099

GENERAL EXAMINATION COMMENTS
(S.R.O. LICENSING EXAMINATION)

1. The topics selected for testing on the written examination were found to be consistently valid and appropriate. Additionally, the answers to the posed questions were generally found to be technically accurate. However, we found both the question stems and the available answer options to be notably wordy and indirect, which served to increase the probability of misinterpretation. All questions taken together required such extensive analysis and thought, that the need to finish the exam became a critical factor, which led to none of the candidates completing their exams within the 4 hour time limit. This left no time for adequate review, which would have allowed license candidates an adequate opportunity to reconsider their decisions. As a result of this finding, we would like to respectfully express our concern regarding the questioning style/technique utilized throughout this closed-reference, time critical examination. The probability of an individual to respond incorrectly to a question on a topic on which he is familiar and knowledgeable has been exaggerated due to the questioning style/technique utilized on this particular examination. (Even if the license candidate clearly knew the correct response to a given question, it was typically difficult and time consuming to find the correct response among the four answer options).
2. It is a requirement for the written examinations to provide questions of various types, inclusive of fact memory/recall, problem solving, analytical, and comprehension. On this examination, the blend of the various question types was notably skewed toward the higher difficulty analytical and comprehension style. For example, questions 96, 98, and 99 on the SRO Licensing Examination could each be broken down into four or five individual learning objective based questions. This also contributed to the challenge to the 4-hour time limit.

References for the above comments:

- a. NUREG/BR-0122
 - 1) Note on page 3-3
 - 2) Page 3-5
 - 3) Page 4-2
 - 4) Page 4-3
 - 5) Page 4-4
- b. NUREG-1021
 - 1) Section ES-401, pages 1 and 2
- c. Review of the last 6 NRC Licensing Examinations administered at Pilgrim Station

QUESTION: 003

(1.00)

A 23 year old radiation worker with a current Form NRC-4 needs to perform work in an area with general radiation levels of 74 mR/hr. The worker's exposure history is:

Lifetime: 24.5 Rem
Current year: 1400 mR
Current quarter: 225 mR

WHICH ONE of the following is the maximum time that the worker can stay in the area without exceeding any PNPS Exposure Control Levels? (Assume no special authorization.)

- a. 20 minutes
- b. 1 hour and 20 minutes
- c. 6 hours and 40 minutes
- d. 7 hours

ANSWER:

c.

COMMENTS:

We recommend that answer b. be selected as the correct response to this question. The PNPS yearly exposure limit of 1500 mR leaves the individual in question with only 100 mR of remaining allowed exposure without special authorization. (This is more limiting than the difference between current quarter exposure and the PNPS quarterly limit) 100 mR allowable exposure in a 75 mR/hr field yields a stay time of one hour and twenty minutes.

REFERENCES:

- PNPS Instructor Guide C-GT-02-02-02, "Exposure Limits" pages 13 and 14

QUESTION: 016 (1.00)

A double ended shear of Recirculation System piping has occurred. Secondary containment has isolated and SBGTS is operating. WHICH ONE of the following describes the expected release?

- a. SBGTS removes most of the noble gasses and halogens. Discharge of SBGTS is an elevated release.
- b. SBGTS removes most of the halogens, but almost none of the noble gases. Discharge of SBGTS is an elevated release.
- c. SBGTS removes most of the noble gases, but almost none of the halogens. Discharge of SBGTS is a ground level release.
- d. SBGTS removes most of the halogens and noble gases. Discharge of SBGTS is a ground level release.

ANSWER:

- b.

COMMENTS:

We recommend that this question (#16) be deleted from the examination. The two identified objectives (ELOs 4 and 5 from IG T-ER-01-01-80) do not have a connection with this information. In addition, the identified knowledge and ability statement (Plant-wide Generics: 294001, A1.16) concerns the "ability to take actions" and not specific system knowledge. Further investigation shows that a knowledge and ability statement does in fact exist for this exact information (216000, Standby Gas Treatment System, K4.05), but only has a rating of 2.6/2.8. Because of this low rating, the PNPS reference materials for the SGT System (SGTS Student Guide and Instructor Guide, O-RO-02-08-03) do not include this information. The "purpose" of the charcoal adsorber filters does mention the removal of iodide, but does not mention the "noble gas" function. Based on this there is no clear basis for this question.

REFERENCES:

- PNPS Dose Assessment Protective Action Recommendations, T-ER-01-01-80, Page 3
- BWR K/A Catalog, Pages 2-2 and 3.9-32
- SGTS objectives, O-RO-02-08-03, Page 3-6/89 and 4-6/89
- SGTS Student Guide, Page 5-5/89

QUESTION: 048

(1.00)

The Standby Gas Treatment (SGT) System initiated on a valid initiation signal 3 minutes ago. Prior to the initiation, both SGT trains were in the normal standby lineup. No operator action has been taken and the initiation signal is still present. The SGT train A heater just tripped due to high temperature. WHICH ONE of the following describes the expected response of the SGT System?

- a. SGT train A fan will trip. SGT train A inlet and outlet dampers will close. SGT train B fan will continue to run. SGT train B inlet and outlet dampers will remain open.
- b. SGT train A fan will trip. SGT train A inlet and outlet dampers will close. SGT train B fan will start. SGT train B inlet and outlet dampers will open.
- c. SGT train A fan will continue to run. SGT train A inlet and outlet dampers will remain open. SGT train B fan will continue to run. SGT train B inlet and outlet dampers will remain open.
- d. SGT train A fan will continue to run. SGT train A inlet and outlet dampers will remain open. SGT train B fan will not start. SGT train B inlet and outlet dampers will remain closed.

ANSWER:

b.

COMMENTS:

We recommend this question be deleted from the examination. The question does not ask for the best or most correct answer, it asks for the "expected response of the SGT System".

REFERENCES:

- PNPS System Reference Text, "Standby Gas Treatment System", pages SGTS-6-5/89 and -11-5/89.
- PNPS Procedure 2.2.50, "Standby Gas Treatment, pages 8 and 21".

QUESTION: 055

(1.00)

The plant is operating at 100% power. WHICH ONE of the following conditions would NOT require initiation of a plant shutdown in accordance with Technical Specifications?

- a. One ADS valve is inoperable. The HPCI inverter tripped on high voltage. Voltage returned to normal, but the inverter failed to automatically reset. Manual reset of the inverter is expected to take 15 minutes.
- b. RCIC is inoperable. The HPCI gland seal condenser is inoperable. Repairs are expected to take 12 hours.
- c. HPCI is inoperable. RHR valve MO-1001-37A (Torus Spray Valve) is stuck in the closed position. Repairs are expected to take 2 days.
- d. LPCI B is inoperable. The HPCI flow indicator controller ramp generator is inoperable. A replacement part had to be ordered and will not be available for 5 days.

ANSWER:

c.

COMMENTS:

We recommend that this question (#55) be deleted from the examination. This question specifically asks the question, "Which condition does not require a shutdown by PNPS Technical Specifications?". After checking the provided excerpts from PNPS Technical Specification, each of the described inoperabilities do, in fact, require entry into an applicable L.C.O. statement. Each of the L.C.O. statements do, in fact, have a shutdown statement associated with them (see attached). After analyzing the question with the correct response provided, it is assumed that the intent of the question was to solicit which situation did not require a shutdown in a short period of time. This is not as simple as it may first seem (just utilizing Technical Specifications) since PNPS has a procedure (1.3.3, Authority to Shutdown and Startup the Station) that specifically addresses when station shutdown should occur on Technical Specification inoperabilities (see attached examples 3A and 3). Based on the question's unclear intent and the lack of an absolutely correct response, it is recommended that this question be deleted.

REFERENCES:

- PNPS Technical Specification Section 3.5, Pages 103, 104, 106, 107, 108 and 109
- PNPS Procedure 1.3.3 (Rev. 10), Pages 4, 5 and 7

QUESTION: 099 (1.00)

The reactor is shutdown with all control rods inserted. WHICH ONE of the following conditions would require Primary Containment Flooding?

- a. RPV Pressure: 800 psig
 RPV Water Level: -170 inches
 Torus Pressure: 10 psig
 No SRVs Open
- b. RPV Pressure: 80 psig
 RPV Water Level: -140 inches
 Torus Pressure: 40 psig
 1 SRV Open
- c. RPV Pressure: 90 psig
 RPV Water Level: Cannot Be Determined
 Torus Pressure: 45 psig
 2 SRVs Open
- d. RPV Pressure: 60 psig
 RPV Water Level: Cannot Be Determined
 Torus Pressure: 25 psig
 3 SRVs Open

ANSWER:

b.

COMMENTS:

We recommend this question include answer c. as a correct response. We agree that answer b. is correct, but c. can also be shown to be correct based on the following sequence of events:

1. If RPV level cannot be determined the operator will exit EOP-01 (given that the reactor has scrammed) from the level and pressure legs and enter EOP-16 at F-1.
2. EOP-16 will ask if 4 SRVs are open. In this case, only two SRVs are open, so EOP-16 is exited and EOP-17 is entered at P-1.
3. In EOP-17, we answer the following:
 - Steam cooling is not required
 - Drywell pressure is below 2.5 psig
 - Torus water level is above 50 inches (All SRVs are opened/attempted)
 - Less than 3 SRVs are open
 - RPV pressure is less than 50 psig above torus pressure
 - RPV water level cannot be determined

COMMENTS: (Cont. Question 099)

4. EOP-17 is exited at P-12, EOP-16 is re-entered at F-4.
5. In EOP-16, we answer the following:
 - Less than 3 SRVs can be opened
 - Feed pumps are available (turns out to be irrelevant)
 - RPV pressure is not 50 psig or more above torus pressure
6. Based on override F-8, section | \bar{Y} | is entered and Primary Containment Flooding is required.

REFERENCES:

- PNPS EOP-01, revision 1
- PNPS EOP-16, revision 1
- PNPS EOP-17, revision 1

ATTACHMENT 5

NRC RESOLUTION OF FACILITY COMMENTS

General Comment #1 (RO and SRO):

Comment noted. The facility commented that the question stems and answer options were notably wordy and indirect on both examinations, but they did not cite any specific examples. The examination questions were reviewed for clarity and adherence to the Examiner's Handbook by an NRC examiner and the NRC Section Chief prior to administration. These reviewers found the questioning style/technique acceptable. Applicant questions during examination administration and post-examination review did not indicate any problems related to question clarity.

General Comment #2 (RO and SRO):

Comment noted. The facility commented that both the RO and SRO written examinations were "notably skewed toward the higher difficulty analytical and comprehension style." Both examinations were 100% multiple choice with a high percentage of comprehension and analysis level questions (approximately 80% on the RO exam/85% on the SRO exam). All of the candidates were provided with selected reference materials and the SROs were provided with selected sections of the Technical Specifications, a full set of EOPs, and the Emergency Action Level classification procedures. Four questions that were common to both exams required the use of references and 18 questions that were unique to the SRO exam required the use of references.

The Examiner's Handbook provides guidance on level of knowledge for test objectives, but does not provide quantitative requirements. The Handbook states that "objectives and questions should be written to reflect the level of knowledge that is most appropriate for a specific K/A" and that objectives and questions at the analysis level "are the most consistent with the purpose of the licensing examination which is to make sure that candidates who pass can apply their knowledge and ability to assure the safe operation of the plant."

The Examiner's Handbook states that written test items should be limited to one concept or topic, unless a synthesis of concepts is being tested. Many of the questions are based on multiple learning objectives; however, they test a single concept or synthesis of concepts. Higher level of knowledge questions often require mastery of multiple learning objectives. For example, question 97 on the RO exam which focuses on the differential pressure relationship between primary and secondary containment requires mastery of multiple learning objectives related to EOP entry conditions and vacuum breaker operation. This is a higher level of knowledge question which evaluates the applicant's comprehension of the pressure relationship between primary and secondary containment. This comprehension is necessary to recognize EOP entry conditions and determine proper vacuum breaker operation.

General Comment Summary (RO and SRO):

The results of the RO exam indicated that the examination was valid and could be completed within four hours by a competent operator. The results of the SRO exam indicated that the exam may have been too long to complete within four hours. All the SRO candidates passed the written exam, but performance on the last ten questions of the exam was only 60%. The average on the common questions was approximately the same for the ROs and SROs, but the SRO average on the SRO only questions was much lower than the RO average on the RO only questions. The quantity of higher level of knowledge questions and questions that required the use of references appear to have contributed to the time concern on the SRO exam. There is no indication that the questioning style/technique affected the applicants' ability to complete the examinations within the allotted time.

Question #1 (RO and SRO):

This question was deleted from the RO and SRO examinations. The facility did not comment on this question; however, post-examination review of the question indicated that it did not test information that a licensed operator needs to know from memory to perform assigned duties.

Question #3 (RO and SRO):

Comment accepted. The correct response was changed to item 'b'. This question was modified as a result of the facility review. Failure to change the answer key was an oversight.

Question #9 (RO):

Comment noted. This question was deleted from the examination because it could be interpreted to have three correct answers. At PNPS all equipment ≥ 115 kV is controlled by REMVEC; therefore, equipment ≥ 230 kV and equipment ≥ 345 kV is controlled by REMVEC. Using this reasoning, items 'c' and 'd' would be correct answers in addition to item 'b'. The term 'specifically' was added to the question to make item 'b' the only correct answer by asking for the specific description of the equipment controlled by REMVEC. If this intent was not understood by the applicants, the question could be misinterpreted.

Question #11 (RO):

Comment accepted. Item 'b' will also be accepted as a correct answer. The training material concerning this icon is not clear. It was interpreted by the examiner to mean that the "condition permitted" version of the icon only referred the NPSH limits and that the Core Spray and RHR pumps would never be operated below the vortex limit.

Question #16 (SRO):

Comment not accepted. This question was not deleted from the examination. The referenced K/A is the "ability to take actions called for in the Facility Emergency Plan, including (if required) supporting or acting as the Emergency Coordinator." One of the actions that an SRO must perform when implementing the Emergency Plan is to approve Protective Action Recommendations (PARs). To do this the SRO must be able to identify the possible in-plant sources of radioactivity and the probable release point. These abilities correspond to the referenced learning objectives. This question tests the SRO's ability to determine the makeup of the release and the release point.

Question #24 (RO):

Comment not accepted. This question was not deleted from the RO examination. It is important for ROs to understand that there may be conditions that the NOS/NWE determined warrant the use of HPCI below 1000 rpm so that they can carry out orders when directed and don't inadvertently secure equipment that may be required to assure adequate core cooling.

Question #38 (RO):

Comment accepted. Item 'd' was accepted as an additional correct response. The reference material for the RWM does not clearly describe the conditions that will cause a select error. It is not clear in the facility comment or in the reference materials that if the selected rod is causing an insert error, but there are fewer than three insert errors, a select error will be received. This question was rewritten several times, both before and after the facility examination review, due to difficulties in interpreting the RWM reference materials. This question was also on the SRO examination. The same change was made to the SRO examination even though the facility did not provide a comment.

Question #48 (RO and SRO):

Comment accepted. This question was deleted from the examinations. All of the actions listed in item 'b' are correct. However the question could be interpreted as asking for a sequence of events, in which case, item 'b' would be incorrect.

Question #55 (SRO):

Comment accepted. This question was deleted from the examination. This question was discussed in depth during the facility examination review and was modified in accordance with the facility's comments. The administrative procedure referenced in the facility comment was not discussed during the review.

Question #99 (SRO):

Comment accepted. Item 'c' was accepted as an additional correct response. The facility had no comment on this question during the preexamination review. No modifications were made to the question between the facility review and examination administration.

ATTACHMENT 6

SIMULATION FACILITY REPORT

Facility License: DPR-35

Facility Docket No.: 50-293

Operating Test Preparation and Administration: November 3 - 20, 1992

This form is to be used only to report observations. These observations do not constitute audit or inspection findings and are not, without further verification and review, indicative of noncompliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information which may be used in future evaluations. No licensee action is required in response to these observations.

During the conduct of the simulator portion of the operating tests, the following items were observed:

<u>ITEM</u>	<u>DESCRIPTION</u>
Rod Worth Minimizer	The Rod Worth Minimizer (RWM) in the simulator is physically different than the RWM in the plant and operation differs significantly. Due to these differences a low power JPM had to be replaced prior to administration of the examinations. (The licensee plans to correct this problem in upcoming modifications to the simulator.)
Power Oscillations	The simulator cannot accurately model power oscillations caused by power to flow instabilities. It was not possible to evaluate the operators on their ability to recognize and respond to power oscillations in a dynamic setting.
Reactor Coolant Leaks	Modelling of reactor coolant leaks is very limited. The only available malfunctions are a design basis Loss of Coolant Accident (DBA LOCA) and a small leak of approximately 200 gpm. The lack of variable loss of coolant accidents severely limits the ability to evaluate operators on RPV level control actions. It also limits the ability to test operators on simultaneous use of the RPV Control and Primary Containment Control Emergency Operating Procedures.