FACILITY POST-EXAMINATION DOCUMENTS COVER LETTER AND ATTACHMENTS 4, 5, AND 6 FOR THE PERRY RETAKE EXAM - AUGUST 2007



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August 7, 2007 PY-CEI/OIE-0708L

United States Nuclear Regulatory Commission 2443 Warrenville Road, STE 210 Lisle, Illinois 60532-4352

Attention: Mr. Dell McNeil, Chief Examiner
Operations Branch Region III

Perry Nuclear Power Plant Docket No. 50-440 NRC Post-Examination Material

Dear Mr. McNeil,

In accordance with NUREG-1021, ES -501, Section C.1, the following items are submitted following completion of the Perry written examination given on August 6, 2007.

Attachment 1 contains the graded written examinations (i.e., each applicant's original answer and examination cover sheets) and a clean copy of each applicant's answer sheet. Attachment 2 contains the questions asked by and answers given to the applicants during the written examination. Attachment 3 contains the written examination seating chart. Attachment 4 contains the completed Form ES-403-1, "Written Examination Quality Checklist". Attachment 5 contains the results of the written examination performance analysis. Attachment 6 contains the revised question 39 from the master examination for which the wording was enhanced. The remainder of the master examination and answer keys was unchanged during the administration and grading of the examinations. Therefore, the master examinations and answer keys will not be forwarded.

No substantive comments were made by the applicants after the written examination.

Original Form(s) ES-201-3, "Examination Security Agreement" will be forwarded when all post-examination signatures have been obtained.

If you require further clarification on the items submitted, or any other additional item, contact Dan Zielinski at (440) 280-5277.

Sincerely,

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Attachments:

- 1. Applicants Written Examinations Including Graded Answer Sheets
- 2. Applicants Questions and Answers Provided During the Written Examination
- 3. Written Examination Seating Chart
- 4. Completed Forms ES-403-1, "Written Examination Quality Checklist"
- 5. Results of the Written Examination Performance Analysis
- 6. Revised question 39

File w/o attachments

Attachment 5

Results of the Written Examination Performance Analysis

Attachment - NRC Initial License Written Examination Analysis

In accordance with ES-403, an examination analysis was performed for all examination questions in order to identify a potential faulty question, an applicant knowledge weakness or a training program deficiency. In addition, the validity for each question that was missed by 50% or more of the applicants was also evaluated. When a question was missed due to an applicant's knowledge weakness, it was determined that the training program contained sufficient coverage of the topic as to not warrant any further changes. In addition, reviewing the correct answer and the remaining plausible distractors with each applicant closed the gap in each applicant's knowledge level. No training program deficiencies were identified.

The results of this examination analysis evaluation for those specific questions missed by 50% or more of the applicant's are summarized below.

- 1. RO #11 Two of three applicants missed the question. The question was evaluated as valid with no changes required. Applicants missed the question due to a knowledge weakness regarding the limitation on Drywell to Primary Containment differential pressure and the Technical Specification Bases for the limit.
- 2. RO #66 Two of three applicants missed the question. The question was evaluated as valid with no changes required. Applicants missed the question due to a knowledge weakness regarding the status of their Operating License in the quarter after they receive it

Attachment 6

Revised question 39

QUESTION RO 39

The plant is in Mode 4 with RPV temperature being maintained 80°F to 110°F by RHR B in Shutdown Cooling. The ATC Operator has signed in two I&C SVIs:

- RPV Level 3 on Narrow Range Level Channel A
- RPV Level 3 on Narrow Range Level Channel D.

During performance of these SVIs, a RPV Level 3 trip signal is input concurrently into their respective channels.

What is(are) the consequence(s) of this action?

- A. 1E12-F008, Shutdown Cooling OTBD SUCT ISOL and 1E12-F053B, Shutdown Cooling B To FDW Shutoff close
- B. 1E12-F009, Shutdown Cooling INBD SUCT ISOL and 1E12-F053B, Shutdown Cooling B To FDW Shutoff close
- C. only 1E12-F008, Shutdown Cooling OTBD SUCT ISOL closes
- D. No Isolation

K&A: Knowledge of the physical connections and/or cause-effect relationships between Primary Containment Isolation System/Nuclear Steam Supply Shut-Off and the following: Shutdown Cooling System/RHR

Primary Containment Isolation System/Nuclear Steam Supply Shut-Off

Explanation (Why the distractors are incorrect): Answer C

Comments: Level of Difficulty = 4

- A 1E12-F008 closes but 1E12-F053B is a Division 2 valve and does not receive a close signal
- B both valves are division 2 valves neither receive a close signal
- D NS4 has inboard/outboard logic, so channels A and D are a Division 1 isolation signal to the division 1 valves.

Technical Reference(s): PDB-I0005 Reference Attached: PDB-I0005 page 35 Proposed references to be provided to applicants during examination: None Learning Objective (As available): OT-Combined-E12 G.3 Question Source: Bank # Modified Bank # New Х Question History: Previous NRC Exam Previous Quiz / Test Question Cognitive Level: Memory or Fundamental Knowledge Comprehension or Analysis 10 CFR Part 55 Content: 55.41 Χ 55.43

Facility: PERRY Date of Exam: 8-6-1007 Exam Level: RO SRO S				
		Initials		
Item Description		а	Ь	С
Clean answer sheets copied before grading		Or	90	m
2.	Answer key changes and question deletions justified and documented	NA	WA	H/A
3.	Applicants' scores checked for addition errors (reviewers spot check > 25% of examinations)	02	A	S ~~
4.	Grading for all borderline cases (80 ±2% overall and 70 or 80, as applicable, ±4% on the SRO-only) reviewed in detail	NA	NA	N/A
5.	All other failing examinations checked to ensure that grades are justified	NA	NA	N/V
6.	Performance on missed questions checked for training deficiencies and wording problems; evaluate validity of questions missed by half or more of the applicants	02	R	pm
Printed Name/Signature Date				
a. Grader Daniell. Zielinski DUC. 87-3007				
b. Facility Reviewer(*) Joseph O. Pierson Stack D. Pierson Santa D.				
c. NRC Chief Examiner (*) Dell R. McNel (Such M. Jed 8/9/07) d. NRC Supervisor (*) Hireman Person Hours Such 8/15/07				
(*) The facility reviewer's signature is not applicable for examinations graded by the NRC;				