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Enclosure 5  
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## **ENCLOSURE 5**

Post-examination comments and facility  
responses

## Post-examination Comments and Facility Responses

There were two questions on the Reactor Operator exam that were changed during the exam through consultation with the Chief Examiner. These two questions, questions 39 and 57 will be changed in the V.C. Summer exam bank to reflect the changes during the exam.

Additionally, an examination review was conducted on September 9, 2013 with all twelve candidates who took the Initial NRC written examination. There were three substantive comments that were submitted by candidates. Those questions and the associated feedback forms are contained at the back of this enclosure. V.C. Summer requests a change to three questions as a result of these discussions.

A discussion of each question and the associated V.C. Summer recommendation for disposition is as follows:

### RO/ SRO question 57

57. Given the following plant conditions:

- LOCA has occurred.
- Safety Injection is actuated.
- Reactor Building pressure indicates 14 psig and rising slowly.
- EOP-1.0, REACTOR TRIP/ SAFETY INJECTION ACTUATION, in progress.
- The following Containment Isolation Valve MCB Status Lights are BRIGHT:
  - RCP SL WTR ISOL 8100
  - LTDN ISOL 8152

Which ONE of the following identifies the containment isolation feature that has **not** functioned correctly and an action required by EOP-1.0?

- A. Phase A; Place **either** Phase A actuation switches in the ACTUATE position.
- B. Phase A; Place **both** Phase A actuation switches in the ACTUATE position.
- C. Phase B; Place **either** RB Spray/Phase B actuation switches in the ACTUATE position.
- D. Phase B; Place **both** RB Spray/Phase B actuation switches in the ACTUATE position.

The answer for this question by the key is A. This question requires the candidate to determine, from the given information, the Containment Isolation function that has failed and the actions required by EOP-1.0, REACTOR TRIP/ SAFETY INJECTION ACTUATION to respond to the malfunction. The following is given as a condition:

- The following Containment Isolation Valve MCB Status Lights are BRIGHT:
  - RCP SL WTR ISOL 8100
  - LTDN ISOL 8152

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During the examination, one candidate asked the proctor for the panel and the entire set of words as they are read on the status lights. While this does not have a bearing on any candidate's contention of this question, it is included here for completeness. After consultation with the chief examiner, the panel numbers were not given but the sub-bullets were expanded to read as follows (changes are bolded):

- The following Containment Isolation Valve MCB Status Lights are BRIGHT:
  - RCP SL WTR ISOL 8100 **CLSD**
  - LTDN ISOL 8152 **CLSD**

The BRIGHT indication as stated in the given condition is actually the condition that indicates that the associated valves have closed properly to isolate containment as shown on page 27 of EOP-1.0.

			RCP SL WTR ISOL 8100 CLSD	PRF TO GAS DEFRAY TR 8033 CLSD	RCDT PP RISCH 7135 CLSD
			LTDN ISOL 8152 CLSD	RCDT VENT ISOL 7150 CLSD	

  

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NOTES:

1. Lights should be BRIGHT.  
2. Only the windows indicated are Phase A Isolation Valves.

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This was true for both the original and changed version of the question. Thus, the premise of a malfunction is invalid because no information is given that indicates that either a Phase A or Phase B containment isolation failure has occurred. There is, therefore, no correct answer.

V.C. Summer requests that question 57 be deleted from the examination.

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### RO/ SRO question 62

62. Given the following plant conditions:

- Plant startup in progress.
- 2% power, increasing.
- Control Bank D is 115 steps withdrawn.
- XCP-639, 1-2, BUS 1B O/C 51BX-1B alarms.

Which ONE of the following describes an action that will satisfy Technical Specification requirements if it is the only action taken within one (1) hour of the 51BX lockout of Bus 1B?

- A. Clear the cause of the lockout and reenergize bus 1B.
- B. Insert only the Control Bank rods to zero steps.
- C. Stabilize reactor power at 2% power.
- D. Manually trip the Reactor.

The answer for this question by the key is D. This question requires the candidate to identify an action that will satisfy technical specifications, if performed within one hour, after a RCP trip due to a loss of a 7.2 KV bus in while in Mode 2. In accordance with 3/4.4.1 REACTOR COOLANT LOOPS AND COOLANT CIRCULATION, the plant must be taken to Mode 3 within one hour.

The definitions for Modes 2 and 3, in accordance with V.C. Summer Technical Specifications, are as follows:

Mode 2 (STARTUP)  $K_{\text{EFF}} \geq 0.99$ , Rated Thermal Power  $\leq 5\%$ , and Average RCS Temperature  $\geq 350^\circ\text{F}$

Mode 3 (HOT STANDBY)  $K_{\text{EFF}} < 0.99$ , Rated Thermal Power  $< 0\%$ , and Average RCS Temperature  $\geq 350^\circ\text{F}$

Answer B. states that only the Control Rods will be driven in to 0 steps. During a Startup in accordance with GOP-3, REACTOR STARTUP FROM HOT STANDBY TO STARTUP (MODE 3 TO MODE 2), Mode 2 is procedurally entered after the withdrawal of Shutdown Banks and before withdrawal of Control Bank A. This procedure served as the technical basis for the question.

In GOP-5 REACTOR SHUTDOWN FROM STARTUP TO HOT STANDBY (MODE 2 TO MODE 3), however, Mode 3 is entered after all Control Banks have been fully inserted and the option is contained in the procedure to leave Shutdown banks withdrawn.

It can be assumed that the Mode 3 shutdown margin requirements were met prior to the startup in accordance with Technical Specifications and procedures. Insertion of the Control Rods to 0 steps as stated in B. would therefore restore the reactivity required for Mode 3. This makes answer B. correct.

**V.C. Summer requests that both answers B and D be accepted as correct answers for question 62.**

## Post-examination Comments and Facility Responses

### SRO question 96

96. Given the following plant conditions:

- Mode 1
- Engineering is determining the risk for a planned maintenance activity in the Switchyard.

Which ONE of the choices below answers both of the following?:

- 1) What can be used as a determining factor for calculating EOOS Risk?
  - 2) What position or group authorizes the start of work for an ORANGE risk activity?
- A. 1) Core Damage Frequency only.  
2) General Manager Nuclear Plant Operations or Management Duty Supervisor.
- B. 1) Core Damage Frequency only.  
2) Plant Safety Review Committee.
- C. 1) Core Damage Frequency or Large Early Release Frequency.  
2) General Manager Nuclear Plant Operations or Management Duty Supervisor.
- D. 1) Core Damage Frequency or Large Early Release Frequency.  
2) Plant Safety Review Committee.

The answer for this question by the key is C. This question requires the candidate to identify the factors used for calculating EOOS (Equipment Out Of Service) Risk and the position or group that must approve the work for an ORANGE risk activity.

Candidates expressed that the second question was worded incorrectly, specifically, in the use of the words "authorizes the start of work". Procedure SAP-102, STATEMENT OF RESPONSIBILITIES, OPERATIONS establishes the responsibilities for authorizing work activities, as follows:

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SAP-102  
REVISION 6

- B. The Work Control Center Senior Reactor Operator (WCC SRO) is responsible for:
1. The WCC SRO reports to the Work Control Supervisor.
  2. Acting as Tagout Authorizer and Work Authorizer for the implementation of scheduled activities.
  3. An SRO or Shift Engineer can assume the duties of the WCC SRO.
    - a. The Work Control Center Auxiliary Operator (WCC AO) is a qualified Danger Tagger and reports to the WCC SRO.

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### 6.0 PROCEDURE

- 6.1 Specific administrative procedures and implementing procedures detail the means of performance of specific tasks to fulfill the Operations Department responsibilities.

While additional management approvals for elevated risk activities are required, authorization to actually start work is the responsibility of those individuals delineated in SAP-102 as stated above. Since the GMNPO, Management Duty Supervisor and the Plant Safety Review Committee are not cited in SAP-102, there is not a correct answer.

**V.C. Summer requests that question 96 be removed from the examination.**