Entergy

Entergy Operations Inc.
Bald Hill Road
PO Box 756
Port Gibson, MS 39150

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Steve Garchow, Chief Examiner
U.S. Nuclear Regulatory Commission, Region IV
1600 East Lamar Blvd
Arlington, TX 76011-4511

SUBJECT: NRC INITIAL EXAMINATION ANALYSIS

GEXO: 2013/00076

Dear Mr. Garchow,

Enclosed is the NRC Initial Examination Analysis for the Initial License Written Examination administered on November 8, 2013.

- Written Exam questions with a greater than or equal to 50% failure rate.
- Written Exam questions with two answers correct.

Please contact Steve or Kyle at (601) 437-2255 if you have any questions or need any further materials.

Sincerely,

Gerald Giles
Manager, Training & Development
Grand Gulf Nuclear Station

Michael Bacon
Superintendent, Training Support
Facility Representative
Grand Gulf Nuclear Station

2013 NRC Exam Analysis

> or = 50% miss

Question 19 50%

Correct answer was taken directly from 10-S-03-2, Response to Fires. Per 10-S-03-2, Response to fires, step, 6.3.2 j, "If a fire should develop in one of the following rooms, secure the control building fan coil unit (Z17-B002). This action prevents moving smoke from the fire origin to non-affected rooms."

- OC303 HVAC Equipment Room (Unit 2 side)

First the student must recognize that room OC is in the control building and that the 303 is on the ground elevation with the Control Room AC Units.

'A' is correct. step 6.3.2 j

'B' is wrong. The control building purge fan can be started for smoke removal within the control building not secured, also, 10-s-02-3 does not mention the control building purge fan.

'C' is wrong. No procedures require the Control Room Standby Fresh Air system to be started.

'D' is wrong.. Access control area FCU does not service this area, also the 10-s-02-3 does not mention this FCU.

Exam team reviewed the other answers and determined that the question is acceptable and no changes are required to the question or lesson material.

Question 52 75%

Correct answer was taken directly from ARI and lesson material. Per 04-S-02-SH13-P854-1A-A4,

A is Correct

B is wrong: The compressors do not have a cooling water temp trip

C is wrong; Low oil filter D/P does nothing, but high filter D/P would cause a trouble alarm.

D is wrong; Oil temp high or pressure low will trip compressor

Exam team reviewed the other answers and determined that the question is acceptable and no changes are required to the question or lesson material.

Question 63 62.5%

Correct answer was taken directly from ARI and lesson material.

Once the F060 closes on a Post Treat rad signal it will auto reset once the signal is cleared. 04-1-02-1H13-P601-19A-C8 step 3.7, "If the radiation levels drop below the Hi Hi Hi trip, ensure N64-F060 opens and indicates open on panel P845."

'A' is wrong. This is required for and NSSSS isolation valve, N64-F060 is not part of NSSSS.

'B' is correct. See explanation above

'C' is wrong. This is required for opening an MSIV after auto closure.

'D' is wrong. This will only open the F045 and close the F060 when taken to BYPASS

Exam team reviewed the other answers and determined that the question is acceptable and no changes are required to the question or lesson material.

Question 78 87.5%

Correct answer was taken directly from ONEPs.

BOP transformer 13 supplies approximately half of the Radial Well Pumps that are in service at rated power; therefore, trip of BOP Xfmr 13 results in a large reduction in PSW flow to the plant. Conditions stated in the stem reflect a "complete" loss of PSW, as defined in ONEP 05-1-02-V-11, step 1.1.1, due to CCW temperature >100°F as the result of degraded PSW flow. Both CCW and TBCW cooling water temperatures will rise as a result of loss of PSW flow at rated power. Based on the stem conditions, rising CCW and TBCW temperatures, when considered separately, seem to imply their respective ONEPs may provide appropriate mitigating actions. However, the PSW ONEP is written to address the overall effects of a degraded PSW supply on the plant, including CCW and TBCW effects, and it provides guidance on when concurrent entry into CCW and TBCW ONEPs is required. For this situation, Loss of PSW ONEP is the appropriate ONEP to provide initial response by the crew. PSW ONEP steps 3.2.15 and 3.2.16 provide the criteria at which the Loss of CCW and TBCW ONEPs should be concurrently executed – if mitigating actions being performed per Loss of PSW ONEP are unsuccessful in restoring and maintaining CCW and TBCW temperatures below 100°F. The conditions given in the stem for CCW, TBCW, and Recirc Pump temperatures do not exceed specific limits stated in the loss of CCW and TBCW ONEPs that would require more extensive or severe action than is accommodated by the loss of PSW ONEP.

All answers are plausible because they reflect actions for varying degrees of effects of degraded CCW or TBCW capability.

Answer C is correct since the overall problem is attributable to PSW flow degradation and CCW temperature 101°F requires declaring a complete loss of PSW. Complete loss of PSW requires power reduction to 60%, beginning with core flow reduction to 70 mlbm/hr. The CRS should select only Loss of PSW, and select the section for a complete loss of PSW, until it is proven that mitigating actions of that ONEP are unsuccessful in restoring TBCW and CCW related temperatures or until the effects of rising CCW or TBCW temperatures reach levels that require declaring total losses of CCW and/or TBCW.

Answer A is wrong because PSW ONEP step 3.2.15 requires entering the CCW ONEP only if PSW ONEP actions are unsuccessful in restoring and maintaining TBCW temperature <100°F and because the alarming Recirc Pump temperature given is not one of the points that require declaring a complete loss of CCW and scramming per the CCW ONEP.

Answer B is wrong because PSW ONEP step 3.2.16 requires entering the TBCW ONEP only if PSW ONEP actions are unsuccessful in restoring and maintaining TBCW temperature <100°F, and TBCW temperature is only 97°F. Loss of TBCW ONEP should not be entered yet.

Answer D is wrong because PSW ONEP step 3.2.15 requires concurrently entering the CCW ONEP only if PSW ONEP actions are unsuccessful in restoring and maintaining TBCW temperature <100°F and because actions for a complete loss of PSW should be taken, not for a partial loss of PSW, which is reflected by this answer.

Exam team reviewed the other answers and determined that the question is acceptable and no changes are required to the lesson material.

Question 89 50%

Correct answer was taken directly from ONEP step.

For evacuation of the Control Room due to a fire, 05-1-02-II-1 step 3.1.4 specifically requires an RO to perform Att. XXII. The first section of this procedure requires opening RPS breakers CB-2A,5A,7A,and 8A on panel 1C71P001 in RPS A MG set room located on 189' elevation, Control Bldg and CB-2B,5B,7B,and 8B on panel 1C71P002 in RPS B MG set room located on 148' elevation, Control Bldg. The CB-2A(B) and 8A(B) result in deenergization of RPS A scram solenoids. The CB-5A(B) and 7(A) deenergize Division 1 and 2 MSIV solenoids. This does not directly affect Feedwater Level Control, but it does result in MSIV closure, which isolates steam to the reactor feed pump turbines, thus disabling Feedwater system. Since the breakers are in the control building and Feedwater is disabled, answer B is correct and all other answers are wrong. Answer A is plausible because the breakers do not directly affect Feedwater level control. Answers C and D are plausible because there are many actions taken outside of the main control room associated with certain security events, but not these specific actions.

Exam team reviewed the other answers and determined that the question is acceptable and no changes are required to the question or lesson material.

Questions with 2 answers correct

Question 50

Accept 2 answers - A and B

Bases:

The stem of the question indicates the DC power is unavailable to the breaker. As such all electrical operation is unavailable. The question answers provide 3 modes of breaker operation; Remote, Local and Manual. These are ambiguous terms, but based on the answers not interchangeable. The correct answer is only Manual is available. This would make answer A also correct as it states Remote and Local are not available.

Procedure 04-S-04-2, Operation of Electrical Circuit Breakers, states in 4.4.2 test the breaker "using Local Breaker Control switch on the front cabinet." Without a specific definition of local operation the student could reasonably assume local would be use of the pistol switch located on the front of the breaker. While there are other uses of local in this procedure that include manual operation the lack of a clear definition and the use of 3 terms in the question (Remote, Local and Manual) or a definition that has manual as a subset of local make answer A just as correct as answer B.

Requesting Answers A and B correct.

Question 93

Accept 2 answers - A and D

Bases:

The question states a relay failure indicated by 1H13-P680-2A-E9 (CONDSR HTWL LVL LO) came in alarm. The stem has no other information indicating any other automatic operation occurred.

The alarm is actuated by 1 of 3 relays 63X/105, 63X/106, or 63X/107. (see drawing 1048-015.) 2 out of 3 relays will trip the condensate pumps via 63X-1/105(drawing E1148-15 and E1148-01). If relay 63X-1 (operated by 2 out of 3 logic) were to fail then the condensate pumps would trip however the alarm P680-2A-E9 would not alarm (see drawing E1148-027) as the alarm is actuated by 63XN105, 63XN106, or 63X/N107 not 63X-1/N105.

Even if 63X-1/105 were to somehow bring in the alarm it is not the only relay that could actuate the alarm. As such, answer D is reasonable for a relay failure.

Requesting Answers A and D correct.