

MONTICELLO INITIAL RO/SRO EXAMINATION

OCTOBER 18, 2002

DOCKET NO. 50-263

EXAMINERS: D. MCNEIL; C. PHILLIPS

\*QNUM 001  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 237  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 201001K411  
\*QUESTION

Which of the following states the purpose for the Scram Discharge Volume High Level Scram?

- a. A Reactor scram is inserted before the Scram Discharge Volume fills and the ability to complete a scram is lost.
- b. A Reactor scram is inserted to isolate an open flow path connecting the primary coolant boundary to Secondary Containment.
- c. A level increase in the Scram Discharge Volume is indicative of multiple leaking scram outlet valves.
- d. A level increase in the Scram Discharge Volume is indicative of primary coolant pressure boundary leakage greater than Tech Spec limits.

\*ANSWER

a.

\*REFERENCE

B.5.6-02.A.1.f

INPO Bank QID 8938

Memory

\*QNUM 002  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 201002A301  
\*QUESTION

Given the following plant conditions.

- Reactor start-up is in progress with the Mode Switch in STARTUP-TO-HOTSTBY.
- IRMs are on range 5.
- While hanging an isolation on Panel Y-20, an Operator incorrectly OPENS the breaker for Circuit 26, SRM/IRM DRIVE CONTROL, causing a loss of SRM and IRM FULL IN/FULL OUT indication.

What is the impact of losing Panel Y-20, Circuit 26 AND why?

- a. A half scram signal occurs due to SRMs Inoperable (INOP).
- b. A full Reactor scram occurs due to IRMs Inoperable (INOP).
- c. A Control Rod withdraw block occurs due to the loss of SRM Full IN indication.
- d. A Control Rod withdraw block occurs due to the loss of IRM Full IN indication.

\*ANSWER

d.

\*REFERENCE

B.5.2.2-02.C.1.c

C.4-B.9.13.B

NEW

Comprehension

\*QNUM 003  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.2.25 201003  
\*QUESTION

Given the following plant conditions.

- The plant is at 100% power.
- Surveillance Procedure 0074, CONTROL ROD DRIVE EXERCISE, is in progress to perform weekly Control Rod exercise checks.
- Control Rod 22-19 was at position 30 at the start of the procedure.
- The operator has attempted to insert and withdraw Control Rod 22-19 with elevated drive water pressures up to 400 psig and no response was obtained with Control Rod 22-19 remaining at position 30.
- The operator has attempted to single rod scram Control Rod 22-19 and no response was obtained.
- All conditions have been verified to be normal for the HCU for Control Rod 22-19.
- All remaining partially withdrawn rods demonstrate proper Control Rod exercising.

What operator action is required AND what is the basis for this action?

- a. Electrically disarm Control Rod 22-19, verify shutdown margin, and continue plant operation. Operation may continue with the shutdown reactivity limits satisfied for the ability to shutdown with one rod out.
- b. Place the plant in a Hot Shutdown condition within 48 hours. CRD collet housing failure may have occurred which could prevent a scram of the Control Rod.
- c. Perform Control Rod exercise checks daily and continue plant operation. Increased surveillance will assure that the Reactor is not operated with a large number of inoperable Control Rods.
- d. Place the plant in a Cold Shutdown condition with 24 hours. The rod is uncoupled and a rod drop accident could occur for this partially withdrawn Control Rod.

\*ANSWER

b.

\*REFERENCE

B.1.3-05.H.1 & TS 3/4.3.A.2.b and bases

New

Comprehension  
Tech Spec w/o ref to be provided

\*QNUM 004  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 201003K101  
\*QUESTION

Reactor power is 100%. NO CRD flow is available, and two CRD accumulator low pressure alarms are received.

Why is a manual Reactor Scram required?

- a. The Control Rod mechanism temperatures will begin increasing.
- b. The Control Rod accumulator Nitrogen pressure is decreasing.
- c. The Control Rod Scram times may be slow.
- d. The Control Rod will begin to drift out.

\*ANSWER

c.

\*REFERENCE

C.4-B.1.3.A

ILT BANK M8107L-020-006

Memory

\*QNUM 005  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.1.33 202001  
\*QUESTION

While operating at 100% power, a lockout occurs on Bus No. 11. Reactor power decreases to 60%. Core and Recirculation Loop flows are as follows.

- A Recirculation Loop Flow is 0 GPM.
- A Recirculation Jet Pump Flow is 3.0E6 lbm/hr.
- B Recirculation Loop Flow is 33,000 GPM.
- B Recirculation Jet Pump Flow is 26.0E6 lbm/hr.
- Total Core Flow is 30.5E6 lbm/hr.

1) What operator action is required AND 2) what mechanism is in place to prevent exceeding fuel safety limits?

- a. 1) Insert Control Rods to exit the Power-Flow Operating Map Stability Exclusion region. 2) Power distribution controls.
- b. 1) Insert Control Rods to exit the Power-Flow Operating Map Stability Exclusion region. 2) The APRM Flow biased scram.
- c. 1) Insert Control Rods to exit the Power-Flow Operating Map Stability Buffer region. 2) Power distribution controls.
- d. 1) Insert Control Rods to exit the Power-Flow Operating Map Stability Buffer region. 2) The APRM Flow biased scram.

\*ANSWER

d.

\*REFERENCE

C.4-B.5.1.2.A

TS 3.5.F.2; Bases

MOD ILT Bank M8114L-002-040

Comprehension

\*QNUM 007  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 202002K103  
\*QUESTION

While the plant is operating at 100% power, a trip of No. 11 Reactor Feed Pump occurs. Reactor total core flow and Reactor power have decreased. Reactor water level is +20 inches and decreasing. The plant responds as designed and no operator actions have been taken.

What caused the decrease in Reactor total core flow AND what is the basis for the system response?

- a. Recirculation MG Set field breakers tripped to decrease total core flow and Reactor power to prevent Reactor Feed Pump run out and a Reactor scram on low Reactor water level.
- b. Runback of the Reactor Recirculation Pumps to 50% pump speed decreased total core flow and Reactor power to prevent Reactor Feed Pump run out and a Reactor scram on low Reactor water level.
- c. Recirculation MG Set field breakers tripped to decrease total core flow and Reactor power to mitigate the consequences if a failure to scram occurs during the transient.
- d. Runback of the Reactor Recirculation Pumps to 50% pump speed decreased total core flow and Reactor power to mitigate the consequences if a failure to scram occurs during the transient.

\*ANSWER

b.

\*REFERENCE

B.5.8-01.C

C.4-B.6.5.A

NEW

Comprehension

\*QNUM 008  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 202002K302  
\*QUESTION

The plant is operating at 100% power. The No. 11 Recirc MG Set Scoop Tube has been locked due to unstable speed control on the No. 11 Recirc MG Set and cannot be reset.

I&C is investigating the speed control problem in accordance with a Work Order for the troubleshooting activity. The No. 11 Recirc MG Set speed is to be lowered 5% to assist troubleshooting per the Work Order.

Who may perform this action AND why?

- a. A Reactor Building Operator because the manipulation of equipment in the Reactor Building is required.
- b. A Control Room Operator because the manipulation of switches on Control Room panel C-04 is required.
- c. An I&C Technician because the Work Order directs and controls this action as part of troubleshooting.
- d. A Licensed Operator because the speed change is a reactivity manipulation effecting Reactor power.

\*ANSWER

d.

\*REFERENCE

B.1.4-05.H.1

NEW

Comprehension

\*QNUM 009  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL S  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 203000 2.1.7  
 \*QUESTION

Given the following plant conditions.

- A Reactor scram initiated from 100% power.
- Drywell pressure is 2.2 psig.
- Reactor water level is 0 inches and increasing.
- Reactor pressure is 550 psig.
- ECCS systems have initiated.
- MO-2-53A, 11 Recirc Pump Discharge, is OPEN.
- MO-2-53B, 12 Recirc Pump Discharge, is CLOSED.

What is the current status of LPCI injection, AND which Recirculation loop has been selected for LPCI injection?

- |    | STATUS                | LOOP SELECTED           |
|----|-----------------------|-------------------------|
| a. | LPCI is injecting     | 'A' Recirculation loop. |
| b. | LPCI is NOT injecting | 'A' Recirculation loop. |
| c. | LPCI is injecting     | 'B' Recirculation loop. |
| d. | LPCI is NOT injecting | 'B' Recirculation loop. |

\*ANSWER

d.

\*REFERENCE

B.3.4-02

NEW

Memory

\*QNUM 010  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL R  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 203000 2.4.27  
 \*QUESTION

The plant is operating at 100% power. A fire has occurred in the Turbine Building 911 foot Elevation East MCC room in MCC-112. The Fire Brigade Leader has notified the control room that the following breakers are to be OPENED to support combating the fire per the fire fighting strategies.

- Breaker 52-304, MCC-133A FEEDER BREAKER
- Breaker 52-307, MCC-133B FEEDER BREAKER
- Breaker 52-903, MCC-112 FEEDER BREAKER

What impact do these breaker operations have on the status of energized equipment in the vicinity of the fire, AND what means of fire suppression should be used?

	EQUIPMENT STATUS	FIRE SUPPRESSION
a.	MCC-133B will re-energize from its alternate source.	Portable water extinguishers may be used.
b.	MCC-133B will re-energize from its alternate source.	Water applied with a fog nozzle may be used.
c.	The MCCs are de-energized.	Carbon Dioxide (CO2) extinguishers may be used.
d.	The MCCs are de-energized.	Portable dry chemical extinguishers may be used.

\*ANSWER

b.

\*REFERENCE

A-3-004.I.A.4.I, A.3-13-C, B.9.7-02.B

NEW

Comprehension

\*QNUM 011  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 203000K605  
\*QUESTION

Given the following plant conditions.

- The plant is operating at 100% power.
- Condensate Service Pump P-60A has been isolated due to excessive pump seal leakage.
- Condensate Service Pump P-60B is in service to support backwash of a Condensate Filter Demineralizer.
- Annunciator 8-C-34, No. 104 480 LDCTR MCC FEEDER TRIP, alarms.
- The Control Room team determines that MCC-141 has been lost.

What impact does the loss of MCC-141 have on the LPCI mode of RHR?

- a. A Group 2 Primary Containment Isolation will cause LPCI Inboard Isolation Valves MO-2014 and MO-2015 to CLOSE.
- b. The Condensate Service jockey pump will auto start to maintain Condensate Service pressurizing station pressure which maintains the RHR system filled with water.
- c. LPCI Outboard Isolation Valve MO-2013 will NOT open on a LPCI initiation signal thus the B LPCI injection path is NOT operable.
- d. The Condensate Service pressurizing stations for RHR will be unable to maintain the RHR system filled with water and a water hammer could occur on LPCI initiation.

\*ANSWER

d.

\*REFERENCE

B.3.4-05.A.2.a

B.8.9-05.C

NEW

Comprehension

\*QNUM 012  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 204000A409  
\*QUESTION

Reactor Shutdown is in progress.

- Reactor Pressure is 80 psig and steady.
- Reactor Temperature is 320 deg F and steady.

What actions can be taken to continue the Reactor cool down to obtain Cold Shutdown conditions?

- a. Place Reactor Head Spray in service.
- b. Place the RWCU system in the Heat Rejection mode of operation.
- c. Place a train of the RHR system in the Shutdown Cooling mode of operation.
- d. OPEN the Feedwater pump recirculation valves and CLOSE the Condensate recirculation valves.

\*ANSWER

b.

\*REFERENCE

C.3, Part VII.B.1

NEW

Comprehension

\*QNUM 013  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 205000A108  
\*QUESTION

The plant has been shutdown for an outage to inspect the ECCS Pump Torus Suction Strainers due to an identified safety concern. RHR Loop A is in Shutdown Cooling mode. Annunciator 3-A-12, RHR HX A OR B DISCH WTR HI TEMP, alarms.

The RHR Heat Exchanger high temperature condition can be confirmed by monitoring temperature...

- a. recorder on Control Room back panel C-21.
- b. indicator in 'A' Residual Heat Removal Room.
- c. recorder on Control Room front panel C-04.
- d. recorder on Control Room front panel C-03.

\*ANSWER

a.

\*REFERENCE

ARP C.6-003-A-12

NEW

Memory

\*QNUM 014  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 209001A401  
\*QUESTION

Given the following conditions:

- A LOCA has occurred.
- ECCS systems injected into the Reactor.
- Reactor water level was restored to normal level and ECCS pumps were secured per C.5-3205, TERMINATE AND PREVENT.
- Drywell pressure is 3.5 psig.
- Subsequently, Reactor level dropped to minus 50 (-50) inches.

Which of the following describes the operation of the Core Spray system?

- a. The Core Spray system will require manual restarting of the pumps and realignment of the Core Spray injection valves.
- b. The Core Spray pumps will automatically restart and inject into the RPV to raise level.
- c. The Core Spray pumps will automatically restart and the Core Spray Injection valves must be manually OPENED from the control room.
- d. The Core Spray system will inject into the RPV when the MO-1751 CS INJECTION BYPASS and MO-1752 CS INJECTION BYPASS hand switches are placed in AUTO.

\*ANSWER

a.

\*REFERENCE

C.5-3205 Part A  
INPO BANK 16343  
Comprehension

\*QNUM 015  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 211000A102  
\*QUESTION

During the conduct of his normal panel rounds, a Control Room Operator has identified that the continuity meter for the SYSTEM 1 Standby Liquid Control Squib valve is indicating zero (0) amperes. Which of the following explains how system operation would be affected if initiation of Standby Liquid Control SYSTEM 1 was attempted?

- a. The 'A' SBLC pump would start, but NOT inject since the squib valve will NOT fire.
- b. The 'A' SBLC pump would start and inject since the squib valve has fired.
- c. The 'A' SBLC pump would NOT start, but the inject path is open as the squib valve fired.
- d. The 'A' SBLC pump would NOT start and the squib valve will NOT fire.

\*ANSWER

a.

\*REFERENCE

B.3.5-01.C, B.3.5-05.G.1, B.3.5-01.D, B.3.5-02.C, ARP 5-B-31

INPO BANK 13129

Memory

\*QNUM 016  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 211000A201  
\*QUESTION

A plant transient has occurred which has resulted in an automatic Reactor scram. 25 Control Rods failed to fully insert. The Operator-At-The-Controls has placed hand switch 11A-S1, SLC SYSTEM SELECTOR, to SYS 1 and verified system operation.

Subsequently, annunciator 8-B-32, NO. 103 480V LDCTR MCC FEEDER TRIP, alarms.

Given the following plant conditions.

- Standby Liquid Control Tank Level is 1000 gal and steady.
- No. 11 SBLC Pump status indicating lights are OFF.
- No. 11 RBCCW Pump status indicating lights are OFF.
- No. 11 RWCU Pump has tripped.
- Torus Temperature is 105 deg F and increasing.

What operator action is required?

- a. Terminate boron injection and insert rods per C.5-3101, ALTERNATE ROD INSERTION.
- b. Inject boron per C.5-3102, ALTERNATE BORON INJECTION WITH CRD.
- c. Inject boron per C.5-3103, ALTERNATE BORON INJECTION WITH RWCU.
- d. Place SBLC System 2 in service per B.03.05-05.G.1, MANUAL INITIATION.

\*ANSWER

d.

\*REFERENCE

B.3.5-05.G.1, B.3.5-05.C, C.4-B.9.7.C

NEW

Comprehension

\*QNUM 017  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 215002A101  
\*QUESTION

The plant is operating at 50% power with a non-edge rod selected when the B Recirc Pump controller failed, raising the speed of the B Recirc Pump. Operators respond by locking the B Recirc MG Scoop Tube, but not before Reactor power rises to 75%. No other operator actions are taken.

Which of the following describes the impact of this transient on the amplification applied to the average LPRM inputs in the Rod Block Monitor (RBM) system?

The amount of amplification to BOTH RBM A and B average LPRM input signals...

- a. is automatically adjusted to correspond to the reference APRM readings.
- b. remains fixed at value at the time of the rod selection.
- c. is automatically adjusted to correspond to the new core flow.
- d. is bypassed based on the rod selection.

\*ANSWER

b.

\*REFERENCE

B.5.1.2-02.C.2

MOD INPO BANK 8752

Comprehension

\*QNUM 018  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 215002K501  
\*QUESTION

Plant power has been reduced from 100% power to 75% power to perform procedure 0255-07-IA-1, MAIN STEAM VALVE EXERCISE TESTS, and Control Rod pattern adjustments. Annunciators 5-A-43, RBM DOWNSCALE, and 5-A-3, ROD WITHDRAW BLOCK, are in alarm.

What operator action is required to reset the alarms and change the Rod Block Monitor (RBM) rod withdraw block set points?

- a. Momentarily depress the APRM/RBM TRIP LEVEL pushbuttons on C-05.
- b. Place the RBM BYPASS switch on C-05 momentarily to Rod Block Monitor 7 and then momentarily to Rod Block Monitor 8 and return to OFF.
- c. Place the Rod Block Monitor 7 and 8 MODE switches momentarily to STANDBY and then return back to OPERATE.
- d. Deselect the currently selected Control Rod and then select the desired Control Rod to be positioned.

\*ANSWER

d.

\*REFERENCE

C.6-005-A-43

NEW

Memory

\*QNUM 019  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 215004A401  
\*QUESTION

A Reactor startup is in progress. The following data was obtained during the startup.

<u>TIME</u>	<u>SRM 21</u>	<u>SRM 22</u>	<u>SRM 23</u>	<u>SRM24</u>
10:10:00	600	560	360	690
10:11:00	960	900	550	920
10:12:00	1360	1290	780	1320
10:13:00	1920	1860	1100	1900
10:14:00	2720	2580	1560	2640

Control Rod motion stopped at time 10:11:00 and the Reactor was declared critical at 10:12:00. Which of the following describes the Reactor period at criticality?

- a. Between 110 and 130 seconds.
- b. Between 130.1 and 160 seconds.
- c. Between 160.1 and 190 seconds.
- d. Between 190.1 and 220 seconds.

\*ANSWER

c.

\*REFERENCE

C.1.III.D.2, C.1.V.A.3.

INPO BANK 9547

Analysis, Synthesis, or Application

\*QNUM 020  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 215004K201  
\*QUESTION

Which of the following plant electrical systems supplies power to the detector and electronic circuitry of the Source Range Monitoring (SRM) System?

- a. 24 VDC station batteries
- b. 125 VDC station batteries
- c. 120 V Instrument AC
- d. 480 VAC station auxiliary

\*ANSWER

a.

\*REFERENCE

B.5.1.1-02.C.1, B.5.1.1-06, Fig 4

ILT BANK M-8107L-054-028

Memory

\*QNUM 021  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 215005K202  
\*QUESTION

The plant is operating at 100% power. A plant electrical fault occurs resulting in the loss of MCC-111.

With the loss of MCC-111, power is lost to Average Power Range Monitoring (APRM) system channels...

- a. 1, 2 and 3 and can be restored by energizing RPS Bus A from the alternate source.
- b. 4, 5 and 6 and can be restored by energizing RPS Bus B from the alternate source.
- c. 1, 2 and 3 and cannot be restored until the cause of the loss of MCC-111 is corrected and MCC-111 is re-energized.
- d. 4, 5 and 6 and cannot be restored until the cause of the loss of MCC-111 is corrected and MCC-111 is re-energized.

\*ANSWER

c.

\*REFERENCE

B.5.1.2-02.D, B.9.12-02.G, B.9.12-05.C

New

Comprehension

\*QNUM 022  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 215005K401  
\*QUESTION

A plant startup is in progress. Reactor power is currently at 75% power and power is being raised to 100% with Recirc Flow. The following annunciators alarm:

- 5-A-38, APRM FLOW BIAS OFF NORMAL
- 5-A-3, ROD WITHDRAW BLOCK

The operator observes the following indications.

- Recirculation flow indications are within expected ranges.
- The amber Flow Converter 1 COMPARATOR indicating light is ON.
- The white Flow Converter 1 INOP indicating light is ON.

Based on the above indications, what is the cause of the Control Rod withdraw block?

- a. An APRM high upscale trip based on Reactor power and flow relationship exceeding  $0.66W+53.6\%$ .
- b. An excessive deviation in APRM Recirculation Flow Converter output signals.
- c. An APRM high upscale trip based on Reactor power and flow relationship exceeding  $0.66W+65.6\%$ .
- d. APRM Recirculation Flow Converter 1 mode selector switch is NOT in OPERATE.

\*ANSWER

b.

\*REFERENCE

C.6-005-A-38, B.5.1.2-02.B.4

NEW

Memory

\*QNUM 023  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 215005K401  
\*QUESTION

Per Plant Technical Specifications, which Reactor mode(s) is the APRM flow biased rod withdrawal block required to be operable, AND what is the basis for the APRM flow biased rod withdrawal block?

- a. Reactor Mode Switch in RUN to prevent operation significantly above the licensing basis power level during operation at reduced flow.
- b. Reactor Mode Switch in RUN or STARTUP TO HOT STANDBY to prevent operation above the licensing basis power level during operation at reduced flow.
- c. Reactor Mode Switch in RUN to provide local core protection against exceeding the MCPR safety limit.
- d. Reactor Mode Switch in RUN or STARTUP TO HOT STANDBY to provide local core protection against exceeding MCPR safety limit.

\*ANSWER

a.

\*REFERENCE

Tech Spec Table 3.2.3, TS 3.2 Bases (page 67)

NEW

Comprehension

\*QNUM 024  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 216000K109  
\*QUESTION

Given the following plant conditions:

- Annunciator 5-A-39, ATWS CH A PB ARMED, is in alarm.
- Pushbutton S-5A, ATWS A MAN, is then depressed.
- Annunciator 5-A-31, ATWS CHANNEL A TRIP, alarms.

If a second sub-channel on ATWS logic ...

- a. Channel A trips, then the Recirc MG Set Drive Motor Breakers OPEN and an ARI valve OPENS.
- b. Channel A trips, then the Recirc MG Set Generator Field Breakers OPEN and an ARI valve OPENS.
- c. Channel B trips, then the Recirc MG Set Drive Motor Breakers OPEN and the ARI valves OPEN.
- d. Channel B trips, then the Recirc MG Set Generator Field Breakers OPEN and the ARI valves OPEN.

\*ANSWER

b.

\*REFERENCE

C.6-005.A-31, B.5.6-01.C.3, B.5.6-02.C.1

NEW

Memory

\*QNUM 025  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 216000K330  
\*QUESTION

The plant has been in a maintenance outage. Plant conditions have been established to start No. 11 and No. 12 Recirc Pumps. The Operator places hand switch 2A-S1A, No. 11 MG SET DRIVE MOTOR to START and observes normal indications for start of the MG Set drive motor.

The Operator then places hand switch HS2A-S7A, MO-2-53A PUMP DISCHARGE, to OPEN and observes normal indications for Recirc Pump startup.

Shortly after the following alarms are received.

- 4-C-1, RECIRC A LOCKOUT
- 4-C-21, RECIRC A STARTUP SEQUENCE INCOMPLETE
- 4-C-31, RECIRC DRIVE MOTOR A TRIP

What malfunction caused the trip of the No. 11 Recirc MG Set?

- a. Loss of Recirc Pump suction valve OPEN indication.
- b. Recirc MG Set high lube oil temperature.
- c. Recirc Pump low differential pressure.
- d. Recirc MG Set low lube oil pressure.

\*ANSWER

c.

\*REFERENCE

B.1.4-02.F.1, C.6-004-C-01, C.6-004-C-08, C.6-004-C-21, C.6-004-C-31

NEW

Memory

\*QNUM 026  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 218000A103  
\*QUESTION

The plant is operating at 98% power. Annunciator 3-A-48, N2 LO PRESSURE SRVS, INBD T-RINGS, alarms. The operator dispatched to the Train A Alternate Nitrogen manifold reports that the manifold pressure is 200 psig and decreasing.

With respect to the Safety Relief Valves (SRVs), what action is required?

- a. Declare ADS SRV A and Low-Low Set SRV E inoperable.
- b. Declare ADS SRV B and Low-Low Set SRV F inoperable.
- c. Declare ADS SRV C and Low-Low Set SRV H inoperable.
- d. Declare ADS SRV D and Low-Low Set SRV G inoperable.

\*ANSWER

a.

\*REFERENCE

B.8.4.3-05.2.a, B.8.4.3-05.3.b, C.6-003-A-48

NEW

Memory

\*QNUM 027  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 219000K410  
\*QUESTION

The plant is operating at 100% power. Procedure 0255-08-IA-1, RCIC SYSTEM PUMP FLOW AND VALVE TESTS, was recently completed. The following plant conditions exist.

- No. 11 RHR pump is aligned for Torus cooling and is operating at 4000 gpm.
- No. 13 RHRSW pump is operating at 3600 gpm.
- Torus temperature is 98°F and decreasing.
- No. 11 and No 12 Service Water pumps are operating.

Annunciator 3-B-19, RHR HX B TUBE/SHELL LOW DIF PRESS, alarms.

What operator action is required to prevent RHR to RHRSW intersystem leakage?

- a. Increase No. 11 RHR Pump flow to 4400 gpm.
- b. Verify CLOSED CV-1729, 12 RHR Heat Exchanger Service Water Outlet, and OPEN RHRSW-32, RHRSW Loop A and B Crosstie.
- c. Decrease No. 13 RHRSW Pump flow to 3500 gpm.
- d. Shut down No. 11 RHR pump and No. 13 RHRSW pump, and vent the No. 12 RHR Heat Exchanger using the RHRSW vent valves.

\*ANSWER

b.

\*REFERENCE

ARP C.6-003-B-19, B.8.1.3-05.H.5

NEW

Memory

\*QNUM 028  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 223001K612  
\*QUESTION

Given the following plant conditions:

- Due to severe winds a loss of off-site power has occurred.
- No. 11 and No. 12 Emergency Diesel Generators (EDGs) failed to energize the essential busses.
- The plant has been shutdown by a manual scram.
- RCIC is being used to control Reactor Water Level between minus 126 (-126) inches and 48 inches.
- No. 13 Diesel Generator has been determined to be unavailable due to damage sustained during the severe winds.
- Efforts have been in progress for the last 4 hours to restore off-site power and determine the cause of the EDGs loading failure, and have NOT been successful.

Four and one-half (4.5) hours after the initiation of the event annunciator 5-A-15, 24 VDC SYSTEM A UNDERVOLTAGE/OVERVOLTAGE, alarms.

What is the consequence of receiving this alarm concerning Primary Containment integrity?

- a. A loss of solenoid power to Division I air operated Primary Containment isolation valves is imminent and the valves should be verified CLOSED.
- b. A loss of position indication power to the H<sub>2</sub>O<sub>2</sub> Analyzer Primary Containment isolation valves is imminent and the manual isolation valves should be verified CLOSED.
- c. A loss of control power to Division I DC powered Primary Containment isolation valves is imminent and the valves should be verified CLOSED.
- d. A loss of power to the solenoid operator for the H<sub>2</sub>O<sub>2</sub> Analyzer Primary Containment isolation valves is imminent and the manual isolation valves should be CLOSED.

\*ANSWER

b.

\*REFERENCE

C.4-B.9.11.A, B.4.3.1-05.C.2

NEW  
Analysis, Synthesis, or Application

\*QNUM 029  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 223002A301  
\*QUESTION

A plant transient has occurred resulting in a loss of No. 11 and No. 12 Feed Water pumps, Reactor scram, and a Group 1 Primary Containment Isolation. RCIC is operating to restore Reactor Water Level when the following alarms and indications are received.

- Annunciator 4-A-9, RCIC TURBINE TRIPPED, alarms.
- Annunciator 3-B-56, HIGH AREA TEMP STEAM LEAK, alarms.
- MO-2078, RCIC Turbine Steam Supply Valve, is OPEN.
- MO-2080, RCIC Turbine Trip and Throttle Valve, is CLOSED.
- RCIC turbine speed and pumped flow are decreasing.
- RCIC pump suction pressure is 20 psig.
- The Mechanical Overspeed light on C-04 is OFF.
- The Group 5 Isolation Reset light on C-04 is OFF.

Based on the above indications, what was the cause of the RCIC turbine trip?

- a. Mechanical over-speed.
- b. High Reactor water level.
- c. Group 5 Containment Isolation.
- d. Low pump suction pressure.

\*ANSWER

c.

\*REFERENCE

B.2.3-01.C, C.4-B.4.1.E

NEW

Memory

\*QNUM 030  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 223002K405  
\*QUESTION

The Reactor Water Clean-up (RWCU) high system flow Group 3 Primary Containment Isolation uses a single flow element to measure system flow. Therefore, a failure of a flow element sensing line could prevent detection of a RWCU line break.

What design feature is used to ensure that a single failure of the flow element sensing line will NOT prevent a Group 3 Isolation signal on high system flow?

- a. A downscale trip on two of the four RWCU flow transmitters will initiate a Group 3 Isolation signal.
- b. A single instrument trip will initiate a high system flow Group 3 Isolation signal to ensure conservative automatic action is initiated.
- c. A high Drywell pressure signal at 2 psig provides redundancy to the RWCU high system flow Group 3 Isolation signal.
- d. A negative differential pressure signal will initiate a Group 3 Isolation signal at an indicated flow of minus 200 (-200) gpm.

\*ANSWER

d.

\*REFERENCE

B.5.6-02.B.1.j

NEW

Memory

\*QNUM 031  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 226001A305  
\*QUESTION

The plant was operating at 100% when a LOCA occurred. The following are the current plant conditions.

- Torus and Drywell Sprays are in-service via Loop A of RHR.
- Core Spray and Loop B of RHR are injecting to the vessel.
- Reactor water level is minus 54 (-54) inches and increasing at 1 inch/minute.
- Torus temperature is 100 deg F and increasing at 1 deg F/minute.
- Torus pressure is 4 psig and decreasing at 0.5 psig/minute.
- Drywell pressure is 5 psig and decreasing at 0.5 psig/minute.

If no operator action is taken, what action will occur based on the above trends?

The Containment Spray Valves will . . . .

- a. remain OPEN and Drywell pressure will be adversely impacted.
- b. automatically CLOSE at approximately 1.0 psig Drywell pressure.
- c. remain OPEN and ECCS pump NPSH will be adversely impacted.
- d. automatically CLOSE at approximately 1.0 psig Torus pressure.

\*ANSWER

b.

\*REFERENCE

B.3.4-02.F.7, B.3.4-01

NEW

Analysis, Synthesis, or Application

\*QNUM 032  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 230000K302  
\*QUESTION

The plant was operating at 75% power when a LOCA and Reactor scram occurred. The A loop of the Residual Heat Removal (RHR) system is operating in the Torus Spray mode. LPCI and both Core Spray loops have been prevented from injecting to the Reactor per C.5-3205, TERMINATE AND PREVENT. HPCI and RCIC are operating to restore Reactor vessel level.

The following are the current plant conditions.

- Reactor level is minus 50 (-50) inches and increasing.
- Reactor pressure is 972 psig and decreasing.
- Drywell pressure is 3 psig and decreasing.
- Torus pressure is 2 psig and decreasing at 0.1 psig per minute.
- Torus temperature is 85 deg F and increasing at 1 deg F per minute.

The Control Room Supervisor has directed RHR loop A be transferred to the Torus Cooling mode and RHR loop B be placed in the Torus Cooling mode. While transferring the A RHR loop from Torus Spray to Torus Cooling, MO-2010, TORUS SPRAY – INBOARD, fails to go full close.

What action should be taken to control Torus temperature?

- a. Manually override the MO-2010 CLOSE torque switch at the MCC to fully CLOSE the valve and then place A and B loops of RHR in Torus Cooling.
- b. Place the B loop of RHR in Torus Cooling AND secure the A loop of RHR Torus Sprays by CLOSING MO-2006, DISCHARGE TO TORUS SPRAY OUTBOARD.
- c. Reduce Reactor pressure using the Main Turbine Bypass Valves to stop adding energy to the Torus from the Safety Relief Valves.
- d. Place the A loop of RHR in Torus Cooling as adequate RHR pump capacity is available to support Torus Cooling and Spray AND place B loop of RHR in Torus Cooling.

\*ANSWER

b.

\*REFERENCE

C.5-1200 Part L, C.5-3502 Part A, B.3.4-05.D.3

NEW  
Analysis, Synthesis, or Application

\*QNUM 033  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 230000K501  
\*QUESTION

The plant is operating at 99% power. Procedure 0255-04-IA-1, RHR PUMP AND VALVE TESTS, is in progress. Stroke timing of the RHR valves per Part A of the procedure has been completed.

Part B of the procedure directs to vent the RHR discharge piping per procedure 2145, RHR SYSTEM DISCHARGE VENTING, prior to performing the remaining portions of the procedure that places each of the RHR pumps in operation for surveillance data.

Why is venting required, AND does this have an impact on the RHR modes of operation?

- a. The venting is to reduce elevated RHR system pressure due to valve stroking to maintain RHR to RHRSW differential pressure AND does not impact the RHR modes of operation.
- b. The venting is to re-establish a water solid system after stroking valves that allow drain paths to the Torus AND does not impact the RHR modes of operation
- c. The venting is to reduce elevated RHR system pressure due to valve stroking to maintain RHR to RHRSW differential pressure AND the LPCI mode, Containment Spray mode, and Containment Cooling modes are not operable until system venting is complete.
- d. The venting is to re-establish a water solid system after stroking valves that allow drain paths to the Torus AND the LPCI mode, Containment Spray mode, and Containment Cooling modes are not operable until system venting is complete.

\*ANSWER

d.

\*REFERENCE

B.3.4-05.2.a, B.3.4-05.4.c, 2145, 0255-04-IA-1

NEW

Memory

\*QNUM 034  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 233000A107  
\*QUESTION

The plant is operating at 100% power. The following plant conditions are in effect.

- Upstream river water temperature is 85 deg F.
- No. 11 Fuel Pool Cooling Water pump is in service.
- No. 12 Fuel Pool Cooling Water pump is isolated for maintenance.
- No. 11 Fuel Pool Heat Exchanger is in service with the Reactor Building Closed Cooling Water Valve full OPEN.
- No. 12 Fuel Pool Filter/Demineralizer is in service.

Annunciator 3-B-47, FUEL POOL HEAT EXCHANGER INLET HI TEMP, alarms and the local indicator has been verified to be at the alarm set point.

What action should be taken in response to the high temperature condition?

- a. Remove the No. 12 Fuel Pool Filter/Demineralizer from service.
- b. Restore the No. 12 Fuel Pool Cooling Water pump to service and establish cooling with No.11 and No. 12 Fuel Pool Cooling Water pumps via No. 11 Fuel Pool Heat Exchanger.
- c. Place the No 12 Fuel Pool Heat Exchanger in service.
- d. Increase RBCCW flow to other components cooled by RBCCW and monitor temperatures on other components cooled by Reactor Building Closed Cooling Water (RBCCW).

\*ANSWER

c.

\*REFERENCE

ARP 3-B-47

NEW

Comprehension

\*QNUM 035  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 233000K407  
\*QUESTION

The plant is operating at 100% power following a refueling outage, which was completed 20 days ago. During the refueling outage, No. 11 and No. 12 Fuel Pool Cooling pumps were replaced to address an equipment obsolescence issue. Since plant start-up, the vibration readings on the Fuel Pool Cooling pumps have steadily increased and have reached the "Required Action" range per the Fuel Pool Cooling pump surveillance procedure.

Plant engineering personnel were in the process of taking vibration readings on the Fuel Pool Cooling pump when the No. 11 pump MCC breaker tripped OPEN, followed about 20 minutes later by a trip of the No. 12 pump MCC breaker.

Engineering has determined that with the current Fuel Pool heat load, the Fuel Pool temperature will reach 140°F in 10 hours. Plant maintenance personnel indicate that replacement pumps are in transit from the manufacturer, but will not be on-site and installed until 48 hours from now.

What course of action is required to restore Fuel Pool cooling?

- a. Place the Tri-Nuc Underwater Filter in operation in the Fuel Pool to provide supplemental emergency Fuel Pool cooling.
- b. Place loop B of the Residual Heat Removal system in service in the Fuel Pool Cooling mode to provide emergency Fuel Pool cooling.
- c. Establish a feed and bleed of the pool using local Fire hose stations for make-up and pool drains for discharge.
- d. Establish Fuel Pool cooling using loop A of Residual Heat Removal aligned for alternate fuel pool cooling while RBCCW is unavailable.

\*ANSWER

b.

\*REFERENCE

B.2.1-05.H.8

NEW

Memory

\*QNUM 036  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 239002K506  
\*QUESTION

Given the following conditions.

- A Reactor scram and Main Steam Isolation Valve (MSIV) closure from 90% power occurred.
- The Safety Relief Valves (SRVs) are cycling to control Reactor pressure.

Which of the following Primary Containment parameters indicates that one of the SRV tailpipe vacuum breakers has failed OPEN?

- a. Drywell pressure will go up each time the SRV cycles.
- b. Torus pressure will go up each time the SRV cycles.
- c. Drywell Equipment Drain Sump level will increase each time the SRV cycles.
- d. Torus temperature will show rapid localized rises each time the SRV cycles.

\*ANSWER

a.

\*REFERENCE

B.3.3-01.C.7 & B.2.4-01.C.2

INPO BANK 8533

Analysis, Synthesis, or Application

\*QNUM 037  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 241000K302  
\*QUESTION

The plant is operating at 100% power with Reactor pressure controlled by the EPR.

If the EPR pressure set point fails high, then which of the following describes the expected final plant conditions assuming no operator action is taken?

- a. Reactor pressure will increase and Reactor power will increase.
- b. Reactor pressure will decrease and Reactor power will decrease.
- c. Reactor pressure will increase and Reactor power will decrease.
- d. Reactor pressure will decrease and Reactor power will increase.

\*ANSWER

a.

\*REFERENCE

C.4-B.5.9.B Bases

Mod Bank M8107L-048-010

Memory

\*QNUM 038  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 241000K504  
\*QUESTION

The plant is operating at 100% power. During restoration of the Reactor Water Clean-Up (RWCU) system following maintenance activities, an inadvertent Group 3 isolation occurs.

The Control Room Operator is in the process of restoring RWCU to service and has OPENED MO-2398, RWCU OUTBOARD ISOLATION. Valves MO-2397, RWCU INBOARD ISOLATION, and MO-2399, RWCU RETURN ISOLATION, are CLOSED. The operator is in the process of verifying that the RWCU pressure and Reactor pressures are equalized and receives the following information.

- The Reactor Building Operator reports that RWCU pump suction pressure is 1010 psig.
- Normal Reactor pressure indication is unavailable due to I&C work that was in progress. The Lead Control Room Operator reports that the Main Steam Line Pressure Averaging Manifold pressure is 960 psig.

What is the next action the Control Room Operator should take to restore the RWCU system?

- a. RWCU pressure and Reactor pressure are equalized and MO-2397, RWCU INBOARD ISOLATION, should be fully OPENED.
- b. RWCU pressure and Reactor pressure are NOT equalized and MO-2397, RWCU INBOARD ISOLATION, should be throttled OPEN to increase RWCU pressure.
- c. RWCU pressure and Reactor pressure are equalized and MO-2399, RWCU RETURN ISOLATION, should be fully OPENED.
- d. RWCU pressure and Reactor pressure are NOT equalized and MO-2404, RWCU DUMP TO HOTWELL, should be OPENED and CV-2403, DUMP FLOW, throttled OPEN to lower RWCU pressure.

\*ANSWER

a.

\*REFERENCE

B.5.9-01.C.1, C.4-B.4.1.C

NEW

Comprehension



\*QNUM 039  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 245000A209  
\*QUESTION

The plant is operating at 75% power and increasing power to 100% following completion of a refueling outage.

Annunciator 7-A-24, TURB BRG DRN HI TEMP, alarms and the Lead Reactor Operator reports that No. 6 Turbine bearing temperature is 156 deg F and increasing.

Shortly after receiving annunciator 7-A-24, annunciator 7-B-33, TURBINE VIBRATION HIGH, alarms. A Control Room Operator observes that the No. 6 bearing vibration is 13 mils and increasing.

What is the expected plant response, AND what operator action would be taken based on the expected plant response?

- a. Turbine trip at 225 deg F lube oil temperature; enter C.3, SHUTDOWN PROCEDURE.
- b. Turbine trip at 15 mils vibration, enter C.3, SHUTDOWN PROCEDURE.
- c. Turbine trip at 225 deg F lube oil temperature; enter C.4-A, REACTOR SCRAM.
- d. Turbine trip at 15 mils vibration, enter C.4-A, REACTOR SCRAM.

\*ANSWER

d.

\*REFERENCE

C.6-007-B-33, B.6.1-02.4.g, C.6-007-B-25

NEW

Memory

\*QNUM 040  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 259002A105  
\*QUESTION

The plant is operating at 100% power when an inadvertent Reactor scram occurs due to personnel bumping sensitive Reactor Protection Instrumentation sensing lines. The plant responds as designed and conditions are as follows.

- Reactor pressure is 950 psig and lowering.
- Reactor level is 0 inches and rising.
- No. 11 Reactor Feedwater pump is in service.
- The CV-6-13, Low Flow Valve, controller setpoint is at 5 inches and in AUTO.
- The Main Feedwater Regulating valves are CLOSED with their controllers in MANUAL.
- MO-1133, HP FW Line A Block Valve, and MO-1134, HP FW Line B Block Valve are CLOSED.

Without further operator action, the Feedwater system will try to restore Reactor level to...

- a. 5 inches.
- b. 15 inches.
- c. 40 inches.
- d. 48 inches.

\*ANSWER

b.

\*REFERENCE

B.5.7-02.B.5.a, C.4-A,

NEW

Memory

\*QNUM 041  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL B  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 259002A205  
 \*QUESTION

The plant is operating at 100% power when annunciator 5-B-30, FW CONTROL VALVE LOCKED, alarms. No other Control Room annunciators are received. The operator observes the Control Room panel C-05 indications as shown on the following page.

What malfunction is indicated, AND what action should the operator take in response to the malfunction?

- |    |  |   |
|----|--|---|
| a. | A loss of control air pressure has occurred for CV-6-12A.  | Control Reactor level with CV-6-12B from the Control Room MANUAL/AUTO STATION, and with local MANUAL control of CV-6-12A. |
| b. | A partial loss of AC Distribution Panel Y-30 has occurred. | Control Reactor level with CV-6-12B from the Control Room MANUAL/AUTO STATION, and with local MANUAL control of CV-6-12A. |
| c. | A loss of control air pressure has occurred for CV-6-12B.  | Control Reactor level with CV-6-12A from the Control Room MANUAL/AUTO STATION, and with local MANUAL control of CV-6-12B. |
| d. | A partial loss of AC Distribution Panel Y-30 has occurred. | Control Reactor level with CV-6-12A from the Control Room MANUAL/AUTO STATION, and with local MANUAL control of CV-6-12B. |

\*ANSWER

a.

\*REFERENCE

ARP 5-B-40, C.4-B.5.7.A, B.5.7-03.B

NEW

Analysis, Synthesis, or Application

\*QNUM 042  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL R  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 261000A201  
 \*QUESTION

SBGT Train B is to be tested for Post Maintenance Testing by performing procedure B.04.02-05.D.4, MANUALLY INITIATE SBGT B TRAIN. Given the following:

- HS-2988B, SBGT UNIT B (MANUAL/AUTO), has been placed in POSITION 1 (MANUAL).
- Additional actions to start the SBGT train are about to be performed.
- A Reactor scram then occurs due to high Drywell pressure.
- MCC-133A becomes locked out on overcurrent.
- Annunciator 24-A-2A, LOW FLOW 3000 CFM, has been alarming for 15 seconds.

What is the status of SBGT and what action should be taken?

- |    |                      |  |
|----|----------------------|--|
| a. | Low SBGT flow exists | place HS-2983B, V-EF-17B ON/OFF, control switch in ON.             |
| b. | Low SBGT flow exists | place HS-2983A, V-EF-17A ON/OFF, control switch in ON.             |
| c. | No SBGT flow exists  | place HS-2988A, SBGT UNIT A (MANUAL/AUTO), control switch in AUTO. |
| d. | No SBGT flow exists  | place HS-2988B, SBGT UNIT B (MANUAL/AUTO), control switch in AUTO. |

\*ANSWER

d.

\*REFERENCE

B.4.2-01.C.3, B.04.02-05.D.1

New

Analysis, Synthesis, or Application

\*QNUM 043  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 261000K102  
\*QUESTION

Given the following:

- The plant is in a startup following a refueling outage.
- The containment is still de-inerted.
- Drywell pressure is 1.4 psig and has been slowly rising during the startup.

Which of the following describes the action to take for the above stated condition AND why?

- |    |   |   |
|----|---|---|
| a. | Scram the reactor   | Drywell pressure should never rise this high during a startup without a reactor coolant leak. |
| b. | Vent the primary containment using SBT  | Drywell pressure is expected to rise by more than 2 psig during containment heatup.           |
| c. | De-inert the primary containment using Procedure 2140, DE-INERTING PRIMARY CONTAINMENT                          | Re-establish normal Drywell pressure conditions.  |
| d. | Shutdown the reactor using C.3, SHUTDOWN PROCEDURE, as required by C.4-B.4.1.F, LEAK INSIDE PRIMARY CONTAINMENT | Due to abnormally high Drywell pressure.  |

\*ANSWER

b.

\*REFERENCE

B.04.01-05.G.4

New

Analysis, Synthesis, or Application

\*QNUM 044  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 262001 2.2.21  
\*QUESTION

The plant is operating at 99% power. On-line maintenance activities have been in progress during the last two days on Loop A of the Core Spray (CS) system.

You have been directed to review Work Order (WO) 0201354 for the Shift Supervisor Completion review.

Review of the WO identifies the following.

- The Work Requested/Symptoms section of the WO states: "Perform routine meggering of No. 11 CS pump motor."
- The WO contains one step to perform meggering of No. 11 CS pump motor, and the step has been completed.
- The Responsible Supervisor and the workers have authorized release of the WO isolation for isolation tag removal.
- The WO isolated the following CS Loop A components:
  - Breaker 152-505, P-208A (11 Core Spray Pump) 4KV Supply, is REMOVED.
  - Breaker 152-505 NR Fuses are REMOVED.
  - Hand Switch HS-14A-S5A, 11 Core Spray Pump, is in PULL-TO-LOCK.

What action should be taken concerning Post Maintenance Testing for this WO?

- a. Return the WO to the WO preparer for processing of a WO temporary procedure change to include post-maintenance testing of the No. 11 CS pump motor breaker.
- b. Return the WO to the Responsible Supervisor for preparation of post-maintenance testing to include a load test of the breaker by starting No. 11 CS pump.
- c. Return the WO to Quality Control (QC) for insertion of QC inspection points, and operability and post-maintenance testing requirements for the No. 11 CS pump motor.
- d. Return the WO to the Responsible Supervisor for preparation of post-maintenance testing to include protective relay testing of the No. 11 CS pump

motor breaker.

\*ANSWER

b.

\*REFERENCE

OWI-03.02 sect 4.1.4, 4AWI-04.05.05, sect 4.4, B.09.06-05.G.1 Part D

New

\*QNUM 045  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 262001A401  
\*QUESTION

An operator is getting ready to transfer Bus 13 from the 1R to the 2R Transformer, when he observes that the red indicating light for breaker 152-302, NO. 1R RES XFMR SEC ACB, is out.

A check of the local indication shows the red indicating light for breaker 152-302 is also out.

Neither of the bulbs are burned out.

What is this indicative of, and what action should be taken?

- |    |  |  |
|----|--|--|
| a. | Loss of electrical tripping capability from the control room only        | Place 152-302 control switch in PULL-TO-LOCK and trip the breaker with the mechanical trip pushbutton. |
| b. | Loss of electrical tripping capability from the control room and locally | Place 152-302 control switch in PULL-TO-LOCK and trip the breaker with the mechanical trip pushbutton. |
| c. | Loss of electrical tripping capability from the control room only        | Remove all loads from the bus before transferring the bus to the 2R Transformer.                       |
| d. | Loss of electrical tripping capability from the control room and locally | Remove all loads from the bus before transferring the bus to the 2R Transformer.                       |

\*ANSWER

b.

\*REFERENCE

Ops Man B.09.06-05

New

Comprehension

\*QNUM 046  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 264000A405  
\*QUESTION

Given the following:

- No. 11 EDG is paralleled to Bus 15 for the monthly surveillance.
- No. 11 EDG load is being held constant at 2500 KW.
- No. 11 EDG Power Factor is being adjusted to approximately 1.0.

Using the attached drawing (Figure 1, 11 EDG Amperes Limitations), which of the following sets of parameters results in a power factor closest to 1.0 for the No. 11 EDG?

- a. Grid voltage is 4100 volts and A phase amp reading is 370 amps.
- b. Bus 15 voltage is 4125 volts and B phase amp reading is 365 amps.
- c. Grid voltage is 4150 volts and B phase amp reading is 355 amps.
- d. Bus 15 voltage is 4175 volts and A phase amp reading is 340 amps.

\*ANSWER

d.

\*REFERENCE

Procedure 0187-01

New

\*QNUM 047  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 264000K505  
\*QUESTION

Which of the following describes the operational implication of paralleling 11 EDG to the grid as part of the monthly surveillance AND why?

- a. 11 EDG is operable since it is already supplying power to Bus 15 therefore it is meeting its intended safety function.
- b. 11 EDG is inoperable while being barred over because it will not be able to respond within 10 seconds of an ECCS signal.
- c. 11 EDG is inoperable because the output breaker could trip on overspeed if the grid were to fail due to overloading of the diesel.
- d. 11 EDG is operable but will not be able to handle full load on Bus 15 since speed droop has been adjusted to between 50-60%.

\*ANSWER

b.

\*REFERENCE

B.09.08-05.A.3.k

New

Memory

\*QNUM 048  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 271000K401  
\*QUESTION

Which of the following components is designed to reduce hydrogen concentration to < 4%, AND, if hydrogen concentration exceeds 4% as determined by the hydrogen analyzers, what will be the result?

	COMPONENT	RESULT
a.	Recombiner Preheater	CLOSES AO-1085A/B
b.	2 <sup>nd</sup> Stage Steam Jet Air Ejector	CLOSES AO-1085A/B
c.	Recombiner Preheater	TRIPS Off-Gas Compressors
d.	2 <sup>nd</sup> Stage Steam Jet Air Ejector	TRIPS Off-Gas Compressors

\*ANSWER

d.

\*REFERENCE

B.07.02.01-01

NEW

Comprehension

\*QNUM 049  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 272000A309  
\*QUESTION

The plant is currently shutdown with RHR "A" in shutdown cooling.

A plant transient has occurred causing the following annunciators:

- 3-A-49, SBTG ANNUNCIATOR
- 5-A-01, REAC BLDG VENT & F P RAD CH A-HI/LO
- 3-B-55, REACTOR BLD EXH PLENUM HI RAD

Which of the following CLOSED valves would be positive indication that these are valid annunciators?

- a. MO-2397, RWCU INLET INBOARD
- b. MO-2014, RHR DIV 1 LPCI INJECTION INBOARD
- c. CV-3311, TORUS TO CTMT RAD MON OUTBOARD
- d. AO-2541A, DRYWELL FLOOR DRAIN ISOLATION

\*ANSWER

c.

\*REFERENCE

Ops Man C.4-B.04.01.B

NEW

Comprehension

\*QNUM 050  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 272000K205  
\*QUESTION

What is the normal source of power to:

RM-17-452B, REACTOR VENTILATION EXHAUST MONITOR B?

- a. RPS Panel Y-40
- b. RPS Panel Y-50
- c. UPS Panel Y-70
- d. UPS Panel Y-80

\*ANSWER

a.

\*REFERENCE

B.9.12-05.C

NEW

Memory

\*QNUM 051  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 286000K109  
\*QUESTION

Which type of Fire Protection water suppression system protects the Diesel Generator Rooms?

- a. Deluge
- b. Dry Pipe Sprinkler
- c. Wet Pipe Sprinkler
- d. Preaction Sprinkler

\*ANSWER

d.

\*REFERENCE

Ops Man B.08.05-01

New

Memory

\*QNUM 052  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL R  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 288000K106  
 \*QUESTION

A loss of control air to the Reactor Building Heating & Ventilation units has occurred.

In accordance with Ops Man B.8.7-05.04, HEATING AND VENTILATION (H&V), an immediate shutdown of the H&V Units is required.

What condition could shutting down the H&V Units cause, AND what action must be taken?

	CONDITION	ACTION
a.	General area temperatures could exceed 104°F	Enter C.4-A, REACTOR SCRAM.
b.	General area temperatures could exceed 104°F	Enter C.4-F, RAPID POWER REDUCTION.
c.	Main Steam Chase temperatures could exceed 165°F	Enter C.4-A, REACTOR SCRAM.
d.	Main Steam Chase temperatures could exceed 165°F	Enter C.4-F, RAPID POWER REDUCTION.

\*ANSWER

d.

\*REFERENCE

Ops Man C.4-B.08.07.A

NEW

Comprehension

\*QNUM 053  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL S  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 290001 2.4.48  
 \*QUESTION

The plant is operating at 100% power. A plant transient is in progress creating the following conditions.

- 3-B-56, HIGH AREA TEMP STEAM LEAK, has alarmed.
- TR-4926 points 13 through 20 are all reading between 160 deg F and 185 deg F, and rising.
- Isolation of Reactor Water Cleanup has been attempted.
- MO-2397, CLEANUP INLET INBOARD VALVE, has failed to CLOSE.
- MO-2398, CLEANUP INLET OUTBOARD, has failed to CLOSE.

What would be the next action directed by the Control Room Supervisor, AND why would that action be taken?

	ACTION	REASON
a.	Shutdown the Reactor	Reduce the rate of energy production.
b.	Shutdown the Reactor	Ensure equipment necessary for safe shutdown will operate.
c.	Scram the Reactor	Reduce the rate of energy production.
d.	Scram the Reactor	Ensure equipment necessary for safe shutdown will operate.

\*ANSWER

c.

\*REFERENCE

C.5.1-1300

NEW

Comprehension

\*QNUM 054  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL B  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 290001K301  
 \*QUESTION

The plant has been operating at 100% thermal power. A transient occurs resulting in an elevated fission product release. The following conditions exist:

- 3-B-55, REACTOR BLDG EXH PLENUM HI RAD is in ALARM.
- SBT A Train is running.

Given the above conditions, why should V-EF-20 through V-EF-22, REACTOR BUILDING MAIN EXHAUST FANS be verified in the OFF position, and what would be the effect if these fans were not secured?

- |    |  |  |
|----|--|--|
| a. | To prevent the possibility of the Turbine Building DP becoming more negative than the Reactor Building | Radioactivity may bypass the SBT filtration.                             |
| b. | To prevent the possibility of the Turbine Building DP becoming more negative than the Reactor Building | Possible backflow through the SBT train which reduces its effectiveness. |
| c. | To prevent the possibility of the Main Exhaust Plenum Room being at a lower pressure than SCTMT        | Radioactivity may bypass the SBT filtration.                             |
| d. | To prevent the possibility of the Main Exhaust Plenum Room being at a lower pressure than SCTMT        | Possible backflow through the SBT train which reduces its effectiveness. |

\*ANSWER

c.

\*REFERENCE

B.04.02-05.D.2 bases, C.4-B.2.4.A bases

NEW

Comprehension

\*QNUM 055  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 290002 2.2.23  
\*QUESTION

The plant has just started up from an outage. During the outage, maintenance was performed on the Jet Pumps, and a special test has been developed to check the Jet Pumps. The Limiting Condition for Operation (LCO) on Jet Pump operability must be entered and exited repeatedly during the performance of this test.

Which of the following requires tracking the LCO each time it is entered and exited?

- a. Shift Supervisor's Log
- b. Control Room status board
- c. Reactor and Control Room Log
- d. Work Execution Center status board

\*ANSWER

c.

\*REFERENCE

OWI-02.02

NEW

Memory

\*QNUM 056  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 290003 2.3.10  
\*QUESTION

Manual initiation of the EFT High Radiation Mode shall be performed if \_\_\_\_\_ radiation level is greater than or equal to \_\_\_\_\_.

	SPACE	RAD LEVEL
a.	Control Room	1 mrem/hr
b.	EFT Building	1 mrem/hr
c.	Reactor Building	3 mrem/hr
d.	250 VDC Battery Room	3 mrem/hr

\*ANSWER

a.

\*REFERENCE

B.08.13-05.H1

NEW

Memory

\*QNUM 057  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 290003K602  
\*QUESTION

A line break in the Service Water piping has rendered the Service Water system inoperable.

Which of the following Emergency Service Water (ESW) pumps must be started to keep V-EAC-14A, Division 1 Control Room Ventilation Train, operable?

- a. No. 11 ESW Pump
- b. No. 12 ESW Pump
- c. No. 13 ESW Pump
- d. No. 14 ESW Pump

\*ANSWER

c.

\*REFERENCE

P & ID NH-36665, B.08.13-05.A.2.e

NEW

Memory

\*QNUM 058  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.1.4  
\*QUESTION

It is 0400 on a quiet midshift during normal full power operation. The Control Room Supervisor's (CRS's) wife calls to tell him that she has gone into labor and that she must get to the hospital.

- At 0405 the CRS departs as directed by the Shift Manager (SM).
- At 0410 the SM calls the Operations Manager to inform him of the reduction in crew composition.
- At 0420 the SM reaches a relief for the CRS and directs him to come to work.
- At 0615 the CRS relief arrives and joins in on the turnover.
- At 0645 the CRS shift turnover briefing is completed.

Which of the following is correct concerning the operating crew's compliance with the shift manning requirements?

- a. The operating crew has complied fully with shift manning requirements.
- b. The CRS may not leave until the Plant Manager's permission is obtained.
- c. The CRS may not leave until his relief has arrived on site and has been briefed.
- d. The CRS position must be manned by a relief within two hours of the CRS's departure.

\*ANSWER

d.

\*REFERENCE

Tech Spec Section 6.0 & 4 AWI-04.01.01

DAEC 2001 NRC Exam QID #83

Analysis, Synthesis, or Application

\*QNUM 059  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.1.22  
\*QUESTION

Given the following:

- SRMs indicate 300 cps and steady.
- Reactor coolant temperature is < 212°F.
- The RPV head has been removed.
- The reactor cavity is flooded and fuel pool gates are removed.
- Core alterations are in progress.

Which of the following states the Mode of Operation the plant is in AND why?

- a. Refuel because core alterations are in progress.
- b. Refuel because the RPV head has been removed.
- c. Shutdown because reactor coolant temperature is < 212°F.
- d. Shutdown because reactor power is steady in the source range.

\*ANSWER

a.

\*REFERENCE

Tech Spec Section 1.0

New

Memory

\*QNUM 060  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.1.29  
\*QUESTION

A manual throttle valve in a safety related system is to be positioned three turns closed from full open for a test procedure.

The Shift Manager assigns you the job of accompanying the operator who will adjust the throttle valve to assure that the valve is throttled as called for in the test procedure and to sign off the procedure step.

Which of the following are you being asked to perform?

- a. PEER CHECK of the operator doing the valve manipulation.
- b. WITNESS CHECK of the operator doing the valve manipulation.
- c. DOUBLE VERIFICATION of the operator doing the valve manipulation.
- d. INDEPENDENT VERIFICATION of the operator doing the valve manipulation.

\*ANSWER

b.

\*REFERENCE

4 AWI-04.04.02

Clinton 2000 Exam

INPO Bank #19053

Memory

\*QNUM 061  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.1.31  
\*QUESTION

Given that the plant is operating at 100% power, which one of the following RCIC valves is NOT in a normal standby lineup?

- a. MO-2110, RCIC TEST FLOW ISOLATION, indicates CLOSED.
- b. MO-2106, RCIC PUMP DISCHARGE OUTBOARD, indicates OPEN.
- c. CV-2104, RCIC PUMP MINIMUM FLOW VALVE, indicates CLOSED.
- d. MO-2076, RCIC STEAMLINER ISOLATION OUTBOARD, indicates OPEN.

\*ANSWER

b.

\*REFERENCE

B.02.03.03

Clinton 2001 NRC Exam QID #22

Memory

\*QNUM 062  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.1.33  
\*QUESTION

The plant is operating at 100% reactor power with the following conditions:

- Generated power has dropped from 613 MWe to 585 MWe.
- Core plate d/p has dropped.
- Jet Pump Loop 'A' flow indicates 26.5 Mlbm/hr.
- Jet Pump Loop 'B' flow indicates 28.0 Mlbm/hr.
- Jet Pump 1 flow indicates 2.8 Mlbm/hr.
- Jet Pump 6 flow indicates 2.8 Mlbm/hr.
- Jet Pump 11 flow indicates 2.8 Mlbm/hr.
- Jet Pump 16 flow indicates 1.3 Mlbm/hr.

Based on the above indications, what action is required per Tech Specs?

- a. Within 12 hours place the reactor in hot shutdown.
- b. Place the reactor in cold shutdown within 24 hours.
- c. Within 24 hours adjust jet pump flow in the 'A' loop to match the 'B' loop.
- d. Isolate the 'A' recirc loop and adjust the single loop operating setpoints within 24 hours.

\*ANSWER

b.

\*REFERENCE

B.01.04-05.H.3

New

Analysis, Synthesis, or Application

\*QNUM 063  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.2.2  
\*QUESTION

A reactor startup is in progress. Conditions just prior to the startup and currently are listed below:

Beginning of Startup

Currently

- |                                   |                                    |
|-----------------------------------|------------------------------------|
| - SRM 21 at 9 cps                 | SRM 21 at 85 cps                   |
| - SRM 22 at 11 cps                | SRM 22 at 100 cps                  |
| - SRM 23 at 8 cps                 | SRM 23 at 90 cps                   |
| - SRM 24 at 10 cps                | SRM 24 at 95 cps                   |
| - Moderator temperature was 148°F | Moderator temperature is 149 deg F |

The reactor is NOT critical and you still have one Control Rod left to pull to complete the current sequence step.

In order to withdraw this Control Rod to continue the startup, what must you do per C.1, STARTUP PROCEDURE, concerning the method of Control Rod withdrawal?

- Change from continuous rod withdrawal to single notch withdrawal.
- Change from single notch withdrawal to continuous notch withdrawal.
- Use continuous notch withdrawal to notch 24 then single notch withdrawal to notch 48.
- Use single notch withdrawal to notch 24 then continuous notch withdrawal to notch 48.

\*ANSWER

a.

\*REFERENCE

C.1, Startup Procedure

DAEC 2001 NRC Exam QID 92

Analysis, Synthesis, or Application

\*QNUM 064  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.2.11  
\*QUESTION

Which of the following items is considered a temporary modification (jumper/bypass) requiring Form 3034, JUMPER BYPASS FORM, to be filled out?

- a. Tygon hose installed on a hose station to fill a cleaning bucket.
- b. Blocking device installed on a relief valve to prevent inadvertent opening.
- c. Thermal overloads removed from a breaker specified on a work procedure.
- d. Installation of an ECCS Test plug into Panel C-32 for performance of an OC approved procedure.

\*ANSWER

b.

\*REFERENCE

4 AWI-04.04.03

Mod INPO Bank, QID #19160

Memory

\*QNUM 065  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.2.22  
\*QUESTION

The Main Turbine Stop Valve RPS Trip function is designed, in combination with other LSSs, to prevent any anticipated combination of transient conditions that would result in reaching which of the following limits?

- a. The RPV pressure SAFETY LIMIT.
- b. The RPV high pressure scram setpoint.
- c. The fuel cladding integrity Minimum Critical Power Ratio (MCPR) SAFETY LIMIT.
- d. The Average Planar Linear Heat Generation Rate (APLHGR) Power Distribution Limit.

\*ANSWER

c.

\*REFERENCE

Tech Spec Section 2.0

DAEC 1999 RO NRC Exam QID #96

Memory

\*QNUM 066  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.2.27  
\*QUESTION

Which of the following is a responsibility of the Fuel Handling Supervisor during core alterations?

- a. Obtaining permission from the Plant Manager if deviation from a refueling procedure is necessary.
- b. Checking that portable monitoring instruments are available and their operation is understood.
- c. Receiving verbal authorization from the Nuclear Engineer for movement of each fuel assembly both into and out of the core.
- d. Delegating his responsibilities to a Licensed Reactor Operator when he cannot be present on the refuel floor during core alterations.

\*ANSWER

b.

\*REFERENCE

D.2-05

New

Memory

\*QNUM 067  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.2.30  
\*QUESTION

The plant is performing refueling operations. Which of the following activities is NOT a responsibility of the Operators in the Control Room during refueling?

- a. Maintaining direct communications with the Refueling Bridge.
- b. Maintaining the fuel accountability tag boards and computer data file.
- c. Recording each fuel move on the refueling procedure verification checklist.
- d. Monitoring of SRM count rates and notifying supervision of abnormal indications.

\*ANSWER

b.

\*REFERENCE

D.1-05.B.2 and D.1-05.B.5

New

Memory

\*QNUM 068  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.2.32  
\*QUESTION

The following conditions exist.

- The plant is in REFUEL with core shuffle in progress.
- Two operable SRMs; located in quadrants in and adjacent to fuel being moved.
- Quadrant where fuel moves are in progress contains 4 fuel assemblies.
- Adjacent quadrant contains 5 fuel assemblies.
- SRM in quadrant where fuel is being moved indicates 2 cps.
- SRM in adjacent quadrant indicates 10 cps.

Which of the following describes the action(s) to be taken for the above stated conditions AND why?

- a. Immediately suspend fuel moves and make event notifications. With <3 cps assurance of neutron flux monitoring is no longer provided to prevent inadvertent criticality.
- b. Immediately notify the Nuclear Engineer and continue fuel moves with caution. It is expected that SRM indication in a quadrant with 2 or fewer fuel assemblies will be <2 cps.
- c. Immediately halt fuel handling operations and make event notifications to required personnel. The refueling interlocks should have prevented fuel moves with a SRM <3 cps to prevent inadvertent criticality.
- d. Immediately notify the Superintendent Nuclear Engineer and perform upcoming fuel moves with caution. With <3 cps assurance of neutron flux monitoring may no longer be provided to prevent inadvertent criticality.

\*ANSWER

a.

\*REFERENCE

Tech Spec Bases 3.10.B & D.2-05

New

Memory

\*QNUM 069  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.3.1  
\*QUESTION

An area of the RADWASTE Building is set aside to store some highly radioactive material. It is determined that the entrance into this area could result in personnel receiving 7 Rem in one hour 30 centimeters from the radiation source.

Which of the following is the correct posting for this area?

- a. High Radiation Area
- b. Very High Radiation Area
- c. Locked High Radiation Area
- d. Double Locked High Radiation Area

\*ANSWER

c.

\*REFERENCE

DEF-L

DAEC '99 RO NRC Exam QID #95, INPO Bank QID 8853

Memory

\*QNUM 070  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.3.2  
\*QUESTION

You have been directed to independently verify the closed position of a system drain valve. To complete the task you will have to spend approximately 10 minutes in the general area of the valve. The dose rate in the general area of the valve is 1 Rem/hr.

Which of the following is the correct approach to fulfilling this task?

- a. Perform the independent verification since total individual dose is expected to be less than the annual limit.
- b. Request the Control Room Supervisor to waive the independent verification since a significant radiation hazard exists.
- c. Request the Control Room Supervisor to review previous position checklists for the system drain valve to ensure that the valve is normally closed.
- d. Perform the independent verification after installing shielding to reduce your dose to less than 5 mrem for verifying valve position.

\*ANSWER

b.

\*REFERENCE

4 AWI-04.04.02

INPO Bank QID

#19137

Memory

\*QNUM 071  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.3.7  
\*QUESTION

In accordance with 4 AWI-08.04.05, RADIOLOGICAL WORK CONTROL, which of the following jobs will require its own RWP Request to be filled out specifically for the job?

- a. Changing oil in the Fire Diesel Pump.
- b. Adding water to the RBCCW Surge tank.
- c. Cleaning out the Floor Drain Collector Tank.
- d. Changing out of the Nitrogen bottles on the Alternate N2 System.

\*ANSWER

c.

\*REFERENCE  
4 AWI-08.04.05  
New  
Memory

\*QNUM 072  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.3.9  
\*QUESTION

The plant is operating at 5% power with the following conditions.

- C.3, SHUTDOWN PROCEDURE, is in progress.
- The primary containment is being de-inerted.
- Instrument failure results in PCIS Group 2 isolation.
- 2 hours later the failure is corrected and Group 2 isolation restored.
- It is desired to restart the containment purge.

Which of the following identify the requirement(s) to restart the containment purge?

- a. Re-verify Containment Integrity is established per LCO 3.7.A.2.
- b. Perform ASME Section XI tests on containment purge isolation valves.
- c. Notify I&C to re-calibrate the HAYS Oxygen Analyzer in the high range.
- d. Verify ODCM-03.01, GASEOUS EFFLUENTS, requirements are met prior to restart of purge.

\*ANSWER

d.

\*REFERENCE

Procedure 2140, B.04.01-05.A.2.e, ODCM-03.01

INPO Bank QID

#13974

Memory

\*QNUM 073  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.3.10  
\*QUESTION

Step 1 of procedure 1279-05, HOT AREA INSPECTIONS, requires reducing the hydrogen injection rate per Ops Man Section B.02.06-05, HYDROGEN WATER CHEMISTRY SYSTEM.

Which of the following describes the reason for performing this step?

- a. Hydrogen injection rate is reduced as required by procedure before reducing reactor power and thus feed flow.
- b. Hydrogen injection is reduced to minimize the explosion hazard during inspection in areas of suspected steam leaks.
- c. Reducing hydrogen injection will reduce dose rates in the Steam Chase, Main Condenser Room and Turbine Operating Floor.
- d. Reducing hydrogen injection will help ensure suitable breathing environment exists in confined spaces, such as the Steam Chase, prior to entry.

\*ANSWER

c.

\*REFERENCE

B.02.06-05 & Procedure 1279-05

New

Memory

\*QNUM 074  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.4.8  
\*QUESTION

The following conditions exist.

- The plant was operating at 100% power when a scram occurred due to a loss of 2RS.
- The following abnormal procedures are being performed:
  - C.4-A, REACTOR SCRAM
  - C.4-B.1.4.B, TRIP OF TWO RECIRCULATION PUMPS
  - Two minutes later suppression pool temperature is 91 deg F and rising.

Which of the following actions are required?

- a. Concurrently enter C.5-1200, PRIMARY CONTAINMENT CONTROL.
- b. Continue C.4-A, REACTOR SCRAM and monitor suppression pool temperature
- c. Exit both abnormal procedures and enter C.5-1200, PRIMARY CONTAINMENT CONTROL.
- d. Exit C.4-A, REACTOR SCRAM, and enter C.5-1200, PRIMARY CONTAINMENT CONTROL.

\*ANSWER

a.

\*REFERENCE

C.5.1-1000, OWI-01.04

INPO Bank QID

#19293

Memory

\*QNUM 075  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.4.17

\*QUESTION

Per the Emergency Operating Procedures, which of the following conditions establishes "Adequate Core Cooling"?

- a. Reactor level at 2/3 core height with Core Spray injecting into the Reactor vessel.
- b. Reactor level at 2/3 core height with LPCI injecting into the Reactor vessel.
- c. Reactor level below minus 126 (-126) inches with HPCI injecting into the Reactor vessel.
- d. Reactor level below minus 126 (-126) inches with alternate injection sources injecting into the Reactor vessel.

\*ANSWER

a.

\*REFERENCE

C.5.1-1000

NEW

Memory

\*QNUM 075.1  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL S  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 2.4.17  
 \*QUESTION

Given the following:

- Reactor scram has occurred from a LOCA coincident with a Station Blackout.
- Control Rods have fully inserted with the exception that 1 Control Rod is at position 30.
- All high pressure injection sources have failed to inject and are not lined up for injection.
- Reactor pressure is 750 psig and decreasing.
- Reactor level is minus 95 (-95) inches and decreasing.
- Torus level is 2.0 inches.

Which of the following identifies the RPV water level that will require opening SRVs, AND what is the basis for that action?

	RPV LEVEL	BASIS
a.	Minimum Steam Cooling RPV Water Level (minus 164 (-164) inches)	to minimize break flow and reduce RPV pressure for low pressure injection sources.
b.	Minimum Steam Cooling RPV Water Level (minus 149 (-149) inches)	to minimize break flow and reduce RPV pressure for low pressure injection sources.
c.	Minimum Zero-Injection RPV Water Level (minus 164 (-164) inches)	to draw excess steam up through the fuel assemblies quenching the fuel and reducing cladding temperature.
d.	Minimum Zero-Injection RPV Water Level (minus 149 (-149) inches)	to draw excess steam up through the fuel assemblies quenching the fuel and reducing cladding temperature.

\*ANSWER

c.

\*REFERENCE

C.5.1-1100, TS 3.3.A.1, C.5.1-2003

New  
Analysis, Synthesis, or Application

\*QNUM 076  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.4.38  
\*QUESTION

Which of the following is NOT a responsibility of the acting Emergency Director during an emergency?

- a. The final decision to issue potassium-iodide to workers.
- b. Declaration and notification of emergency classifications.
- c. The authorization of employees to receive radiation exposures greater than 10CFR20 limits.
- d. Implementing actions recommended by the Severe Accident Management Guidelines Group.

\*ANSWER

d.

\*REFERENCE

A.2-001

INPO Bank QID

#6408

Memory

\*QNUM 077  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.4.50  
\*QUESTION

Given the following conditions:

- The plant is operating at 100% power.
- A failure of the Steam Pressure Control System occurs causing Turbine Control Valves to fully open.
- A large increase in Main Generator MWe is noticed.
- Annunciator 5-B-16, REACTOR PRESS HI/LO, is alarming.

Which of the following actions should be taken for the conditions stated above?

- a. Manually scram the reactor.
- b. Commence a normal reactor shutdown.
- c. Push the EPR STOP pushbutton on the C-07 panel.
- d. Restore reactor pressure using the Pressure Regulator Override (PRO).

\*ANSWER

a.

\*REFERENCE

C.4-B.05.09.A

New

Analysis, Synthesis, or Application

\*QNUM 078  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL B  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 295001K306  
 \*QUESTION

To perform repairs to the No. 11 Recirc MG Set collector ring, the plant has entered single loop operations with No. 12 Recirculation pump in operation.

The operator is directed by procedure B.01.04-05.E.3, SINGLE LOOP OPERATION, to verify idle Recirculation loop flow by increasing the running Recirculation pump's speed.

What indication confirms idle Recirculation loop reverse flow AND why?

	INDICATION	REASON
a.	A DECREASE in Total Core Flow	The Total Core Flow summing logic can differentiate loop flow direction based on the status of the Recirc MG Set field breaker position.
b.	A DECREASE in idle loop Jet Pump Flow	The core flow measurement instrumentation cannot differentiate between reverse flow and forward flow.
c.	An INCREASE in Total Core Flow	The Total Core Flow summing logic can differentiate loop flow direction based on the status of the Recirc MG Set Field breaker position.
d.	An INCREASE in idle loop Jet Pump Flow	The core flow measurement instrumentation cannot differentiate between reverse flow and forward flow.

\*ANSWER

d.

\*REFERENCE

B.01.04-05.E.3, B.01.04-05.A.3.b.2)g)

NEW

Memory

\*QNUM 079  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL B  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 295002A101  
 \*QUESTION

What temperature should the Condensate pump suction be maintained below in the summer,  
 AND what would be the concern if you are unable to maintain it below that temperature?

	TEMP	CONCERN
a.	<100 deg F	degraded performance of the Steam Jet Air Ejectors, which could lead to loss of Main Condenser vacuum.
b.	<100 deg F	reduction in condensate pump suction pressure which effects Feedwater pump suction pressure and possible loss of Reactor water level.
c.	<125 deg F	degraded performance of the Steam Jet Air Ejectors, which could lead to loss of Main Condenser vacuum.
d.	<125 deg F	reduction in condensate pump suction pressure which effects Feedwater pump suction pressure and possible loss of Reactor water level.

\*ANSWER

c.

\*REFERENCE

B.06.03-05, C.4-B.06.03.A

NEW

Comprehension

\*QNUM 080  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295003A101  
\*QUESTION

Upon a loss of Bus 11, Abnormal Procedure C.4-B.09.06.A, LOSS OF BUS 11 OR BUS 12, directs the operator to place the control switch for the tripped Feedwater pump in the STOP position.

Why is this action directed?

- a. Resets the low Feedwater flow automatic runback logic for the Reactor Recirculation pumps.
- b. Enables the auto start logic for the Feedwater pump Aux Oil Pump to start on a restoration of Bus 11.
- c. Allows troubleshooting Bus 11 to determine if the fault is in the Feedwater pump breaker or elsewhere.
- d. Prevents an uncontrolled start of the tripped Feedwater pump if power should be restored to Bus 11.

\*ANSWER

d.

\*REFERENCE

C.4-B.09.06.A

NEW

Memory

\*QNUM 081  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295003K202  
\*QUESTION

The plant is in normal full power operation with no LCOs, when massive grid instabilities result in a loss of offsite power for the foreseeable future. The plant responds as designed with both Emergency Diesel Generators (EDGs) running and loaded.

Diesel fuel oil delivery is uncertain due to infrastructure problems.

Assume the following in your answer:

- The Diesel Oil Storage Tank, T-44, level is 40, 500 gallons.
- The Diesel Oil Receiving Tank, T-83, level is at 9, 000 gallons.
- The Heating Boiler Oil Storage Tank, T-84, level is 19, 500 gallons.
- Power is available for necessary fuel oil transfer equipment.

Select the answer that CORRECTLY describes how long the EDGs will be able to operate FULLY LOADED, if no more fuel can be delivered.

- a. 1 EDG for 7 days. This is at the design fuel consumption rate for the Diesels and T-44 only; the fuel in T-84 is normally too low quality for transfer to T-44.
- b. 2 EDGs for 7 days. This is at the design fuel consumption rate for the Diesels and T-44 only; the fuel in T-84 is normally too low quality for transfer to T-44.
- c. 2 EDGs for 7 days. This includes an additional 28, 500 gallons of Diesel Oil from T-83 and T-84 with fuel being used at the design fuel consumption rate for the Diesels and T-44.
- d. 2 EDGs for 14 days. This includes an additional 28, 500 gallons of Diesel Oil from T-83 and T-84 with fuel being used at the design fuel consumption rate for the Diesels and T-44.

\*ANSWER

a.

\*REFERENCE

TS 3.9.B.3.c, B.8.11-05.A.3.a, B.8.11-01.B.1, B.8.11-01.C.1

MOD INPO QID 649

Comprehension

\*QNUM 082  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295006K101  
\*QUESTION

The following conditions exist.

- A Reactor scram has occurred.
- A Group 3 Isolation has been received due to low-low Reactor water level.
- The scram has not been reset.

What is the concern with these specific conditions?

- a. The Group 3 isolation coupled with the shrink from the cold water addition could make RPV level control difficult.
- b. Cold water injected into the Recirc loops could cause thermal clamping of a Recirc pump discharge valve preventing it from being completely closed.
- c. A failure to reset the scram will prevent the draining of the Scram Discharge Volume, which could limit the ability to rescram the Reactor if needed.
- d. A low temperature over pressurization of the vessel could occur due to loss of decay heat removal capability and injection of cold CRD flow.

\*ANSWER

d.

\*REFERENCE

C.4-A

NEW

Comprehension

\*QNUM 083  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295006K303  
\*QUESTION

Assuming the plant responds as designed, which of the following describes the immediate Reactor pressure response to a manual scram from rated conditions AND the reason?

Indicated Reactor pressure will...

- a. raise due to delay in Bypass Valves opening.
- b. raise due to rapid closure of the Turbine Control Valves.
- c. lower due to Recirc pump runback to 30%.
- d. lower due to collapsing voids in the core region.

\*ANSWER

d.

\*REFERENCE

C.4-A

NEW

Comprehension

\*QNUM 084  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL S  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 295008 2.1.6  
 \*QUESTION

A Reactor scram has occurred and an ATWS condition exists. The following are the current plant conditions.

- Reactor power is 7%.
- A Group 1 Isolation has occurred.
- Torus temperature is 105 deg F and slowly increasing.
- Drywell pressure is 0.8 psig and slowly increasing.
- Reactor water level is minus 51 (-51) inches.
- Standby Liquid Control has been started.
- SRVs are controlling Reactor pressure.

What would be the level band that you would direct the operator to maintain, AND what is the basis for the bands upper setpoint?

	LEVEL BAND	BASIS
a.	Minus 126 (-126) to 48 inches	Suppresses Reactor power to the lowest practical level while still ensuring that the core is adequately cooled.
b.	Minus 126 (-126) to 48 inches	Preserves the availability of Feedwater, HPCI, and RCIC and avoids moisture carryover and loss of boron into Main Steam lines.
c.	Minus 149 (-149) to minus 51 (-51) inches	Suppresses Reactor power to the lowest practical level while still ensuring that the core is adequately cooled.
d.	Minus 149 (-149) to minus 51 (-51) inches	Preserves the availability of Feedwater, HPCI, and RCIC and avoids moisture carryover and loss of boron into Main Steam lines.

\*ANSWER

b.

\*REFERENCE

C.5.1-2007

NEW

Comprehension

\*QNUM 085  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295008K103  
\*QUESTION

The plant is in steady state operation at 100% power. A Feedwater flow transmitter slowly starts failing low.

How would reactor water level respond and what would the Reactor Level Control (RLC) system do?

Water level would...

- a. decrease until there is a large enough mismatch in feed flow signals that causes the RLC system to shift from three-element to single-element and stabilize level.
- b. decrease until level reaches 30 inches at which time the Master Level Controller clamps the signal at 30 inches and stabilizes level.
- c. increase until there is a large enough mismatch in feed flow signals that causes the RLC system to shift from three-element to single-element and stabilize level.
- d. increase until level reaches 40 inches at which time the Master Level Controller clamps the signal at 40 inches and stabilizes level.

\*ANSWER

c.

\*REFERENCE

B.05.07-02

NEW

Comprehension

\*QNUM 086  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295010 2.4.8  
\*QUESTION

The plant has experienced a transient causing the following conditions in the Primary Containment.

- Drywell pressure is 2.5 psig.
- Reactor pressure is 830 psig

Given the above conditions, C.5-1100, RPV LEVEL CONTROL, directs that before RPV pressure drops to 320 psig, prevent Core Spray and LPCI injection not needed for core cooling per C.5-3205.

What is the basis for this action?

- a. Reduces the thermal stress on the Reactor vessel through cold water injection.
- b. If not needed for core cooling, injection is prevented to facilitate RPV pressure control.
- c. If not needed for core cooling, injection is prevented to facilitate RPV water level control.
- d. Minimizes the reduction in NPSH of the ECCS pumps needed for core cooling due to Torus water level decrease.

\*ANSWER

c.

\*REFERENCE

C.5.1-1100

NEW

Memory

\*QNUM 087  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295012K202  
\*QUESTION

The Reactor was operating at 100% power when a transient occurred causing a Main Turbine trip and Reactor scram. In accordance with C.4-A, REACTOR SCRAM, Part B, Step 8 the operator places the POST SCRAM switch on the C-25 Panel to ON.

Which of the following describes the reason for performing this step?

- a. This provides maximum cooling to the general areas of the Primary Containment since these areas become very hot post scram.
- b. This provides maximum cooling to the Primary Containment CRD under vessel area since this area becomes very hot post scram.
- c. This causes the Drywell coolers to receive maximum cooling flow from RBCCW by fully opening flow control valves due to extra heat loads post scram.
- d. This causes Reactor Recirc pumps to receive maximum cooling flow from RBCCW by fully opening flow control valves due to extra heat loads post scram.

\*ANSWER

b.

\*REFERENCE

B.8.16-01

NEW

Memory

\*QNUM 088  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL S  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 295013  
 \*QUESTION

In response to a leaking Safety Relief Valve (SRV) a plant shutdown has been initiated and all available Torus cooling has been placed in service. Due to high river water temperatures, the Torus Temperature has continued to increase and is currently 92 deg F.

The Reactor is currently holding at 75% power while engineering evaluates the improved trend in SRV discharge line temperatures, with SRV discharge line temperature at 210 deg F and steady.

What action should be taken to maintain compliance with plant Technical Specifications, AND what is the basis for this action?

	ACTION	BASIS
a.	Terminate the plant shutdown and monitor Torus temperature every five minutes	Excessive steam condensing loads are avoided for Torus temperatures less than 160 deg F.
b.	Continue with the plant shutdown	The Torus temperature is greater than the initial conditions assumed in the LOCA analysis for confirming adequate ECCS pump net positive suction head.
c.	Terminate the plant shutdown and monitor Torus temperature every five minutes	Ensure Torus temperature is less than the initial conditions assumed in the LOCA analysis for confirming adequate ECCS pump net positive suction head.
d.	Continue with the plant shutdown	Excessive steam condensing loads may occur if a spurious lift of the leaking Safety Relief Valve were to occur.

\*ANSWER  
 b.

\*REFERENCE

TS 3.7.A.1.a, TS 3.7.A.1.b, and TS bases page 176,

NEW

Comprehension

\*QNUM 089  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295013K201  
\*QUESTION

Whenever Reactor Core Isolation Cooling (RCIC) is to be operated for surveillance testing, Torus cooling is required to be in service as a prerequisite to starting RCIC.

Ensuring that Torus cooling is in service before operating RCIC...

- a. assures that the bulk water temperature in the Torus does not exceed Tech Spec limits.
- b. allows the maximum average suppression pool water temperature limit to be increased to 105 deg F.
- c. allows adequate thermal mixing of the water in the suppression pool to limit stress on the Torus shell due to differential thermal expansion.
- d. assures that heat added to the suppression pool does not increase Torus air space pressure to the point where the Torus to Drywell vacuum breakers cycle.

\*ANSWER

a.

\*REFERENCE

Test 0255-08-IA-1

INPO Bank QID 8883

Memory

\*QNUM 091  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295014K101  
\*QUESTION

The Chernobyl Unit 4 event resulted in severe core damage with extensive off-site radioactive releases. A cause of this event was that the Reactor was operated in an unanalyzed configuration, which resulted in a prompt criticality excursion.

Which of the following describes mechanisms that are in place to prevent a Chernobyl like prompt criticality event from occurring at the Monticello Nuclear Generating Plant?

- a. Detailed safety reviews are required for tests or experiments; and infrequent tests and evolutions require procedure validation and review, dedicated management oversight, pre-job briefing, and specific guidance for when and how to abort the test.
- b. The Anticipated Transient Without Scram (ATWS) and Standby Liquid Control systems are designed to mitigate the consequences of a failure of the primary Reactor shutdown mechanisms.
- c. Symptom based emergency procedures, installed post-accident monitoring instrumentation, control room panel human factor design, and emergency response facilities and staffing are required by the Monticello operating license.
- d. The Reactor Protection System, in conjunction with the Primary Containment Isolation systems, is designed to ensure radioactive releases do not exceed the guidelines of 10 CFR Part 100.

\*ANSWER

a.

\*REFERENCE

Lesson plan M-8108L-031 section III.C, 4AWI-02.03.03, sect 4.14, 4AWI-05.06.02, sect 2.0 & 4.6

Mod ILT Bank QID M-8108L-036-006

Comprehension

\*QNUM 092  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL B  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 295015K301  
 \*QUESTION

A scram signal has been received, but not all the rods have inserted. Reactor power is 15%. C.5-2007, FAILURE TO SCRAM, calls for inserting Control Rods per C.5-3101, ALTERNATE ROD INSERTION.

Which of the parts in C.5-3101 require you to bypass the Rod Worth Minimizer (RWM), AND why must it be bypassed?

	BYPASS	REASON
a.	De-energize Scram Logic	Rod positions may not match rod sequence in the RWM.
b.	Increase Cooling Water DP and use RMCS	Rod positions may not match rod sequence in the RWM.
c.	De-energize Scram Logic	Position indication from the Rod Position Information System is lost during a scram.
d.	Increase Cooling Water DP and use RMCS	Position indication from the Rod Position Information System is lost during a scram.

\*ANSWER

b.

\*REFERENCE

C.5-3101

Clinton 2001 NRC Exam Modified

Comprehension

\*QNUM 093  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295017K102  
\*QUESTION

A plant transient has occurred which has resulted in fuel element failure. Drywell pressure has increased to the point that Primary Containment venting is required.

Which of the following methods of venting would be expected to have the highest radioactive release to the public?

- a. Hard Pipe Vent
- b. 2 inch line from Torus.
- c. 2 inch line from Drywell.
- d. 18 inch line from Drywell.

\*ANSWER

a.

\*REFERENCE

C.5-3505

NEW

Comprehension

\*QNUM 094  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL B  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 295017K301  
 \*QUESTION

A fuel failure is suspected with the plant operating at 100% power. The following conditions exist:

- Stack Gas Rad Monitors A, and B indicate 105,000 mc/sec
- Reactor Building Ventilation (RBV) Exh Plenum Rad Monitors A, and B indicate 23 mr/hr

What is the expected plant response and the reason?

	PLANT RESPONSE	REASON
a.	RBV isolation with Standby Gas Treatment System initiation	due to Stack Gas Rad Monitor signals.
b.	Off-Gas Line and Compressed Gas Storage Line to Stack isolates	due to the RBV Exh Plenum Rad Monitor signals.
c.	RBV isolation with Standby Gas Treatment System initiation	due to the RBV Exh Plenum Rad Monitor signals.
d.	Off-Gas Line and Compressed Gas Storage Line to Stack isolates	due to Stack Gas Rad Monitor signals.

\*ANSWER  
 d.  
 \*REFERENCE  
 B.05.11-01  
 NEW  
 Memory

\*QNUM 095  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL S  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 295018A201  
 \*QUESTION

The plant was operating at 100% power when a Loss of Off-Site power occurred. The current conditions are:

- The No. 12 Standby Diesel Generator started and tied onto Bus 16.
- The No. 11 Standby Diesel Generator started but failed to tie onto Bus 15.

Alarms received associated with the No. 11 Emergency Diesel Generator start included:

- 93-A-19, RAW WATER
- 93-A-13, HOT ENGINE
- 8-B-30, DIESEL ENG TROUBLE
- 8-B-19, ESW PUMP 11 LO DSCH PRESS

1) What is the cause of the above alarms, AND 2) given the current plant conditions, is the objective met for an adequate supply of power for operation of engineered safeguards equipment per the Technical Specification Bases?

	CAUSE	ADEQUATE POWER?
a.	Loss of power to ESW pump 11 only	No
b.	Loss of power to ESW Pump 11 and SW Pump 11	No
c.	Loss of power to ESW pump 11 only	Yes
d.	Loss of power to ESW Pump 11 and SW Pump 11	Yes

\*ANSWER

d.

\*REFERENCE

NF-36298-1, Tech Spec Bases 3.9

NEW

Comprehension

\*QNUM 096  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL S  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 295021A205  
 \*QUESTION

The Reactor is currently in Cold Shutdown with the Reactor Vessel head still tensioned.

Normal shutdown cooling has been lost. Other means of shutdown cooling have been unsuccessful and it is decided to establish a cooling flow path through an SRV to the Torus.

This procedure requires the monitoring of the reactor vessel metal temperatures.

What is the minimum Technical Specification temperature for the Reactor Vessel metal temperatures, AND what is this based upon?

	TEMPERATURE	BASIS
a.	70°F	Shell to Flange DT (at greatest stress)
b.	70°F	Nil Ductility Temperature + 60°F
c.	78°F	Shell to Flange DT (at greatest stress)
d.	78°F	Nil Ductility Temperature + 60°F

\*ANSWER

b.

\*REFERENCE

Tech Spec Bases 3.6/4.6

NEW

Comprehension

\*QNUM 096.1  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295021K301  
\*QUESTION

Following a loss of normal shutdown cooling the operator is directed to monitor and control RPV water level from 55 inches to 80 inches.

Maintaining the Reactor water level at a high level provides...

- a. the required net positive suction head for restarting the RHR pump.
- b. an adequate margin to the low water level shutdown cooling isolation setpoint.
- c. a large volume of relatively cool water to control the Reactor temperature increase.
- d. an adequate margin to establish a natural circulation path through the Reactor core.

\*ANSWER

d.

\*REFERENCE

C.4-B.3.4.A

LaSalle 1995 NRC Exam

Memory

\*QNUM 097  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295022K202  
\*QUESTION

An earthquake has taken place resulting in a Loss of Coolant Accident (LOCA). Current conditions are:

- Reactor water level is minus 180 (-180) inches and decreasing.
- Containment High Range Radiation Monitors are beginning to come on-scale.
- Annunciator 5-B-17, CHARGING WATER LOW PRESSURE, is in alarm.
- All off-site power has been lost.

Concerning the CRD system, what action needs to be taken?

- a. Start a Condensate Pump.
- b. Start a Condensate Service Pump.
- c. Close the selected CRD Flow Control Valve.
- d. Close CRD-10-1 and CRD-10-2, 11 and 12 CRD Post Filter Inlets.

\*ANSWER

d.

\*REFERENCE

C.4-B.01.03.A

NEW

Analysis, Synthesis, or Application

\*QNUM 098  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL S  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 2.2.22  
 \*QUESTION

In accordance with the refueling Limiting Conditions for Operations:

More than one control rod may be withdrawn from the reactor core during outages provided that, except for momentary switching to the Startup mode for interlock testing, the Reactor mode switch shall be locked in the Refuel position.

Which of the following states how more than one Control Rod may be removed from the core, AND what will prevent the loading of fuel into the core once the control rods are removed?

	BYPASS	PREVENTION
a.	Refueling interlock from the Control Rod is bypassed.	Only administrative controls are in place to prevent loading fuel.
b.	Rod Worth Minimizer is bypassed.	Interlock from other Control Rod prevents moving the bridge over the core with fuel on the hoist.
c.	Refueling interlock from the Control Rod is bypassed.	Interlock from other Control Rod prevents moving the bridge over the core with fuel on the hoist.
d.	Rod Worth Minimizer is bypassed.	Only administrative controls are in place to prevent loading fuel.

\*ANSWER

a.

\*REFERENCE

Tech Spec 3.10 and Bases

NEW

Comprehension

\*QNUM 099  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295023A102  
\*QUESTION

The plant is shutdown for a refueling outage with the Reactor Cavity flooded.

Failure of the RPV-to-Drywell Refueling Cavity Bellows could first be identified by which of the following indications?

	Fuel Pool Cooling Skimmer Surge Tank Level	Drywell Floor Drain Sump Level
a.	Lowering	Rising
b.	Lowering	Lowering
c.	Rising	Rising
d.	Rising	Lowering

\*ANSWER

a.

\*REFERENCE

B.02.01-05.H.7

\*QNUM 100  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295024A202  
\*QUESTION

A major plant transient has occurred causing the following plant conditions.

- Drywell pressure is 13 psig and rising slowly.
- Drywell temperature is 270 deg F and rising slowly.
- Torus water level is 2.7 feet.

Based on the information above, which of the following would be the next action to take?

- a. Initiate Torus Cooling.
- b. Initiate a Blowdown.
- c. Initiate Drywell Sprays.
- d. Initiate Primary Containment Vent.

\*ANSWER

c.

\*REFERENCE

C.5-1200

NEW

Analysis, Synthesis, or Application

\*QNUM 100.1  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL S  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 295024A202  
 \*QUESTION

A major plant transient has occurred causing the following plant conditions:

- Drywell pressure is 13 psig and rising slowly.
- Drywell temperature is 270 deg F and rising slowly.
- Torus water level is 2.7 feet.

Based on the information above, which of the following would be the next action to take, AND what is the basis for taking this action?

	ACTION	BASIS
a.	Initiate Drywell Sprays	to prevent "chugging".
b.	Initiate Primary Containment Vent	to prevent "chugging".
c.	Initiate Drywell Sprays	to decrease the percentage of non-condensibles in the Drywell.
d.	Initiate Primary Containment Vent	to decrease the percentage of non-condensibles in the Drywell.

\*ANSWER

a.

\*REFERENCE

C.5-1200

NEW

Analysis, Synthesis, or Application

\*QNUM 101  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295024K101  
\*QUESTION

The plant transient has occurred resulting in the following conditions.

- Drywell pressure is 57 psig and rising.
- Loss of all decay heat removal capability (beyond the design basis) of the plant.
- Torus water level is 11.5 feet.

Which system would be used to prevent Primary Containment over pressurization under the above listed conditions?

- a. Hard Pipe Vent
- b. Combustible Gas Control System
- c. Standby Gas Treatment from Torus
- d. Standby Gas Treatment from Drywell

\*ANSWER

a.

\*REFERENCE

B.04.01-02

NEW

Comprehension

\*QNUM 102  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295025A202  
\*QUESTION

Which of the following is NOT a valid description of the bases for the RPV high pressure scram setpoint?

- a. Assures that RCS pressure does not exceed the range of the fuel cladding integrity safety limit.
- b. Provides a backup to the APRM neutron flux scram for main steam line isolation type transients.
- c. Works in conjunction with the TCV fast closure and TSV closure scrams and the SRVs to ensure the RCS pressure safety limit is not exceeded.
- d. Calculated such that with the design base pressure transient, RCS pressure does not exceed 102% of maximum normal operating pressure.

\*ANSWER

d.

\*REFERENCE

Tech Spec 2.4 Bases

New

Memory

\*QNUM 103  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295025K104  
\*QUESTION

The plant had been operating on a 340 day run when a reactor scram occurred. 15 minutes after the scram plant conditions are:

- A Group 1 isolation has occurred and has not been reset.
- 6 Control Rods are at position 04, and 3 Control Rods are at position 02
- Reactor power is 2%.
- RCIC tripped on overspeed and cannot be restarted.
- HPCI is out of service.
- Reactor water is 34 inches and has remained steady.

Why is power still at 2% AND, assuming no operator action, what is the status of the Safety Relief Valves (SRVs)?

- a. Multiple rods still out, SRVs controlling pressure in Low Low Set mode.
- b. Decay heat generation, SRVs controlling pressure in Low Low Set mode.
- c. Multiple rods still out, SRVs controlling pressure in the self action mode.
- d. Decay heat generation, SRVs controlling pressure in the self action mode.

\*ANSWER

b.

\*REFERENCE

C.4-A, M-8107L-025

NEW

Comprehension

\*QNUM 104  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295026 2.1.10  
\*QUESTION

In accordance with plant Technical Specifications:

If the Torus water temperature exceeds \_\_\_\_\_, then the Reactor shall be \_\_\_\_\_.

- a. 100°F immediately scrammed
- b. 100°F in cold shutdown in 24 hours
- c. 110°F immediately scrammed
- d. 110°F in cold shutdown in 24 hours

\*ANSWER

c.

\*REFERENCE

Tech Spec 3.7.A.1.c

NEW

Memory

\*QNUM 105  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295026A103  
\*QUESTION

A small break LOCA has occurred and the operators are taking actions to control plant parameters.

- HPCI is injecting for RPV level control.
- Drywell pressure is 4 psig and lowering.
- Torus pressure is 3 psig and lowering.
- Loop A and B of RHR are in Torus Spray.

The operator reports that Torus temperature 85 deg F and increasing, when annunciator 5-B-52, TORUS WATER HI TEMP SPOTMOS TROUBLE, alarms. The operator then reports that that the observed SPOTMOS indication reads "ERROR 49."

For the conditions given above the operators should verify Torus temperature using . . .

- a. temperature recorder TR-23-115 on Control Room back panel C-21.
- b. steam tables and converting Torus pressure to bulk Torus temperature.
- c. the other division of SPOTMOS indication on Control Room Panel C-03.
- d. the SPOTMOS averaging unit LED display on Control Room back panel C-21.

\*ANSWER

c.

\*REFERENCE

B.4.1-02.B, C.5.1-1200, C.6-005-B-52

NEW

Memory

\*QNUM 106  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295028A102  
\*QUESTION

The plant is operating at 100% power with the following conditions:

- The Drywell Atmosphere Cooling System is in a normal lineup with fan V-RF-1 in standby.
- A small steam leak exists in the Primary Containment.
- The operating crew then inserts a manual Reactor scram.
- During the scram the following occurs:
  - Lockout of Bus 14
  - Bus 16 powered from 1AR
- The following conditions now exist:
  - Reactor water level is 2 inches and steady.
  - Drywell pressure is 1.7 psig and steady.
  - Drywell temperature is 155 deg F and slowly rising.

Based on the above transient, which of the following describes the current condition of the Drywell Atmosphere Cooling system?

- a. All four Drywell fans are running and dampers V-D-32 and V-D-34 (Drywell Ventilation Dampers) are OPEN.
- b. One Drywell fan (V-RF-3) is running and dampers V-D-32 and V-D-34 (Drywell Ventilation Dampers) are CLOSED.
- c. None of the Drywell fans are running and dampers V-D-32 and V-D-34 (Drywell Ventilation Dampers) are CLOSED.
- d. Two Drywell fans (V-RF-1 and V-RF-3) are running and dampers V-D-32 and V-D-34 (Drywell Ventilation Dampers) are OPEN.

\*ANSWER

a.

\*REFERENCE

B.8.16-02

New

Memory

\*QNUM 107  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295029A202  
\*QUESTION

The following plant conditions exist.

- PCIS Group 1 isolation has occurred and the Reactor failed to scram.
- Reactor water level is being maintained above the top of active fuel.
- Condensate and Feedwater are the only available high pressure injection source.
- Reactor pressure is being maintained by Safety Relief Valves.
- Torus water level is 3.5 feet and rising.
- C.5-3402, DRAINING TORUS WATER TO RADWASTE, is in progress.

Based on the stated conditions, which of the following describes the expected actions the crew will take AND how those actions affect Reactor power and pressure?

- a. Stop injection to the RPV with Feedwater and Condensate to prevent exceeding 4.3 feet Torus water level. This will result in lower Reactor power and pressure due to increased voiding in the core.
- b. A blowdown will need to be conducted due to Torus level reaching 4.3 feet. This will cause RPV pressure to drop rapidly and should help to lower Reactor power by increased voiding in the core.
- c. A blowdown will need to be conducted due to Torus level reaching 4.3 feet. This will cause RPV pressure to drop rapidly and will result in a power increase due to the increased Feedwater flow into the RPV.
- d. Stop injection to the RPV with Feedwater and Condensate to prevent exceeding 4.3 feet Torus water level. This will result in a lower Reactor power due to increased voiding in the core but will cause Reactor pressure to rise due to the loss of inlet subcooling.

\*ANSWER

b.

\*REFERENCE

C.5.1-1200, C.5.1-2007, & C.5.1-2002

New

Analysis, Synthesis, or Application

\*QNUM 108

\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295029K101  
\*QUESTION

Given the following:

- An unisolable LOCA has occurred.
- The crew has been unable to keep the core covered.
- The Severe Accident Management Guidelines have been implemented.
- The crew is in the process of flooding the Primary Containment to keep the core covered.

Based on the conditions given, which of the following describes the consequence of adding too much water to the Primary Containment?

- a. It may cause the loss of all accurate level indications inside the RPV due to covering up of all available indicators inside the Primary Containment.
- b. It could result in a structural failure of some components of the Primary Containment as a result of excessive force due to airspace pressure and hydrostatic head of the water.
- c. It may cause Drywell pressure to rise to the point where the RPV vent valves become inoperable due to a loss of the d/p necessary for the pneumatic operator to work.
- d. It could cause a rapid rise in Primary Containment pressure as the steam/nitrogen bubble becomes compressed in the upper part of the containment when the containment goes solid.

\*ANSWER

b.

\*REFERENCE

C.5.1-1000

New

Comprehension

\*QNUM 109  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295030A203  
\*QUESTION

A plant transient has occurred which has resulted in the following conditions:

- Torus level is minus 3 (-3) feet and decreasing.
- Torus temperature is 160 deg F and steady.

- 1) Given these conditions what is the highest that reactor pressure may be to keep from Emergency Depressurizing?
- 2) The basis for maintaining reactor pressure below this limit is to ensure that a Blowdown will not result in exceeding the...

- |    | 1)       | 2)                          |
|----|----------|-----------------------------|
| a. | 850 psig | Torus design temperature.   |
| b. | 950 psig | Torus design temperature.   |
| c. | 850 psig | Drywell design temperature. |
| d. | 950 psig | Drywell design temperature. |

\*ANSWER

a.

\*REFERENCE

C.5.1-1200

NEW

Analysis, Synthesis, or Application

\*QNUM 110  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.1.32 295031  
\*QUESTION

Given the following conditions.

- The plant is operating at 100% power.
- A failure occurs in the Reactor Level Control System.
- Reactor water level is lowering at 5 inches per minute.
- A rapid power reduction is performed.
- In accordance with 4 AWI-04.01.01, GENERAL PLANT OPERATING ACTIVITIES, the Control Room Supervisor orders a manual scram at 15 inches Reactor water level prior to receiving the automatic scram.

Which of the following describes the reason for inserting the Reactor scram on low Reactor water level?

- a. At the low Reactor water level scram set point excessive carryunder of steam will occur, which will raise the core boiling boundary and may challenge fuel integrity.
- b. The steam dryer skirt starts to uncover allowing excessive carryover of steam into the downcomer region, which reduces NPSH to the Reactor Recirc pumps.
- c. A Reactor scram is required at the low Reactor water level set point to reduce the fission heat generation in the core to ensure adequate core cooling will be maintained.
- d. At the low Reactor water level scram set point steam will bypass the dryer and separator through the downcomer causing excessive carryover of moisture to the main turbine.

\*ANSWER

c.

\*REFERENCE

B.05.06-02 and Tech Spec 2.1 & 2.3 Bases

New

Memory

\*QNUM 111  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295031A106  
\*QUESTION

The following plant conditions exist.

- 0800:00 A LOCA with a loss of offsite power has occurred.
- 0800:10 No. 11 EDG and No. 12 EDG energize Bus 15 and Bus 16.
- 0800:15 Annunciator 3-A-41, AC INTERLOCK, alarms.
- 0800:45 Annunciator 3-A-38, REACTOR LOW LOW LEVEL, alarms.
- 0800:57 NO. 11 EDG trips on overspeed.
- 0802:00 Annunciator 3-A-38, REACTOR LOW LOW LEVEL, clears.

Based on the above timeline, which of the following describes the expected condition of the ADS Safety Relief Valves (SRVs) AND why?

- a. At 0802:02 all three SRVs will open to depressurize the RPV due to the 107 second timer has timed out as indicated by alarm 3-A-38.
- b. At 0802:32 all three SRVs will open to depressurize the RPV due to the 107 second timer as indicated by alarm 3-A-41.
- c. All three SRVs will remain closed due to the RPV low-low level condition clearing.
- d. All three SRVs will remain closed due to the loss of all Div. I low pressure ECCS pumps.

\*ANSWER

c.

\*REFERENCE

B.03.03-01

New

Comprehension

\*QNUM 112  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295031K210  
\*QUESTION

Given the following:

- The plant is operating at 100% power.
- A transient results in a scram setpoint being exceeded.
- The Reactor Protection System fails to automatically scram the Reactor.

Without operator action, which of the following describes how the Control Rods will be automatically inserted to shutdown the Reactor?

- a. RPV pressure greater than or equal to 1035 psig for 9 seconds will energize the ATWS/ARI system logic to insert Control Rods.
- b. RPV pressure greater than or equal to 1135 psig will immediately de-energize the ATWS/ARI system logic to cause Control Rods to insert.
- c. RPV level less than or equal to minus 47 (-47) inches for 9 seconds will energize the ATWS/ARI system logic to cause Control Rods to insert.
- d. RPV level less than or equal to minus 126 (-126) inches, will immediately de-energize the ATWS/ARI system logic to cause Control Rods to insert.

\*ANSWER

c.

\*REFERENCE

B.05.06-02

New

Memory

\*QNUM 113  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL R  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 2.4.48 295032  
 \*QUESTION

Given the following:

- The plant is operating at 100% power.
- A report comes to the Control Room that a possible steam leak exists in the RCIC room.

Which of the following describes the confirmatory indication AND corresponding action taken in the Control Room?

Based on TR-4926 points 22, 23, & 24 (RCIC EQUIP AREA) on \_\_\_\_ (1) \_\_\_\_ reading above max normal, PCIS Group \_\_ (2) \_\_ isolation should be performed.

	(1)	(2)
a.	Control Room Back Panel C-21	5
b.	Cable Spreading Room Panel C-18	5
c.	Control Room Back Panel C-21	4
d.	Cable Spreading Room Panel C-18	4

\*ANSWER

a.

\*REFERENCE

B.02.03

New

Memory

\*QNUM 114  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL S  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 295036A102  
 \*QUESTION

Given the following:

- A fire exists on the 935 foot elevation of the Reactor Building in the SW corner.
- The fire brigade has been fighting the fire for 15 minutes.
- Alarms in the Control Room indicate high water level exists in the RHR 'B' corner room.
- Local report indicates that water level is 4 inches above the floor.
- Source of the leak has been identified as the fire protection header.

Which of the following describes the action required for the high corner room water level AND why?

	ACTION	REASON
a.	Do NOT isolate the fire protection header	This is an alternate injection source into the RPV to keep the core cooled.
b.	Do NOT isolate the fire protection header	Fire fighting efforts take precedence over Secondary Containment concerns in this condition.
c.	Isolate the fire protection header as directed by C.5-1300, SECONDARY CONTAINMENT CONTROL	Prevent having to scram the Reactor.
d.	Isolate the fire protection header as directed by C.5-1300, SECONDARY CONTAINMENT CONTROL	Prevent having to declare the 'B' ECCS equipment inoperable.

\*ANSWER

b.

\*REFERENCE

C.5.1-1300

INPO Bank QID #1832

Analysis, Synthesis, or Application

\*QNUM 115

\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295033A104  
\*QUESTION

The plant is operating at full power with the following conditions.

- A leak has developed from RWCU.
- PCIS Group 3 isolation has failed to occur.
- Reactor Building ventilation has isolated and 'A' SBTG is running.
- The following indications exist from 'A' SBTG:
  - EXHAUST FAN V-EF-17A is ON
  - AIR HEATING UNIT E-34A-1 is OFF
  - AO-2945, FILTER TRAIN UPSTREAM ISOLATION, is OPEN
  - AO-2979, FILTER TRAIN DOWNSTREAM ISOLATION, is OPEN
  - FLOW CONTROLLER FIC-2943 indicates 3500 cfm
- Annunciator 24-A-3A, NO DT, is alarming and will not reset.

Based on the above indications, which of the following is the correct operator response?

- a. Manually start 'B' SBTG since the 'A' train has failed to start correctly.
- b. Start AIR HEATING UNIT E-34B-1 manually since it failed to start in auto.
- c. Adjust FLOW CONTROLLER FIC-2943 to achieve 4000 cfm, which will allow the flow switch to turn on the air heating unit.
- d. Verify the air heating unit cycles to maintain 70-110 deg F filter train inlet temperature since this is an expected response of the heater.

\*ANSWER

a.

\*REFERENCE

ARP 24-A-3A

New

Memory

\*QNUM 116  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295033K201  
\*QUESTION

A high radiation condition exists on the 935 foot elevation of the Reactor Building NE due to a hot particle being lodged in the Scram Discharge Volume (SDV) during a scram. C.5-1300, SECONDARY CONTAINMENT CONTROL, has been entered.

Which of the following describes a possible indication available to warn the operators of this condition?

- a. SPDS screen 110, EOP AREA RADIATION LIMITS.
- b. ARM reading from Control Room back panel C-252.
- c. LIQUID PROCESS HI RADIATION annunciator alarming on the C-04 panel.
- d. REACTOR BUILDING HI RADIATION annunciator alarming on the C-05 panel.

\*ANSWER

a.

\*REFERENCE

B.5.12, SPDS User Manual

New

Memory

\*QNUM 117  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL S  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 2.4.10 295034  
 \*QUESTION

The plant is in a refueling outage. Fuel moves began 2 hours ago. While removing a spent fuel assembly from its core cell location, the Fuel Grapple failed resulting in release of the fuel assembly and the assembly dropping back into the cell it was being removed from. The following conditions exist.

- Evidence of gas release is seen from the refueling cavity.
- Refuel floor ARM indicates 200 mrem/hr.
- The following annunciators are alarming:
  - 4-A-1, REFUELING FL AREA HI RADIATION
  - 5-A-1, REAC BLDG VENT & F P RAD CH A HI/LO
  - 5-A-2, REAC BLDG VENT & F P RAD CH B HI/LO
- Reactor Building ventilation has isolated and SBGT has started.

Which Guideline would be entered AND which Emergency Action Level would need to be declared for the above stated conditions?

	GUIDELINE	EMERGENCY ACTION LEVEL
a.	Guideline 2 (In-Plant Radiation Levels)	Alert (Increase by a factor of 500 in plant radiation levels as indicated by Area Radiation Monitoring System or direct measurement.)
b.	Guideline 2 (In-Plant Radiation Levels)	Site Area Emergency (Increase by a factor of 1000 in plant radiation levels as indicated by Area Radiation Monitoring System or direct measurement.)
c.	Guideline 30 (Major Damage to Spent Fuel)	Alert (Dropping, bumping or otherwise rough handling of a spent bundle or individual fuel rods and FUEL POOL RADIATION MONITOR CH A or CH B exceeds 50 mr/hr.)
d.	Guideline 30 (Major Damage to Spent Fuel)	Site Area Emergency (Dropping a heavy object onto spent fuel confirmed by direct observation and FUEL POOL RADIATION MONITOR CH A or CH B exceeds 50 mr/hr.)

\*ANSWER

C.

\*REFERENCE

A.2-101

New

Memory

\*QNUM 118  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295034K305  
\*QUESTION

The plant is operating at 100% power with the following conditions.

- Steam leak has developed from the HPCI system.
- REACTOR BUILDING HI RADIATION annunciator is alarming.
- Reactor Building ventilation has isolated and SBGT is running.
- HPCI Turbine Area temperature has exceeded MAX SAFE.
- HPCI Turbine Area radiation monitor indicates UPSCALE HIGH.
- Reactor Building Drain Tank Room radiation monitor indicates 1R/hr.
- All automatic and manual attempts to isolate the leak have failed.

Which of the following is the correct action to take for this condition AND why?

- a. Blowdown the RPV to minimize the radioactivity released into the Secondary Containment.
- b. Open the Main Turbine bypass valves to maximize the use of the Off-Gas System for radioactivity control.
- c. Shutdown the Reactor as required by C.5-1100, RPV CONTROL, to reduce the break flow into the Reactor Building.
- d. Execute C.3, SHUTDOWN PROCEDURE, to reduce the rate of energy production and heat input into the Secondary Containment.

\*ANSWER

a.

\*REFERENCE

C.5-1300 & C.5.1-1300

New

Analysis, Synthesis, or Application

\*QNUM 118.1  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295034K204  
\*QUESTION

Given the following:

- A high radiation condition exists in the Reactor Building plenum.
- A Reactor scram and PCIS Group 2 isolation has occurred due to lowering Reactor water level.
- Both SBTG trains have failed to start.
- Annunciators REAC BLDG VENT & F P RAD CH A-HI/LO and REAC BLDG VENT & F P RAD CH B-HI/LO are NOT alarming.

If indications of a significant radioactive leak were identified in the Turbine Building, which of the following would be correct?

- a. The Stack Dilution Fans should be started to dilute any radioactivity discharged.
- b. The SBTG System should be manually isolated to prevent contaminants from being drawn into the Reactor Building.
- c. The Reactor Building plenum exhaust fans should be started to assure the release is monitored by the RBV WRGMs.
- d. The Radwaste Building ventilation fans should be restarted to prevent drawing contaminants in from the Turbine Building.

\*ANSWER

c.

\*REFERENCE

C.4-B.4.1.B

Mod '99 NRC Exam QID RO #81

Analysis, Synthesis, or Application

\*QNUM 119  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295035K101  
\*QUESTION

The plant is operating at 100% power with the following conditions.

- The roving security officer reports that an equipment explosion has occurred on the 935 foot elevation at the SE corner of the Reactor Building and that no plant security compromise has occurred.
- Annunciator 3-A-27, RX BLDG DP AT OR ABOVE 0" WATER, is alarming
- Panel C-24B manometer DPI-4424 reads 0 inches H2O.

Which of the following describes the effect this transient has on operation of the plant?

- a. The Reactor should be immediately scrammed.
- b. Verify automatic isolation of Secondary Containment and automatic initiation of SBTG.
- c. Commence a normal shutdown per C.3 and be in cold shutdown within 36 hours.
- d. Throttle supply fan flow by raising the control air pressure for the associated SCTMT isolation dampers.

\*ANSWER

c.

\*REFERENCE

B.04.02-05 H.1, Tech Spec 3.7.C.4

New

Memory

\*QNUM 120  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295037K207  
\*QUESTION

Which of the following sets of conditions would require implementation of C.5-2007, FAILURE TO SCRAM?

- a. APRMs indicate 1% power  
Turbine Control Valve oil pressure is 100 psig  
4 Control Rods are at position 48  
RPS air header is depressurized
- b. APRMs indicate 8% power  
West SDV contains 40 gallons of water  
Control Rods have not inserted  
Backup scram valves are de-energized
- c. IRMs indicate 75 on range 7  
'A' and 'B' MSIVs are 50% open  
2 Control Rods are at position 48  
RPS air header is depressurized
- d. IRMs indicate 75 on range 9  
Main Condenser vacuum is 20" Hg  
Control Rods have not inserted  
Backup scram valves are energized

\*ANSWER

d.

\*REFERENCE

C.5-1100 and C.5-2007

New

Analysis, Synthesis, or Application

\*QNUM 121  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295037K304  
\*QUESTION

The following conditions exist.

- The Reactor has failed to scram.
- Reactor power is 12% and steady.
- SRVs are being used to maintain Reactor pressure below 1056 psig.
- Torus temperature is 113 deg F and rising.
- SBLC System is injecting into the RPV.
- Reactor water level is being maintained minus 126 (-126) inches to minus 149 (-149) inches.

Which of the following describes the condition the operating crew will expect to achieve NEXT AND the affect this condition has on the core?

- a. Hot shutdown boron weight will allow the crew to state that the Reactor will remain shutdown under all conditions and exit the failure to scram EOP.
- b. All SRVs remaining closed will allow the crew to restore the normal RPV water level control band using preferred and alternate ATWS Injection Systems.
- c. SBLC tank level less than or equal to 675 gallons will allow the crew to restore the normal RPV water level control band to promote mixing of boron in the core via natural circulation.
- d. All SRVs remaining closed will allow the crew to transition from the override leg of RPV water level control and restore RPV water level to the normal operating band.

\*ANSWER

c.

\*REFERENCE

C.5.1-2007

New

Analysis, Synthesis, or Application

\*QNUM 121.1  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295037K204  
\*QUESTION

The plant was operating at full power when the following transient occurred.

- MSIVs CLOSE from spurious PCIS Group 1 isolation.
- Control Rods have failed to insert.
- Reactor pressure peaked at 1150 psig.
- Reactor power is now 23% and slowly lowering.
- Feedwater and Condensate has become unavailable.
- Reactor water level is being lowered by preventing injection.
- Reactor pressure is being maintained via SRVs.
- Drywell radiation indicates possible fuel element failure.

Which of the following actions should be performed to minimize heat input into the Primary Containment?

- a. Inject SBLC.
- b. Open the MSIVs.
- c. Blowdown the RPV.
- d. Trip the Recirc pumps.

\*ANSWER

a.

\*REFERENCE

C.5-2007 & C.5.1-2007

New

Analysis, Synthesis, or Application

\*QNUM 122  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295038K203  
\*QUESTION

The plant is operating at 100% power with the following conditions:

- A transient has occurred resulting in fuel failure.
- Release rates are approaching the Alert level.
- PCIS Group 2 and secondary containment isolation has occurred.
- Several Turbine Building ARMs are alarming.
- All automatic functions have occurred as expected.

Based on the above conditions, which of the following systems should be started to minimize the effect this transient has on the health and safety of the public and plant personnel?

- a. Standby Gas Treatment System
- b. High Radiation Sampling System
- c. Turbine Building Ventilation System
- d. Reactor Building Ventilation System

\*ANSWER

c.

\*REFERENCE

C.4-B.04.01.B

New

Analysis, Synthesis, or Application

\*QNUM 123  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295038K303  
\*QUESTION

The plant is in a refueling outage with the following conditions.

- Spent fuel is being moved in the Spent Fuel Pool.
- A spent fuel bundle is dropped on top of several other spent fuel bundles.
- Large gas bubbles are emanating from the spent fuel bundles.
- All of the Reactor Building 1027 foot elevation radiation monitors are in alarm.
- Standby Gas Treatment has started.
- Control Room air intake radiation monitors are reading 2 mrem/hr.

Which of the following describes the response of the CRV-EFT System AND why?

The CRV-EFT System will...

- a. operate in the Normal Mode since normal outside air intake is not affected by the above conditions.
- b. shift to the Isolate Mode to prevent any contaminated air from entering the Control Room atmosphere.
- c. operate in the Normal Mode to provide filtered outside air to the Control Room for pressurization and prevent in-leakage of contaminated air.
- d. shift to the High Radiation Emergency Mode to provide filtered outside air to the Control Room for pressurization and prevent in-leakage of contaminated air.

\*ANSWER

d.

\*REFERENCE

B.08.13-01

INPO Exam Bank QID #16334

Memory

\*QNUM 123.1  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 295038A103  
\*QUESTION

Given the following:

- The plant is operating at 100% power.
- The RBCCW Liquid Process Radiation Monitor is alarming on the C-10 Panel and has been verified to be reading greater than the alarm setpoint.
- The RBCCW Expansion Tank high level alarm is in and tank level has been verified to be greater than the alarm setpoint.

Leakage from which of the following systems/components would NOT result in this condition?

- a. RWCU
- b. Fuel Pool Cooling
- c. Reactor Recirc Pumps
- d. Primary Containment Drywell Coolers

\*ANSWER

d.

\*REFERENCE

B.5.11 and C.4-B.02.05.B

Mod INPO Bank

QID#1789

Comprehension

\*QNUM 124  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 400000A401  
\*QUESTION

The plant is operating at 100% power with the following initial conditions.

- No. 12 RBCCW Pump is operating with No. 11 RBCCW Pump in standby.
- Procedure 1084, RBCCW STANDBY PUMP AUTO INITIATION TEST, is in progress for No. 11 RBCCW Pump.
- Isolation valve for PS-1398, RBCCW LOW PRESSURE PUMP START, for No. 11 RBCCW Pump has been CLOSED.

After CLOSING isolation valve for PS-1398, breaker 52-403 trips on overcurrent causing a loss of MCC 142A and MCC 142B.

Which of the following actions should be taken to correct the stated conditions?

- a. Observe auto start of the No. 11 RBCCW Pump.
- b. Manually scram the Reactor and verify RWCU System isolates.
- c. The standby RBCCW Pump should be manually started from the C-06 Panel.
- d. Trip both Reactor Recirc Pumps after 60 seconds and CLOSE RBCCW Drywell isolation valves.

\*ANSWER

c.

\*REFERENCE

C.4-B.02.05.A, Procedure 1084

New

Analysis, Synthesis, or Application

\*QNUM 125  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL B  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 400000K604  
\*QUESTION

The plant is operating at 100% power during a hot summer day with the following conditions.

- Low river level has placed the Circulating Water System in closed cycle operation.
- 480V transformer X-10 is out of service due to overheating.
- LC 101 is being powered from LC 102 via 101/102 LC BUS TIE ACB 52-209.
- No. 11 Circulating Water Pump trips due to a loss of power to Bus 13.

Which of the following states the effect on the Circulating Water System?

- a. No. 12 CIRC WATER PUMP will trip.
- b. No. 12 CIRC WATER PUMP will trip and the MO-1850 will CLOSE.
- c. No. 11 COOLING TOWER PUMP will trip.
- d. NO. 11 COOLING TOWER PUMP will trip and the MO-1154 will move to the intermediate low flow position.

\*ANSWER

c.

\*REFERENCE

B.06.04-02

New

Analysis, Synthesis, or Application

\*QNUM 126  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 500000A105  
\*QUESTION

Given the following plant conditions.

- A large break LOCA has occurred with a loss of all offsite power.
- Containment hydrogen and oxygen concentrations require initiation of Torus sprays.
- The following actions were taken to initiate Torus sprays on Division I of RHR:
  - Control Switch 10A-S17A, CONTAINMENT SPRAY/COOLING LPCI INITIATION BYPASS, was placed in BYPASS.
  - MO-2006, DISCHARGE TO TORUS OUTBOARD, was OPENED.
  - MO-2010, TORUS SPRAY – INBOARD, was OPENED.
  - MO-2008, TORUS COOLING INJ/TEST INBOARD, was OPENED as necessary to maintain RHR pump flow requirements.
  - MO-2002, HX BYPASS, keylock switch was placed in the CLOSE position.
  - 11 RHRSW Pump and 13 RHRSW Pump control switches were placed in the START position.

Which of the following describes the status of Torus sprays?

- a. Div I RHR pumps are spraying the Torus and RHRSW pumps are providing cooling to the RHR Hx.
- b. Div I RHR pumps are NOT spraying the Torus but RHRSW pumps are providing cooling to the RHR Hx.
- c. Div I RHR pumps are spraying the Torus and RHRSW pumps are NOT providing cooling to the RHR Hx.
- d. Div I RHR pumps are NOT spraying the Torus and RHRSW pumps are NOT providing cooling to the RHR Hx.

\*ANSWER

c.

\*REFERENCE

C.5-3502

New

\*QNUM 127  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL R  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 500000A203  
\*QUESTION

A transient occurred 2 hours ago resulting in the following conditions:

- Drywell pressure is 14.6 psig and slowly lowering.
- Torus level is 5 inches and steady.
- Torus temperature is 165 deg F.
- Drywell temperature is 275 deg F.
- Actual Reactor water level is minus 174 (-174) inches and steady.
- Upon checking the H2/O2 analyzer readings it is determined that hydrogen concentration is 7% and oxygen concentration is 5.5%.

Based on the indications, which of the following describes the implications to plant safety?

- a. Exceeding the Drywell Spray Limit challenges Primary Containment integrity.
- b. Exceeding the Hydrogen Combustion Limit challenges Primary Containment integrity.
- c. Exceeding the Vortex Limit challenges core cooling.
- d. Exceeding the NPSH Limit challenges core cooling.

\*ANSWER

b.

\*REFERENCE

C.5-1205, C.5-1000

New

Analysis, Synthesis, or Application

\*QNUM 127.1  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2002/09/09  
 \*FAC 263  
 \*RTYP BWR-GE3  
 \*EXLEVEL S  
 \*EXMNR  
 \*QVAL 1.00  
 \*SEC  
 \*SUBSORT  
 \*KA 500000A203  
 \*QUESTION

The plant is in a LOCA with an emergency depressurization in progress. Systems have been aligned to feed the RPV and water level is 10 inches and rising fast. RPV pressure is currently 300 psig and lowering.

Which of the following situations would require the initiation of Drywell sprays AND why?

	CONDITIONS	REASON
a.	Drywell pressure is 10 psig and Drywell temperature is 175°F	to reduce Drywell pressure and temperature through convective cooling.
b.	Drywell pressure is 30 psig and Drywell temperature is 325°F	to reduce Drywell pressure and temperature through evaporative cooling.
c.	Containment oxygen concentration is unknown and containment hydrogen concentration is 5.4%	to ensure that a deflagration condition does not occur.
d.	Containment oxygen concentration is 5.4% and containment hydrogen concentration is unknown	to reduce the flammability of combustible gasses in the Drywell atmosphere.

\*ANSWER

d.

\*REFERENCE

C.5-1205 and C.5.1-1205

Mod INPO Bank

QID #905

Analysis, Synthesis, or Application

\*QNUM 128  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2002/09/09  
\*FAC 263  
\*RTYP BWR-GE3  
\*EXLEVEL S  
\*EXMNR  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.3.10 600000  
\*QUESTION

Given the following conditions:

- The plant has just started up after a refueling outage.
- A fire has broken out in the Radwaste Trash Compacter Area.
- The Fire Brigade has been fighting the fire for 12 minutes.
- Levels of airborne contamination have been rising in the Radwaste Building.
- No safety systems have been affected by the fire.

Which of the following is correct with regards to the above conditions?

- a. Declare an Unusual Event for a plant fire and make a site evacuation announcement over the site's PA system.
- b. Declare an Unusual Event for a plant fire and make a local evacuation announcement over the plant's PA system.
- c. Declare a Site Area Emergency for a plant fire and make a site evacuation announcement over the site's PA system.
- d. Declare a Site Area Emergency for a plant fire and make a local evacuation announcement over the plant's PA system.

\*ANSWER

b.

\*REFERENCE

A.2-301

New

Analysis, Synthesis, or Application

\*END