

PROPOSED NRC-DEVELOPED WRITTEN EXAMINATION

FOR THE FERMI INITIAL EXAMINATION - JUNE 2001

\*QNUM ~~033~~ RO<sup>7</sup>  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR Peterson  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295023 K3.02 [3.4/3.8]  
\*QUESTION

During Core Alterations with a fuel assembly raised out of the core, a loss of power occurs to the Refuel Mast. Area radiation levels are slightly elevated and preparations are being made to lower the fuel assembly. However, it is discovered that the one-rod out interlock is not functioning for the Reactor Mode Switch. What must be done in order to continue Core Alterations and lower the fuel assembly?

- A. Verify the Reactor Mode Switch is LOCKED in the REFUEL position, then release the Refuel Mast Main Hoist Motor Electric Brake, and lower the mast by turning the electric motor shaft with a wrench.
- B. Verify the Reactor Mode Switch is LOCKED in the SHUTDOWN position, then release the Refuel Mast Air Brake, while intermittently releasing the Main Hoist Motor Electric Brake.
- C. Verify the Reactor Mode Switch is LOCKED in the REFUEL position, then intermittently place the Refuel Mast control in lower while releasing the Refuel Mast Brakes.
- D. Verify the Reactor Mode Switch is LOCKED in the SHUTDOWN position, then release the Refuel Mast Brakes and lower the mast with hand winch on the Refueling Platform.

\*ANSWER B

\*REFERENCE 23.710; 24.623; ST-OP-315-0090-001; Bank Question # Ref. EQ-OP-315-0190-000-0012-002, AND 315-0290-000-0004-002

K/A Number: 295023 K3.02 [3.4/3.8]  
Direct/New/Modified: Modified  
Tier/Group: 1/3  
SRO/RO/Both Level: RO  
K/A Importance: 3.4  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: CA

\*QNUM ~~038~~ Ro #2  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 201002 K3.02  
\*QUESTION

A startup is in progress with the following conditions:

- Reactor power is 35%
- Both Reactor Recirc Pumps are in service
- Total core flow is 58%
- Control rods are being withdrawn to raise power

Control Rod 22-07 is selected. Due to a failure in the Reactor Manual Control System, Control Rod 22-15 is also selected.

Based on these conditions, a control rod block is imposed by the:

- A. Rod Block Monitor to prevent outward rod movement.
- B. Rod Block Monitor only when reator power exceeds 92%.
- C. Rod Worth Minimizer as soon as a control rod is withdrawn two steps.
- D. Rod Worth Minimizer as soon as a control rod withdrawal signal is generated.

\*ANSWER A

\*REFERENCE 23.607

K/A Number: 201002 K3.02 [2.9/3.2]  
Direct/New/Modified: Direct  
Tier/Group: 2/1  
SRO/RO/Both Level: RO  
K/A Importance: 2.9  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Comprehension

\*QNUM ~~039~~ Ro #3

\*HNUM

\*ANUM

\*QCHANGED FALSE

\*ACHANGED FALSE

\*QDATE 2001/06/14

\*FAC 341 Fermi 2

\*RTYP BWR-GE4

\*EXLEVEL R

\*EXMNR PTYOUNG

\*QVAL

\*SEC

\*SUBSORT

\*KA 202002 A4.05 {3.4/3.4}

\*QUESTION

The plant was operating at 100% power. A short circuit in panel COP H11-P603 activates the Recirc Manual Runback circuit.

Given these conditions, which of the following describes the plant parameter changes observed during the initial phase of the runback?

- A. Reactor pressure begins to decrease  
Reactor water level initially increases
- B. Reactor pressure begins to increase  
Reactor water level remains the same
- C. Reactor pressure begins to increase  
Reactor water level initially decreases
- D. Reactor pressure initially remains the same  
Reactor water level remains the same

\*ANSWER A

\*REFERENCE

20.138.03 Uncontrolled Recirc Flow Change  
UFSAR 15.3

K/A Number: 202002 A4.05 {3.4/3.4}

Direct/New/Modified: New

Tier/Group:2/1

SRO/RO/Both Level: RO

K/A Importance: 3.4

Level of Difficulty (1 - 5): 2

Memory/Comprehension-Analysis: Analysis

\*QNUM ~~042~~ Ro #4  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 206000 G2.2.25  
\*QUESTION

E4150 - F007 HPCI Pump Discharge Outboard Isolation Valve, is closed due to leakage past E4150 - F006, HPCI Pump Discharge Inboard Isolation Valve. Why is the HIGH PRESSURE COOLANT INJECTION (HPCI) System considered inoperable?

- A. The E4150 - F007 does not receive an OPEN signal if the HPCI System is automatically initiated.
- B. The E4150 - F007 is susceptible to pressure locking and may not open if the HPCI System is automatically initiated.
- C. The valve stem for E4150 - F007 would be thermally bound due to the heat from the leaking inboard valve (E4150 - F006).
- D. The E4150 - F007 is normally open, with power turned off, because the motor operator is not sized properly to open the valve when the system initiates.

\*ANSWER B

\*REFERENCE 23.202 Rev 67

ST-OP-315-0039-001, Obj. 01-07;-08;-09 ROs not responsible for ITS LCOs however they are responsible for knowing HPCI precautions and limitations that apply to operation, and be able to determine entry into ITS action statements (per objectives)

K/A Number:206000 G2.2.25

Direct/New/Modified: Direct

Tier/Group:2/1

SRO/RO/Both Level: RO

K/A Importance: 2.5

Level of Difficulty (1 - 5): 3

Memory/Comprehension-Analysis: Memory

\*QNUM ~~048~~ Ro #5  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA .215004.A2.03 {3.0/3.3}  
\*QUESTION  
Given the following:

- A reactor startup is in progress.
- SRM channel A is bypassed due to a failed upscale detector
- After IRMs are on range 2 the Reactor Operator begins withdrawing SRMs
- Reactor period is 85 seconds
- SRM channel B detector will NOT withdraw from its fully inserted position

Which of the following describes the expected SRM response and will the startup continue?

- A. De-energize the SRM B detector and continue the startup.
- B. Bypass SRM B and continue the startup.
- C. Hold the startup until all IRMs reach Range 8 because SRM trips are bypassed.
- D. Hold the startup, or shutdown, until either ARM A or B can be repaired.

\*ANSWER C

\*REFERENCE ST-OP-315-0022-001, SOP 23.602, and GOP 22.000.02

NOTE: Met Part B of K/A but no facility reference available, AOP for stuck SRM detector was deleted.

K/A Number: 215004.A2.03  
Direct/New/Modified: Direct  
Tier/Group: 2/1  
SRO/RO/Both Level: RO  
K/A Importance: 3.0  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: CA

\*QNUM ~~050~~-RO #6  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 216000 G2.1.28 {3.2/3.3}  
\*QUESTION

The purpose of the Reference Leg Back-Fill system is to?

- A. allow removal of the steam condensing chambers.
- B. compensate for the effects of reference leg leakage into the Drywell.
- C. eliminate the effects of Drywell temperature on the indicated vessel water level.
- D. prevent water saturated with non-condensable gases from accumulating in the reference leg.

\*ANSWER D

\*REFERENCE ST-OP-315-0021-001

K/A Number: 216000 G2.1.28 {3.2/3.3}  
Direct/New/Modified: New  
Tier/Group: 2/1  
SRO/RO/Both Level: RO  
K/A Importance: 3.2  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 055 Ro #7

\*HNUM

\*ANUM

\*QCHANGED FALSE

\*ACHANGED FALSE

\*QDATE 2001/06/14

\*FAC 341 Fermi 2

\*RTYP BWR-GE4

\*EXLEVEL R

\*EXMNR PTYOUNG

\*QVAL

\*SEC

\*SUBSORT

\*KA 223002 A3.02 {3.5/3.5}

\*QUESTION

Reactor water level has decreased to a level between level-2 and level-3. Which of the following have isolated?

- A. MSL Drains (Group 1).
- B. RHR System (Group 3).
- C. RHR SDC (Group 4).
- D. TWM (Group 12).

\*ANSWER C

\*REFERENCE ST-OP-315-0048-001

NOTE: a=L1 - G1; b=L1-G3; c=L3 - G4; d=L2-G12

K/A Number: 223002 A3.02 {3.5/3.5}

Direct/New/Modified: New

Tier/Group: 2/1

SRO/RO/Both Level: RO

K/A Importance: 3.5

Level of Difficulty (1 - 5): 2

Memory/Comprehension-Analysis: Memory

\*QNUM 057 RO # 8

\*HNUM

\*ANUM

\*QCHANGED FALSE

\*ACHANGED FALSE

\*QDATE 2001/06/14

\*FAC 341 Fermi 2

\*RTYP BWR-GE4

\*EXLEVEL R

\*EXMNR Bielby

\*QVAL

\*SEC

\*SUBSORT

\*KA 239002 A2.03 {4.1/4.2}

\*QUESTION

In 20.000.25, Failed Safety Relief Valve, describe the expected response of 1) Feed/Flow Steam Flow mismatch; and 2) select the correct Immediate Actions for a stuck open safety relief valve (SORV):

- A. 1) Steam Flow greater than Feed Flow;  
2) Depress both OPEN and CLOSE pushbuttons for the SORV.
- B. 1) Steam Flow greater than Feed Flow;  
2) Depress only the CLOSE pushbutton for the SORV.
- C. 1) Feed Flow greater than Steam Flow;  
2) Depress only the CLOSE pushbutton for the SORV.
- D. 1) Feed Flow greater than Steam Flow;  
2) Depress both OPEN and CLOSE pushbuttons for the SORV.

\*ANSWER D

\*REFERENCE ST-OP-802-2002-001; 20.000.25, Rev. 16

K/A Number: 239002 A2.03 {4.1/4.2}

Direct/New/Modified: New

Tier/Group: 2/1

SRO/RO/Both Level: RO

K/A Importance: 4.1

Level of Difficulty (1 - 5): 3

Memory/Comprehension-Analysis: CA

\*QNUM     -062 RO #9  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE    2001/06/14  
\*FAC      341     Fermi 2  
\*RTYP     BWR-GE4  
\*EXLEVEL   R  
\*EXMNR     PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA        261000 A4.04 {3.3/3.4}  
\*QUESTION

The plant is in Mode 1 at 100% power. You are directed to reduce the pressure in both the Drywell and Torus to 10 inches w.c. by venting through the Standby gas Treatment System. Both the Drywell and Torus are currently at 19 inches w.c.

Which of the following describes the process that would be used to complete this task?

- A. With both train of SGTA running the Drywell and Torus would be vented simultaneously.
- B. With both train of SGTS running the Drywell and Torus would be vented one at a time.
- C. With one train of SGTS running the Drywell and Torus would be vented simultaneously.
- D. With one train of SGTS running the Drywell and Torus would be vented one at a time.

\*ANSWER     D

\*REFERENCE    SOP 23.406

K/A Number: 261000 A4.04 {3.3/3.4}  
Direct/New/Modified: New  
Tier/Group: 2/1  
SRO/RO/Both Level: RO  
K/A Importance: 3.3  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: Memory

\*QNUM 064 Ro#10  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 264000 A2.09 {3.7/4.1}  
\*QUESTION

Operators are performing Surveillance Procedure 24.307.14 "EMERGENCY DIESEL GENERATOR 11 - START AND LOAD TEST." The status of the test is:

EDG 11 Engine Control Mode switch is in LOCAL.  
The Exciter Bypass switch has been placed in BYPASS  
The EXCITER TRIPPED light is on  
Exciter RESET pushbutton is ON.

For the given conditions, EDG 11 \_\_\_\_\_ automatically start.  
Independent of the given conditions, in order to "load" ED11 the Mechanical Governor Speed Adjust Knob must be at the \_\_\_\_\_ position and the Exciter Bypass switch must be in the \_\_\_\_\_ position and be RESET.

- A. will **NOT** MINIMUM NORMAL
- B. will **NOT** MAXIMUM SHUTDOWN
- C. will MAXIMUM NORMAL
- D. will MINIMUM SHUTDOWN

\*ANSWER C  
\*REFERENCE ST-OP-315-0065-001  
K/A Number: 264000  
Direct/New/Modified: New  
Tier/Group: 2/1  
SRO/RO/Both Level: RO  
K/A Importance: 3.7  
Level of Difficulty (1 - 5): 4  
Memory/Comprehension-Analysis: Analysis

\*QNUM 065 RO# 11  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 201006 G2.2.33 {2.5/2.9}  
\*QUESTION

Which system enforces adherence to a preplanned control rod sequence?

- A. ROD WORTH MINIMIZER
- B. PLANT PROCESS COMPUTER
- C. REACTOR PROTECTION SYSTEM
- D. ROD POSITION INFORMATION SYSTEM

\*ANSWER A

\*REFERENCE ST-OP-315-0013-001

K/A Number: 201006  
Direct/New/Modified: New  
Tier/Group: 2/2  
SRO/RO/Both Level: RO  
K/A Importance: 2.5  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 067 R0 #12  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 204000 A3.04 {3.4/3.5}  
\*QUESTION

The plant is in Mode 2 with reactor heatup in progress. The Reactor Water Cleanup System (RWCU) is lined up to blowdown from RWCU to the Main Condenser.

Annunciator 2D119, RBCCW PUMPS DIFF PRESS HIGH/LOW alarms.

No operator actions have been taken. Assume all other systems operate as expected, which statement correctly describes the response of the RWCU System?

- A. G3352-F119, RWCU Inlet Isolation Valve, closes and RWCU pumps, C001A & B, trip.
- B. G3352-F220, G3352-F004, and G3352-F001, RWCU Containment Isolation Valves, close and RWCU pumps, C001A & B, trip.
- C. G3352-F044, Filter/Demineralizer Bypass Valve, automatically opens to protect the Filter/Demineralizers.
- D. G3300-F033, Blowdown Flow Control Valve, automatically adjusts to control the RWCU Non-Regenerative Heat Exchanger outlet temperature.

\*ANSWER A

\*REFERENCE ARP 2D110 RWCU Non Regen Hx Outlet Temp High  
EQ-OP-202-0401-000-0203-001

K/A Number: 204000  
Direct/New/Modified: Modified  
Tier/Group: 2/2  
SRO/RO/Both Level: RO  
K/A Importance: 3.4  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Analysis

\*QNUM ~~069~~ Rod #13  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 214000 K3.03 {3.1/3.2}  
\*QUESTION

The Unit is at 65% power, control rods are being withdrawn to establish the full power rod line. Which of the following statements correctly describes the effect on the Reactor Manual Control system to the selection of a control rod with a complete loss of rod position information for that control rod?

- A. WHITE "Selected Rod" light on the 4-Rod Display is NOT illuminated.  
Timer Switch Malfunction Select Block RED indicator is illuminated.
- B. WHITE "Selected Rod" light on the 4-Rod Display is illuminated.  
Timer Switch Malfunction Select Block RED indicator is NOT illuminated.
- C. Full Core Display Selected Rod Identification Light is NOT illuminated.  
Timer Malfunction Select Block Test Indication WHITE indicator is illuminated.
- D. Full Core Display Selected Rod Identification Light is illuminated.  
Timer Malfunction Select Block Test Indication WHITE indicator is NOT illuminated.

\*ANSWER A  
\*REFERENCE ST-OP-315-0011-001

K/A Number: 214000  
Direct/New/Modified: Modified  
Tier/Group: 2/2  
SRO/RO/Both Level: RO  
K/A Importance: 3.1  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM -070- Rod #14  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 215002 G2.1.27 {2.8/2.9}  
\*QUESTION

Which of the following correctly describes the purpose of the Rod Block Monitor?

The Rod Block Monitor prevents control rod withdrawal:

- A. that would result in exceeding the maximum licensed power level during power operations.
- B. if localized neutron flux exceeds a predetermined setpoint to preclude a MCPR Safety Limit violation during control rod withdrawal.
- C. that would result in exceeding one of the monitored APRM rod block setpoints to prevent fuel damage during abnormal operating transients.
- D. if localized neutron flux exceeds a predetermined setpoint to protect fuel clad temperature during design basis loss of coolant accidents.

\*ANSWER B  
\*REFERENCE ST-OP-315-0024-001; ITS Basis

K/A Number: 215002  
Direct/New/Modified: New  
Tier/Group: 2/2  
SRO/RO/Both Level: RO  
K/A Importance: 2.8  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~071~~ R0<sup>15</sup>

\*HNUM

\*ANUM

\*QCHANGED FALSE

\*ACHANGED FALSE

\*QDATE 2001/06/14

\*FAC 341 Fermi 2

\*RTYP BWR-GE4

\*EXLEVEL R

\*EXMNR PTYOUNG

\*QVAL

\*SEC

\*SUBSORT

\*KA 219000 K5.04 {2.9/2.9}

\*QUESTION

Following a LPCI initiation signal, the EARLIEST that the LPCI motor operated Heat Exchanger Bypass valves can be manually closed from the control room is...

(Select ONE of the following)

A. 30 seconds

B. 1 minute

C. 3 minutes

D. 10 minutes

\*ANSWER C

\*REFERENCE INPO Bank Question 6820 Dresden 2

ST-OP-315-0041-001

K/A Number: 219000 K5.04 {2.9/2.9}

Direct/New/Modified: Direct

Tier/Group: 2/2

SRO/RO/Both Level: RO

K/A Importance: 2.9

Level of Difficulty (1 - 5): 2

Memory/Comprehension-Analysis: Memory

\*QNUM 073- R0 # 16  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR Hopkins  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 230000 A2.05 {3.3/3.6}  
\*QUESTION

The unit was operating with Division 1 Residual Heat Removal (RHR) System running in Torus Cooling Mode, when at 0900, Division 1 experienced a complete loss of offsite power. The plant is currently stable with power restored to the Div 1 ESF busses by the emergency diesel generators. Restoration of offsite power is expected by 1100.

Choose the statement that correctly 1) predicts the impact of the loss of power on Div 1 RHR pumps and 2) describes the subsequent system alignment required for the given conditions.

- A. Div 1 RHR pump(s) automatically restart when power was restored.  
Re-align Div 1 RHR to the Torus Cooling Mode to provide loading for the diesel generator.
- B. Div 1 RHR pump(s) automatically restart when power was restored.  
Re-align Div 1 RHR pump(s) for RHR Shutdown Cooling Mode to begin piping warm-up.
- C. Div 1 RHR pump(s) are available for automatic initiation.  
Prevent Div 1 RHR from automatically restarting until realigned to Standby Mode.
- D. Div 1 RHR pump(s) are available for automatic initiation.  
Automatic re-alignment of Div 1 RHR to Standby Mode occurred when power was restored.

\*ANSWER C  
\*REFERENCE ST-OP-315-0041-001 and SOP 23.205  
K/A Number: 230000  
Direct/New/Modified: New  
Tier/Group: 2/2  
SRO/RO/Both Level: RO  
K/A Importance: 3.3  
Level of Difficulty (1 - 5): 4  
Memory/Comprehension-Analysis: Analysis

\*QNUM 075 Ro # 17  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 256000 K5.07 {2.7/2.7}  
\*QUESTION

The following plant conditions exist:

ARP 5D131, SOUTH HOTWELL LEVEL HIGH/LOW, in alarm  
Hotwell level verified at 45 inches on N61-R805, S Hw Primary/Backup.

Which statement describes the plant status for the given conditions.

- a. Condenser Pumps, tripped  
Heater Feed Pumps, tripped  
Reactor Feed Pumps, tripped
- b. Normal Hotwell Supply Pump auto started  
N2000-F620, Cndr HW Rlf Station Byp Valve, closed  
N20-F401, Cndr Hotwell Norm Relief LCV, closed (0% indicated)  
N20-F402, Cndr Hotwell Emerg Relief LCV, closed (0% indicated)  
N20-F407, Cndr Hw Norm Makeup LCV, open (> 90% indicated)
- c. N20-F401, Cndr Hotwell Norm Relief LCV, open (> 90% indicated)  
N20-F402, Cndr Hotwell Emerg Relief LCV, closed (0% indicated)  
N20-F406, Cndr Hw Emerg Makeup LCV, closed (0% indicated)  
N20-F407, Cndr Hw Norm Makeup LCV, closed (0% indicated)  
N2000-F636, Cndr HW Emerg Makeup Byp Valve, closed
- d. Normal and Emergency Hotwell Supply Pumps are running  
N2000-F620, Cndr HW Rlf Station Byp Valve, closed  
N20-F401, Cndr Hotwell Norm Relief LCV, closed (0% indicated)  
N20-F402, Cndr Hotwell Emerg Relief LCV, closed (0% indicated)  
N20-F406, Cndr HW Emerg Makeup LCV, open (> 90% indicated)  
N20-F407, Cndr HW Norm Makeup LCV, open (> 90% indicated)

\*ANSWER B  
\*REFERENCE ST-OP-315-0006-001  
K/A Number: 256000 K5.07 {2.7/2.7}  
Direct/New/Modified: New  
Tier/Group: 2/2  
SRO/RO/Both Level: RO  
K/A Importance: 2.7

Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: Comprehension

\*QNUM 079 RO #18

\*HNUM

\*ANUM

\*QCHANGED FALSE

\*ACHANGED FALSE

\*QDATE 2001/06/14

\*FAC 341 Fermi 2

\*RTYP BWR-GE4

\*EXLEVEL R

\*EXMNR PTYOUNG

\*QVAL

\*SEC

\*SUBSORT

\*KA 272000 K6.01 {3.0/3.2}

\*QUESTION

RPS Distribution Panel C71-P001A has lost power, which of the following Radiation Monitors is effected?

- A. Div 1 RB Vent Exhaust Radiation Monitor
- B. Div 1 Containment Area Hi Range Monitor
- C. Div 1 Fuel Pool Vent Exh Duct Rad Monitor
- D. Div 1 CCHVAC Makeup Air Radiation Monitor

\*ANSWER C

\*REFERENCE EQ-OP-315-0150-000-0007-001 & ST-OP-315-0050-001

K/A Number: 272000 K6.01 {3.0/3.2}

Direct/New/Modified: Direct

Tier/Group: 2/2

SRO/RO/Both Level: RO

K/A Importance: 3.0

Level of Difficulty (1 - 5): 3

Memory/Comprehension-Analysis: Memory

\*QNUM ~~085~~ RO #19  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR Perterson  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 234000 K3.03 {3.1/3.8}  
\*QUESTION

During movement of spent fuel in the spent fuel pool, the Fuel Grapple was damaged. Which one of the following equipment may be used to move a spent fuel assembly that weights 950 pounds?

- A. J B Hook Grapple
- B. Manipulator Grapple
- C. General Purpose Grapple
- D. Control Rod Grapple

\*ANSWER C

\*REFERENCE ST-OP-315-0090-001

K/A Number: 234000 K3.03 {3.1/3.8}  
Direct/New/Modified: New  
Tier/Group: 2/3  
SRO/RO/Both Level: RO  
K/A Importance: 3.1  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~088~~ RO #20  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.1.1 {3.7/3.8}  
\*QUESTION

A locked open valve can be identified because it has a \_\_\_\_\_ padlock.

- A. red
- B. green
- C. no color identification
- D. red with a black dot

\*ANSWER A

\*REFERENCE EQ-OP-213-0041-000-B001-001  
MOP09

K/A Number: Generic 2.1.1  
Direct/New/Modified: Direct  
Tier/Group: 3/  
SRO/RO/Both Level: RO  
K/A Importance: 3.7  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM     ~~090~~ RO #21  
\*HNUM  
\*ANUM  
\*QCHANGED   FALSE  
\*ACHANGED   FALSE  
\*QDATE  
\*FAC        341        Fermi 2  
\*RTYP       BWR-GE4  
\*EXLEVEL    R  
\*EXMNR       Hopkins  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA         Generic 2.1.25, {2.8/3.1}

**\*QUESTION**

Given the following conditions:

A large break LOCA has occurred.

The reactor has been scrammed and all rods inserted.

All systems responded to the LOCA as designed.

Reactor vessel level is 75 inches wide range and slowly lowering.

Indicated Torus Water Level: -15 inches

Indicated Torus Pressure: 4.0 psig

Average Torus Water Temperature (point 9): 220 deg. F

Primary Containment Air Temperature:

(TR50-R800A, Recorder H11-P601, point 11: 215 deg. F)

(TR50-R800B, Recorder H11-P602, point 12: 215 deg. F)

Based on the plant conditions described above, select the maximum RHR LPCI injection flow for RHR Loop A with two pumps operating.

- A. 11,000 gpm
- B. 17,000 gpm
- C. 25,000 gpm
- D. 28,000 gpm

\*ANSWER        B

\*REFERENCE     ST-OP-820-3002-001, Revision 1, "Cautions, Curves, and Calculations."  
RHR (LPCI) NPSH Limit Curve.

K/A Number: 2.1.25

Direct/New/Modified: New

Tier/Group: 3, Conduct of Operations

SRO/RO/Both Level: RO

K/A Importance: 2.8

Level of Difficulty (1 - 5): 3

Memory/Comprehension-Analysis: Comprehension-Analysis

\*QNUM 002 RO #22  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.2.30  
\*QUESTION

The plant is in mode 5 with refueling activities in progress. You have been notified that a new fuel bundle is being placed in the core. Shortly thereafter you observe the SRM counts increasing with a steady positive period. As the CRNSO:

- A. place the mode switch in shutdown.
- B. check to see if the SRM's are fully inserted.
- C. notify the refuel floor SRO, that fuel movement must be stopped.
- D. inform the refuel floor SRO, that the fuel bundle rate of insertion into the cell should be slowed down.

\*ANSWER C

\*REFERENCE EQ-OP-802-2006-000-0016-002  
MOP13, Conduct of Refueling and Core Alterations

K/A Number: 2.2.30  
Direct/New/Modified: Direct  
Tier/Group: 3/  
SRO/RO/Both Level: RO  
K/A Importance: 3.5  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 003 Ro # 23  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL R  
\*EXMNR Hopkins  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.2.34 {2.8/3.2}

\*QUESTION

Given the following conditions:

A reactor startup was in progress and subsequently placed on hold.

Prior to the startup, the plant was operating for 150 days at 100% power when a reactor scram occurred. The scram occurred 36 hours ago.

When the startup was placed on hold, Source Range Channels were 1000 cps.

The four count rate doubling value for the startup was 2200 cps.

Fifteen minutes after the startup was placed on hold, source range counts increased to 1100 cps and continued to slowly increase.

Based on the conditions described above, SELECT the cause for the increase in source range counts.

- A. All four MSIVs drifted full shut.
- B. Startup level control valve drifted full open.
- C. Xenon production greater than Iodine decay.
- D. Reactor recirculation pump speed slowly increased.

\*ANSWER B

\*REFERENCE

General Operating Procedure, 22.000.02, Revision 47, Plant Startup to 25% Power, Precaution and Limitation 3.2.10.

K/A Number: 2.2.34

Direct/New/Modified: New

Tier/Group: Tier 3, Equipment Control.

SRO/RO/Both Level: RO

K/A Importance: 2.8

Level of Difficulty (1 - 5): 3

Memory/Comprehension-Analysis: Comprehension-Analysis

\*QNUM ~~095~~ RO #24

\*HNUM

\*ANUM

\*QCHANGED FALSE

\*ACHANGED FALSE

\*QDATE 2001/06/14

\*FAC 341 Fermi 2

\*RTYP BWR-GE4

\*EXLEVEL R

\*EXMNR PALAGI

\*QVAL

\*SEC

\*SUBSORT

\*KA 2.3.2 {2.5/2.9}

\*QUESTION

A fuel pool cleanup is underway which involves routine removal of cut-up, used LPRMs from the fuel pool, packaging them, and transferring them to a truck for shipment offsite. Which of the following types of RWP(s) would be used for this work?

- A. Only Job Specific RWP.
- B. Job Specific RWP and verbal RWP provided by a Radiation Protection Supervisor who is present at the work site.
- C. Job Specific RWP or a Routine Specific RWP written for LPRM disposal.
- D. Job Specific RWP or a General RWP written specifically for LPRM disposal.

\*ANSWER A

\*REFERENCE Procedures MRP05r3

K/A Number: 2.3.2 {2.5/2.9}

Direct/New/Modified: New

Tier/Group: 3/

SRO/RO/Both Level: RO

K/A Importance: 2.9

Level of Difficulty (1 - 5): 2

Memory/Comprehension-Analysis: M

\*QNUM      097- R0 #25  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE    2001/06/14  
\*FAC      341      Fermi 2  
\*RTYP     BWR-GE4  
\*EXLEVEL   R  
\*EXMNR     PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA        2.4.6 {3.1/4.0}  
\*QUESTION

What is the basis for concurrent entry into each of the parameter control sections of an EOP?

The concurrent execution of the sections are required because the

- A. actions taken allow the operator to diagnose and correct the cause of the event regardless of the degraded condition.
- B. parameters controlled interrelate with each other, action to stabilize one parameter may cause one or more of the other parameters to change.
- C. steps interrelate the task performed. Concurrent performance of the directed task ensures violation of additional Technical Specifications will be prevented.
- D. parameters controlled interrelate with the Entry Conditions. This prevents branching which would direct the operator to exit one procedure, path or part of a flowpath, and enter another.

\*ANSWER        B  
\*REFERENCE     ST-OP-802-3001-001

K/A Number: 2.4.6  
Direct/New/Modified: Direct  
Tier/Group: 3/  
SRO/RO/Both Level: RO  
K/A Importance: 3.1  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: M

\*QNUM ~~001~~ *Ro # 26*  
\*HNUM *SRO # 1*  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295005 G2.1.2 (3.0/4.0)  
\*QUESTION

The plant was operating at 100% power when annunciator 4D46, AMAIN TURBINE TRIPPED@ alarmed. Which of the following indications **CONFIRM** the turbine tripped?

- a. Reactor is scrammed  
RPV Pressure is < 1050 psig  
A Turbine Bypass Valve is open
- b. Generator Field Breaker indicates OPEN  
Generator Output Breaker CF indicates OPEN  
Generator Output Breaker CM indicates OPEN
- c. Turbine Stop Valves indicate CLOSED  
Turbine Control Valves indicate CLOSED  
Low Pressure Stop, and Intercept Valves indicate CLOSED
- d. Reactor is scrammed  
3D90, ATurbine Stop Valve Closure Channel Trip@ in alarm  
3D89, ATurbine Cont Valve Fast Closure Channel Trip@ in alarm

\*ANSWER C.

\*REFERENCE AOP 20.109.01, Turbine/Generator Trip  
ARP 4D46 MAIN TURBINE TRIPPED  
ARP 3D89 TURBINE CONT VALVE FAST CLOSURE CHANNEL TRIP  
ARP 3D90 TURBINE STOP VALVE CLOSURE CHANNEL TRIP

K/A Number: 295005 G2.1.2  
Direct/New/Modified: New  
Tier/Group: 1/1  
SRO/RO/Both Level: Both  
K/A Importance: 3.0/4.0  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Comprehension

\*QNUM            002-      RO # 27  
                              SRO # 2  
\*HNUM  
\*ANUM  
\*QCHANGED    FALSE  
\*ACHANGED    FALSE  
\*QDATE        2001/06/14  
\*FAC          341        Fermi 2  
\*RTYP         BWR-GE4  
\*EXLEVEL     B  
\*EXMNR        AM STONE  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA            295006 A1.02 {3.9/3.8}  
\*QUESTION

The reactor has scrammed due to high containment pressure. With the below given condition of the MSIVs, select the proper method of maintaining reactor water level.

- A. With MSIVs closed, use reactor feed pumps to maintain level between Level 3 and Level 8.
- B. With MSIVs closed, use high pressure coolant injection to maintain level between Level 3 and level 8.
- C. With MSIVs opened, use standby feedwater pumps to maintain level between Level 4 and Level 7.
- D. With MSIVs opened, use reactor core isolation cooling to maintain level between Level 4 and Level 7.

\*ANSWER        B

\*REFERENCE     BANK - ST-OP-802-2002-001

K/A Number: 295006 A1.02 {3.9/3.8}  
Direct/New/Modified: Direct  
Tier/Group: 1/1  
SRO/RO/Both Level: Both  
K/A Importance: 3.9  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Comprehension

RO # 28 / SRO # 3  
-003

\*QNUM  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR EQW  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295006 A2.01 {4.5\*/4.6\*}  
\*QUESTION

Given the following conditions:  
The plant is operating in single loop at 65% rated flow.

Choose the maximum power allowed by RPS before exceeding the flow biased scram setpoint.

- A. 97
- B. 98
- C. 102
- D. 107

\*ANSWER A  
w= 65% = % rated flow  
1 loop,  $0.63(w-8\%)+61.4 = 97.31$   
2 loop,  $0.63(w)+61.4 = 102.35$   
 $0.63(w+8)+61.0 = 107.39$   
 $0.61(w-8\%)+63.4 = 98.17$

\*REFERENCE ITS Table 3.3.1.1-1

K/A Number: 295006 A2.01 {4.5\*/4.6\*}  
Direct/New/Modified: New  
Tier/Group: T1G1  
SRO/RO/Both Level: Both  
K/A Importance: 4.5  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: Comprehension

\*QNUM            ~~004~~      RO # 29  
\*HNUM                       SRO # 4  
\*ANUM  
\*QCHANGED    FALSE  
\*ACHANGED    FALSE  
\*QDATE        2001/06/14  
\*FAC          341        Fermi 2  
\*RTYP         BWR-GE4  
\*EXLEVEL      B  
\*EXMNR        AM Stone  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA            295007 K3.06 {3.7/3.8}

\*QUESTION  
The reactor is at 50% power when the outboard "A" main steam line isolation valve closes. Which of the following describes the resulting effect the response of the governor/pressure control system?

- A. Reactor pressure increased. Turbine bypass valves will open as a result of the reactor scram on high power.
- B. The core void fraction decreased. Turbine control valves will open to compensate for the increased reactor pressure.
- C. Reactor power decreased due to the addition of negative reactivity. Turbine control valves will close in order to maintain a constant reactor pressure.
- D. The core void fraction increased. Turbine bypass valves will open to compensate for the increased steam flow in the other main steam lines.

\*ANSWER        B  
\*REFERENCE:    ST-OP-315-0045-001

K/A Number: 295007 K3.06 {3.7/3.8}  
Direct/New/Modified: New  
Tier/Group: 1/1  
SRO/RO/Both Level: Both  
K/A Importance: 3.7  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: Comprehension



*RO # 31*  
*SRO # 6*  
-006  
\*QNUM  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295010.AK2.02 {3.3/3.5}  
\*QUESTION

The drywell to torus vacuum breakers are set to maintain the drywell to torus differential pressure within set limits to:

- A. Prevent expansive failure of the downcomer between the drywell and torus.
- B. Prevent exceeding the design differential pressure between primary and secondary containment.
- C. Minimize impact loading on the torus in the event of a rapid drywell pressure increase due to an accident.
- D. Minimize the pump head differential for the RHR pumps taking a suction from the torus and discharging through the torus and drywell spray headers.

\*ANSWER C

\*REFERENCE Previous NRC Exam Question  
EQ-OP-802-3002-000-0007-002  
ST-OP-315-0016-001

K/A Number: 295010.AK2.02  
Direct/New/Modified: Direct  
Tier/Group: 1/1  
SRO/RO/Both Level: Both  
K/A Importance: 3.3  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~007~~ R0#32  
\*HNUM SRO # 7  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR AM Stone  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295014.G2.1.7 {3.7/4.4}  
\*QUESTION

The following transient has occurred:

- A slow increase in Reactor power and Generator MWe.
- A slight decrease in Reactor level.
- No annunciation.
- A slow increase in Reactor Pressure.

SELECT the response that identifies the cause of this power transient.

- A. A slow increase Reactor Feed pump speed.
- B. A slow increase in Recirculation Pump speed.
- C. A control rod slowly drifts out of the core.
- D. A spurious initiation of Reactor Core Isolation Cooling.

\*ANSWER B

\*REFERENCE FERMI: AOP-20.138.03 "Uncontrolled Recirc Flow Increase"

K/A Number: 295014.G2.1.7 {3.7/4.4}  
Direct/New/Modified: Direct Bank - NRC  
Tier/Group: 1/1  
SRO/RO/Both Level: Both  
K/A Importance:  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: Comprehension

\*QNUM ~~008~~ RO # 33  
\*HNUM SRO # 8  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Peterson  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295015.A1.06 {4.0/4.2}  
\*QUESTION

The plant is in an ATWS condition in which the following conditions exist:

- RPV pressure 200 psig
- 24 control rods failed to insert
- The eight blue scram lights are extinguished
- The HCU accumulators for the stuck rods are depressurized and inaccessible

The operating crew would use which of the following methods to insert control rods?

- A. Vent scram air header.
- B. Reset, then reinitiate the scram.
- C. Open individual scram test switches.
- D. Vent the control rod drive over piston volumes.

\*ANSWER B

\*REFERENCE

29.ESP.03, Rev. 5 (Purpose, Page 3)  
EOP 29.100.01 SH 1A, Rev.6 (Step FSQ-11)  
Exam Bank Question Ref: EQ-OP-202-0101-000-0203-004

K/A Number: 295015 A1.06 {4.0/4.2}  
Direct/New/Modified: Direct  
Tier/Group: 1/1  
SRO/RO/Both Level: Both  
K/A Importance: 4.0  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: CA

~~000~~ RO # 34 } Entire question replaced  
SRO # 9 } JH

\*QNUM  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR F2EQB  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295024 A2.04 {3.9/3.9}  
\*QUESTION

Following a small steam leak inside the drywell, primary containment pressure gradually rises to the point that the operating crew initiates drywell sprays.

The reason for initiating drywell spray is to protect:

- A. Equipment inside the torus.
- B. Safety/relief valves (SRVs).
- C. Equipment inside the drywell.
- D. Torus-to-drywell vacuum breakers.

\*ANSWER A

\*REFERENCES: EQ-OP-202-0801-000-A002-012, EOP 29.100.01 SH 2, Rev 7 (Step PCP-9)  
EOP 29.100.01 SH 6, Rev 7 (DWSIL Curve)

K/A Number:	295024 A2.04 {3.9/3.9}
Direct/New/Modified:	Direct
Tier/Group:	1/2
SRO/RO/Both Level:	B
K/A Importance:	3.9/3.9
Level of Difficulty (1 - 5):	2
Memory/Comp-Analysis:	Memory

\*QNUM 010 R0 35  
\*HNUM 5R0 10  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295025 EA1.03 {4.4/4.4}  
\*QUESTION

During a severe pressure and level transient the control room NSO observes a partial failure of the low-low set logic. The Division I SRV open sealed-in light is ON as well as the Division I scram pressure sealed-in light. Neither light is lit for Division II. Believing the Division II logic has failed, the NSO expects which of the following performances from the low-low set SRVs?

With increasing pressure:

- A. neither SRV A or G will open at their low-low set setpoints.
- B. SRV A will open at 1017 psig, SRV G will open at 1047 psig.
- C. both SRVs A and G will open at 1017 psig.
- D. SRV A will open at 1017 psig, SRV G will not open at its low-low set setpoint.

\*ANSWER D.

\*REFERENCE 23.201, Rev.19; ARP 1D38, Rev.10

K/A Number: 295025 EA1.03  
Direct/New/Modified: Direct  
Tier/Group: 1/1  
SRO/RO/Both Level: B  
K/A Importance: 4.4/4.4  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM 011 Ro 36  
\*HNUM SRO 11  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295031 K1.01 {4.6/4.7}  
\*QUESTION

The mechanisms to ensure adequate core cooling are only core submergence,

- A. and Spray Cooling.
- B. and Steam Cooling only with injection.
- C. and Steam Cooling only without injection.
- D. and Steam Cooling both with and without injection.

\*ANSWER D

\*REFERENCE

INPO Bank Question 2067 Quad Cities 1  
ST-OP-802-3001-001 Introduction to Emergency Operating Procedures

K/A Number: 295031 K1.01  
Direct/New/Modified: Direct  
Tier/Group: 1/1  
SRO/RO/Both Level: Both  
K/A Importance: 4.6  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~012~~ R0 37  
\*HNUM SR0 12  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR EQW  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295037.K1.06 {4.0/4.2}  
\*QUESTION

Given the following conditions:

A reactor scram has occurred.  
3 control rods did not full insert  
Power is 10%

Alternate-boron injection using the standby feedwater system has been directed by the NASS.

When alternate boron injection is initiated, reactor power will initially:

- A. decrease due to the negative reactivity added from the CST water temperature.
- B. increase due to the positive reactivity added from the CST water temperature.
- C. decrease due to the boron initially forcing the flux peak to the top of the core.
- D. increase due to the boron initially forcing the flux peak to the center of the core.

\*ANSWER B

\*REFERENCE ST-OP-3003-001

K/A Number: 295037.K1.06 {4.0/4.2}

Direct/New/Modified: Modified

Tier/Group: 1/1

SRO/RO/Both Level: Both

K/A Importance: 4.2

Level of Difficulty (1 - 5): 3

Memory/Comprehension-Analysis: Comprehension

\*QNUM        018        Ro 38  
 \*HNUM                    SRa 13  
 \*ANUM  
 \*QCHANGED   FALSE  
 \*ACHANGED   FALSE  
 \*QDATE  
 \*FAC        341        Fermi 2  
 \*RTYP        BWR-GE4  
 \*EXLEVEL   B  
 \*EXMNR     F2EQB  
 \*QVAL  
 \*SEC  
 \*SUBSORT  
 \*KA        500000 A2.03 {3.3/3.8}  
 \*QUESTION

If hydrogen concentration can not be determined to be less than 6% AND oxygen concentration can not be determined to be less than 5%, the drywell fans must be shutdown.

Which ONE of the following describes the reason for this requirement?

- A. Allow drywell sprays to be initiated.
- B. Eliminate a potential ignition source.
- C. Prevent the hydrogen and oxygen from combining into a flammable mixture.
- D. Allow the hydrogen to accumulate in the top of the drywell where the oxygen concentration is the least.

\*ANSWER            B

\*REFERENCES: EQ-OP-802-3004-000-0011-004, 29.100.01, ST-OP-802-3004-001

K/A Number:	500000 A2.03 {3.3/3.8}
Direct/New/Modified:	Direct
Tier/Group:	2
SRO/RO/Both Level:	B
K/A Importance:	3.3/3.8
Level of Difficulty (1 - 5):	3
Memory/Comp-Analysis:	Memory

\*QNUM ~~014~~ R0 39  
\*HNUM SR0 14  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295001 AA1.06 {3.3/3.4}  
\*QUESTION

The plant was operating at 75% power when the B recirculation pump tripped. The following plant conditions exist:

Recirc Loop 'A' flow.....20,500 gpm  
Reactor power.....48%  
Total core flow.....40%  
APRM periodicity (regional).....0.55 seconds

Which of the following is the MINIMUM required IMMEDIATE operator action?

- A. Raise the speed of "A" RRMG to get out of the current Power-Flow Map region.
- B. Close the "B" Reactor Recirc Pump discharge valve.
- C. Insert CRAM array control rods.
- D. Place Reactor Mode Switch in SHUTDOWN.

\*ANSWER C.

\*REFERENCE EQ-OP-802-2003-000-0015-005; 20.138.01 Rev. 2/6/01; TR 3.4.1.1; TRB 3.4.1.1; Power-Flow Map Applicant reference?

K/A Number: 295001 AA1.06  
Direct/New/Modified: Modified  
Tier/Group: 1/2  
SRO/RO/Both Level: B  
K/A Importance: 3.3/3.4  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM     ~~015~~     Ro 90  
 \*HNUM             SRO 15  
 \*ANUM  
 \*QCHANGED   FALSE  
 \*ACHANGED   FALSE  
 \*QDATE  
 \*FAC         341     Fermi 2  
 \*RTYP        BWR-GE4  
 \*EXLEVEL    B  
 \*EXMNR      Bielby  
 \*QVAL  
 \*SEC  
 \*SUBSORT  
 \*KA           295002 AA2.04 {2.8/2.9}  
 \*QUESTION

During performance of a plant startup, the following conditions existed:

Reactor power.....4%  
 MSIVs.....open  
 SJAEs.....all in service

Annunciator 6D16, OFF GAS MN CONDENSER PRESSURE HIGH, alarms. A minute later 4D108, CONDENSER PRESSURE HIGH, alarms. The following indications are observed:

Offgas flow.....offscale high  
 Condenser vacuum.....2.4 psia (slowly increasing)

Which of the following would be appropriate for the given current conditions?

- A. Start the Mechanical Vacuum Pumps.
- B. Insert CRAM array control rods.
- C. Place the Reactor Mode Switch to SHUTDOWN and close the MSIVs.
- D. Place the Div 1 and 2 Low Condenser Vacuum Bypass Switches in BYPASS.

\*ANSWER        A.

\*REFERENCE:       EQ-OP-315-0132-000-0008-007; 20.125.01 Rev. 21

K/A Number:                   295002 AA2.04  
 Direct/New/Modified:         Modified  
 Tier/Group:                   1/2  
 SRO/RO/Both Level:         B  
 K/A Importance:               2.8/2.9  
 Level of Difficulty (1 - 5):   2  
 Memory/Comprehension-Analysis: CA

\*QNUM ~~016~~ R041  
\*HNUM 5R016  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295003 2.1.23 {3.9/4.0}  
\*QUESTION

A Station Blackout occurred, but Offsite Power was subsequently restored. The NASS now directs an operator to return the logic A and B keylock switches on Panel H11-614 to NORMAL.

Why were these switches in TEST?

- A. Prevent Automatic Depressurization System initiation when power was restored.
- B. Prevent automatic initiation of LPCI when power was restored.
- C. Prevent RCIC isolation on high temperature.
- D. Prevent automatic load sequencing when 4160V ESF bus power was restored.

\*ANSWER C.

\*REFERENCE: EQ-OP-802-2012-000-0005-004; 20.300.SBO, Rev. 1/31/01; 20.300.SBO Bases, Rev.0

K/A Number: 295003 2.1.23 {3.9/4.0}  
Direct/New/Modified: Direct  
Tier/Group: 1/2  
SRO/RO/Both Level: B  
K/A Importance: 3.9/4.0  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: CA

\*QNUM 017 R042  
\*HNUM SAC 17  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295004 AK1.05 {3.3/3.4}  
\*QUESTION

Multiple DC battery alarms prompted the shift supervisor to dispatch operators to report on the status of 130/260V ESS Battery Chargers 2A-1 and 2A-2. The operators reported the following:

AC breaker on the 2A-1 charger tripped  
DC breaker on the 2A-1 charger tripped  
AC feeder breaker (MCC 72B-2A, Pos 3D) to 2A-1 charger tripped  
2A-2 charger breakers were in their normal lineup (no breakers tripped)

How can the 4160V Breaker 64B Position B5 be operated?

- A. Operate local manual, but not remotely from the Control Room.
- B. Close remotely from the Control Room, but require local manual operation to open.
- C. Operate remotely from the Control Room or local manual.
- D. Open remotely from the Control Room, but require local manual operation to close.

\*ANSWER A.

\*REFERENCE 20.300.260VESF; ARP 9D17, Rev.14; ST-OP-315-0064-001

K/A Number: 295004 AK1.05  
Direct/New/Modified: Modified  
Tier/Group: 1/2  
SRO/RO/Both Level: B  
K/A Importance: 3.3/3.4  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM        ~~018~~      Ro 43  
\*HNUM                      Sr 18  
\*ANUM  
\*QCHANGED   FALSE  
\*ACHANGED   FALSE  
\*QDATE  
\*FAC        341      Fermi 2  
\*RTYP       BWR-GE4  
\*EXLEVEL   B  
\*EXMNR     Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA        295008 AK3.08 {3.4/3.5}  
\*QUESTION

During a feedwater transient, the Unit NSO started the RCIC system for reactor water level control using the appropriate operating procedure. The Unit NSO became distracted and allowed level to rise above Level 8 after which it lowered below Level 2.

Which of the following describes the reason for, and expected response of RCIC during the reactor water level transient?

- A. The RCIC Turbine Steam Inlet Valve (E51-F045) will close at Level 8 to prevent damage to the Main Turbine, and RCIC will automatically restart at Level 2.
- B. The RCIC Turbine Steam Inlet Valve (E51-F045) will close at Level 8 to prevent damage to the RCIC turbine, and will trip and isolate RCIC.
- C. The RCIC Trip Throttle Valve (E51-F059) will close at Level 8 to prevent damage to the RCIC turbine, and will trip and isolate RCIC.
- D. The RCIC Trip Throttle Valve (E51-F059) will close at Level 8 to prevent damage to the Main Turbine, and RCIC will automatically restart at Level 2.

\*ANSWER        A.

\*REFERENCE        ST-OP-315-0043-001, Rev.9

K/A Number:                      295008 AK3.08  
Direct/New/Modified:            Modified  
Tier/Group:                        1/2  
SRO/RO/Both Level:              B  
K/A Importance:                   3.4/3.5  
Level of Difficulty (1 - 5):       3  
Memory/Comprehension-Analysis: CA

\*QNUM ~~019~~ R044  
\*HNUM 5A019  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295012 AK2.02 {3.6/3.7}  
\*QUESTION

The plant is operating at full power with all DW Cooling Fans in operation. Panel H11-P808 annunciator 8D41, DIV 1 DRYWELL TEMPERATURE HIGH, alarms. The operator observes that T47-R803A, Drywell Cooling System Area Temperatures Div 1, point 16 indicates 158 degrees F (trip setpoint is 155 degrees F).

If the average drywell temperature has risen from 132°F to 135°F during the last 8 hours, which one of the following actions is appropriate?

- A. Manually initiate EECW and EESW Systems.
- B. Shift DW Cooling Fans 1,2,3 and 4 to low speed.
- C. Operate all available Drywell Cooling.
- D. Increase GSW cooling to RBCCW.

\*ANSWER D.

\*REFERENCE ST-OP-315-0043-001, Rev.10; ARP 8D41, Rev.14

K/A Number: 295012 AK2.02  
Direct/New/Modified: Modified  
Tier/Group: 1/2  
SRO/RO/Both Level: B  
K/A Importance: 3.6/3.7  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM 020 Ra 45  
\*HNUM SA 20  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295013 AK2.01 {3.6/3.7}  
\*QUESTION

The following plant conditions exist:

- The reactor is at full power.
- Torus Cooling is in operation and average temperature is increasing.
- HPCI testing is in progress.

The required action is to immediately stop HPCI testing if torus temperature exceeds (1) degrees F, immediately enter Primary Containment Control (29.100.01, Sheet 2) if torus temperature exceeds (2) degrees F, or immediately place the mode switch in shutdown if torus temperature exceeds (3) degrees F.

- A. (1) 95; (2) 105; (3) 110
- B. (1) 105; (2) 110; (3) 95
- C. (1) 110; (2) 105; (3) 95
- D. (1) 105; (2) 95; (3) 110

\*ANSWER D.

\*REFERENCE ST-OP-802-3004-001, Rev.2; 29.100.01, Sheet 2, Rev.8; TS 3.6.2.1

K/A Number: 295013 AK2.01  
Direct/New/Modified: New  
Tier/Group: 1/2  
SRO/RO/Both Level: B  
K/A Importance: 3.6/3.7  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: M

\*QNUM ~~021~~ R046  
\*HNUM s/Ro 21  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295017 AA1.08 {3.1/3.4}  
\*QUESTION

The plant was operating at full power and experienced the following conditions:

- Main Steam Line Radiation Monitors A,B,C, and D indicated greater than 3 X Normal
- Off Gas Log Scale PRM recorder indicated 800 mr/hr with a constant increase

After the plant shutdown, the 3rd Main Steam Line Isolation Valves (MSIVs) and Division 2 MSIVLCS Steam Line Drain Valve (B21-F600) were closed. The Division's 1 and 2 MSIV Leakage Control System (LCS) Initiate keylock switches were placed in INITIATE with the following plant conditions:

- Reactor Pressure 40 psig
- Main Steam Line Pressure between inboard and outboard MSIVs 40 psig
- Main Steam Line Pressure between outboard and 3rd MSIVs 44 psig
- Division 1 Nuclear Instrument Air System (NIAS) Pressure 100 psig
- Division 2 NIAS Pressure 80 psig

Subsequently, the CRNSO reported that Division 1 MSIVLCS was injecting, but the Division 2 MSIVLCS Isolation Valves (B21-F437 and F438) had not opened.

(1) Based on the operating plant conditions, was manual operator action required to scram the reactor? (2) Is the MSIVLCS operating as expected? Why or why not?

- A. (1) Yes. (2) Yes. Division 2 Isolation Valves will not open because Main Steam Line pressure is too high.
- B. (1) Yes. (2) No. Division 2 Isolation Valves should have opened.
- C. (1) No. (2) Yes. Division 2 Isolation Valves will not open because Main Steam Line pressure is too high.
- D. (1) No. (2) No. Division 2 Isolation Valves should have opened.

\*ANSWER C.

\*REFERENCE

ST-OP-315-0005-001, Rev.12; ARP 3D83, Rev.11; 20.00.07, Rev. 2/5/01;  
23.137.01, Rev.21

K/A Number: 295017 AA1.08  
Direct/New/Modified: Modified  
Tier/Group: 1/2  
SRO/RO/Both Level: B  
K/A Importance: 3.1/3.4  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM ~~022~~ Ro 47  
\*HNUM SRc 22  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295018 2.2.24 {3.3/3.7}  
\*QUESTION

The plant is operating at 100% power. All RBCCW pumps are tripped and cannot be restarted. Div 1 EECW pump tripped and cannot be restarted, but Div 2 EECW pump is running. What action(s) is (are) required?

- A. Both Reactor Recirculation Pumps A & B must be stopped within 2 minutes.
- B. The Reactor Recirculation Pump A must be stopped within 2 minutes.
- C. The Reactor Recirculation Pump B must be taken to its minimum speed immediately.
- D. The Reactor Recirculation Pump A must be taken to its minimum speed immediately.

\*ANSWER B.

\*REFERENCE ST-OP-315-0067-001, Rev.13; 20.127.01, Rev. 24

K/A Number:	295018 2.2.24
Direct/New/Modified:	Modified
Tier/Group:	1/2
SRO/RO/Both Level:	B
K/A Importance:	3.3/37
Level of Difficulty (1 - 5):	2
Memory/Comprehension-Analysis:	CA

\*QNUM ~~023~~ Ro 48  
\*HNUM SRO 23  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295020 AA2.01 {3.6/3.7}  
\*QUESTION

The plant is operating at 100% power. An I&C surveillance for Reactor Water Level 1 instruments is in progress. Due to an error, an inadvertent Reactor Water Level 1 signal is initiated. The following responses are observed:

LPCI pumps running  
CS pumps running  
EDGs running

Annunciators:

1D29 RHR INIT REAC VESSEL H2O LEVEL L1 alarmed  
1D31 ADS DRYWELL PRESS BYPASS TIMER INITIATE A/B LOGIC alarmed

How will primary containment pressure be effected from this inadvertent Reactor Water Level 1 signal?

- A. Increase due to EECW actuation
- B. Increase due to single speed cooling fans tripping
- C. Decrease due to 2 speed cooling fans shifting to fast speed
- D. Decrease due to RBCCW isolation

\*ANSWER B.

\*REFERENCE: 23.601, Rev.25 (fan trip, 2 speed shift to slow); ST-OP- 315-0067-001, Rev.13 (RBCCW/EECW, actuation signals that are not L1);NOTE: a. EECW would not actuate/isolate until DW press is 1.68#; c. these fans shift to slow speed; d. RBCCW would not isolate on L1

K/A Number: 295020 AA2.01  
Direct/New/Modified: New  
Tier/Group: 1/2  
SRO/RO/Both Level: B  
K/A Importance: 3.6/3.7  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM     ~~024~~     Ro 49  
\*HNUM             SRO 24  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC        341     Fermi 2  
\*RTYP       BWR-GE4  
\*EXLEVEL B  
\*EXMNR     Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA        295022 AK1.01 {3.3/3.4}  
\*QUESTION

The plant is in Condition 2 at approximately 500 psig. CRD Pump A trips and CRD Pump B cannot be immediately started. Five accumulator trouble lights are lit, all on withdrawn control rods and annunciator 3D10, CRD ACCUMULATOR TROUBLE has alarmed.

What IMMEDIATE ACTION is required?

- A. Place the Reactor Mode Switch in SHUTDOWN.
- B. Attempt to restart at least one CRD Pump within 20 minutes.
- C. Commence a normal reactor shutdown.
- D. Verify the cause of the accumulator trouble, and drain or recharge as necessary.

\*ANSWER        A.

\*REFERENCE        20.106, Rev. 2/2/01; ARP 3D10, Rev.11

K/A Number:                    295022 AK1.01  
Direct/New/Modified:            Modified  
Tier/Group:                    1/2  
SRO/RO/Both Level:            B  
K/A Importance:                3.3/3.4  
Level of Difficulty (1 - 5):    3  
Memory/Comprehension-Analysis: CA

\*QNUM 025 Ro 50  
\*HNUM SAo 25  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Pelton  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295026 EK3.04 {3.7/4.1}  
\*QUESTION

Which ONE of the following statements correctly describes the relationship between the Boron Injection Initiation temperature (BIIT) curve and the Heat Capacity Limit (HCL) curve?

- A. The HCL curve is based on reactor pressure and is used to determine how long an operator has until the limits of the BIIT curve are reached.
- B. Operating within the constraints of the BIIT curve ensures sufficient boron will be injected into the core to shut down the reactor before the suppression pool reaches the limits of the HCL curve.
- C. Operating in accordance with the more restrictive of either the BIIT curve or the HCL curve ensures the limits of the Primary Containment Pressure Limit curve will not be reached.
- D. The BIIT curve and the HCL curve collectively monitor the energy additions into the suppression pool to prevent exceeding the limits of the Pressure Suppression Pressure curve.

\*ANSWER b.

\*REFERENCES ST-OP-802-3002-001, Revision 1.

K/A Number:	295026 EK3.04
Direct/New/Modified:	Direct
Tier/Group:	1/2
SRO/RO/Both Level:	B
K/A Importance:	3.7/4.1
Level of Difficulty (1 - 5):	3
Memory/Comp-Analysis:	M

\*QNUM ~~026~~ R051  
\*HNUM SR026  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Pelton  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295028 G2.1.33 {3.4/4.0}  
\*QUESTION

The following plant conditions exist following a break in the AA@ recirculation system piping:

Reactor mode switch position.....Shutdown  
Reactor coolant temperature.....220 °F  
Drywell temperature.....200 °F  
Drywell pressure.....1.4 psig

Which of the following correctly describes the Technical Specification (TS) applicability in regards to the condition of the drywell?

- A. TS do not apply under emergency conditions.
- B. TS applies due to high drywell temperature.
- C. TS do not apply since applicable entry conditions do not exist.
- D. TS applies due to high drywell pressure.

\*ANSWER b.

\*REFERENCES Technical Specification 3.6.1.5, ST-OP-802-3001-001, Revision 2.

K/A Number:	295028 G2.1.33
Direct/New/Modified:	New
Tier/Group:	1/2
SRO/RO/Both Level:	B
K/A Importance:	3.4/4.0
Level of Difficulty (1 - 5):	2
Memory/Comp-Analysis:	CA

\*QNUM .027 R052  
\*HNUM SRO 27  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Pelton  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295029 EK1.01 {3.4/3.7}

\*QUESTION  
EOP 29.100.01, Sheet 2, "Primary Containment Control" requires drywell sprays to be terminated if torus water level exceeds +54 inches. The impact of continued operation of drywell sprays with torus level in excess of +54 inches would be:

- A. Drywell spray would be rendered ineffective due to the lower ring of drywell spray nozzles being submerged.
- B. Drywell sprays would be operated outside the drywell spray initiation limit curve.
- C. The static head resulting from the level of water in the torus would cause the drywell spray nozzle flow to exceed design capacity.
- D. Post-spray drywell vacuum relief cannot be assured due to the submergence of the torus-to-drywell vacuum breakers.

\*ANSWER d.

\*REFERENCES ST-OP-802-3004-001, Revision 2; EOP 29.100.01, Sheet 2, Revision 8; EOP 29.100.01, Sheet 6, Revision 8.

K/A Number:	295029 EK1.01
Direct/New/Modified:	New
Tier/Group:	1/2
SRO/RO/Both Level:	B
K/A Importance:	3.8/4.1
Level of Difficulty (1 - 5):	2
Memory/Comp-Analysis:	M

\*QNUM ~~028~~ RO53 } Replaced question  
\*HNUM SRO28 }  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295030 EA1.01 {3.6/3.8}  
\*QUESTION

Both HPCI and RCIC are operating to maintain adequate core cooling. Torus water level is lowering, current level is -100 inches.

29.100.01 Sh 6, NOTE 4, states:

"Below -16 inches Torus water level OR above 164 deg. F Torus water temperature, operation of LPCI, CS, HPCI or RCIC above the NPSH or vortex limit may result in equipment damage. HPCI vortex limit is -94 inches. RCIC vortex limit is -105inches."

At this point you would:

- A. Continue to operate HPCI only irregardless of vortex limits.
- B. Continue to operate both HPCI and RCIC irregardless of vortex limits.
- C. Shutdown HPCI only to prevent exceeding vortex limits.
- D. Shutdown both HPCI and RCIC to prevent exceeding vortex limits.

\*ANSWER B

\*REFERENCES EQ-OP-3004-000-0012-001; EOP 29.100.01 S6 Rev 8; ST-OP-802-3002-001, Rev 1 Sect III.D.

K/A Number:	295030 EA1.01
Direct/New/Modified:	Modified
Tier/Group:	1/2
SRO/RO/Both Level:	B
K/A Importance:	3.8/4.1
Level of Difficulty (1 - 5):	2
Memory/Comp-Analysis:	CA

\*QNUM 029 Ro 54  
\*HNUM SRo 29  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295033 EK2.01 {3.8/4.0}  
\*QUESTION

During plant operation at 99% power, an unisolatable HPCI steam supply line event causes the HPCI room and RBSB SE corner room to exceed their respective Max Safe level of 5 R/hr as listed in Table 14, Secondary Containment Rad Levels. Based on this information, which of the following actions will be directed:

- A. Perform an orderly reactor shutdown and Emergency Depressurization.
- B. Scram and Emergency Depressurization.
- C. Perform an orderly reactor shutdown only.
- D. Scram only.

\*ANSWER c.

\*REFERENCES Concept from ST-OP-802-3005-001, Rev. 1, Sect.II.D.9.

K/A Number:	295033 EK2.01
Direct/New/Modified:	New
Tier/Group:	1/2
SRO/RO/Both Level:	B
K/A Importance:	3.8/4.0
Level of Difficulty (1 - 5):	3
Memory/Comp-Analysis:	M

\*QNUM ~~030~~ R0 55  
\*HNUM SR0 30  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Hopkins  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295034 EA2.01 {3.8/4.2}  
\*QUESTION

The following actions automatically occurred as the result of high radiation:  
Reactor Building HVAC tripped  
SGTS started  
Control Center HVAC aligned to recirculation mode

Based on the information provided above, CHOOSE the radiation monitor and indicated radiation level that caused the automatic actions.

- A. Reactor Building Vent Exhaust = 14,500 cpm.
- B. Fuel Pool Vent Exhaust = 7.3 mRem.
- C. Turbine Building Vent Exhaust = 11,500 cpm.
- D. Radwaste Building Vent Exhaust = 14.5 mRem.

\*ANSWER B

\*REFERENCES AOP 20.710.01, Refueling Floor High Radiation

K/A Number:	295034 EA2.01{3.8/4.2}
Direct/New/Modified:	New
Tier/Group:	1/2
SRO/RO/Both Level:	B
K/A Importance:	3.8/4.2
Level of Difficulty (1 - 5):	2
Memory/Comp-Analysis:	CA

\*QNUM     03T     Ro 56  
            SRO 31  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE  
 \*FAC       341     Fermi 2  
 \*RTYP      BWR-GE4  
 \*EXLEVEL B  
 \*EXMNR     Pelton  
 \*QVAL  
 \*SEC  
 \*SUBSORT  
 \*KA        295038 EK2.03 {3.6/3.8}  
 \*QUESTION

As a result of an accident, the control center HVAC system automatically realigned to the RECIRCULATION mode. A subsequent off-site release resulted in the initiation of a Hi-Hi radiation signal on both the normal and emergency makeup air intake radiation monitors. The CCHVAC system emergency air intake selector switch is in AUTO. What impact does the offsite release have on the continued operation of CCHVAC?

- A. The emergency air intakes will isolate pending the results of the 5-minute intake radiation monitor sample period.
- B. The CCHVAC system will automatically realign to the PURGE mode in order to reduce the radiation levels at the air intakes.
- C. The emergency air intakes will remain open unless either the north or south emergency air intake radiation levels decrease to below the Hi-Hi trip setpoint.
- D. The CCHVAC system will automatically TRIP stopping the supply fan, supply fan heaters, roll filter motor, return air fan, and electrostatic filter.

\*ANSWER           c.

\*REFERENCES       ST-OP-315-0073-001, Revision 15; Station drawing 6M721-5736-3, Revision F.

K/A Number:	295038 EK2.03
Direct/New/Modified:	New
Tier/Group:	1/2
SRO/RO/Both Level:	B
K/A Importance:	3.6/3.8
Level of Difficulty (1 - 5):	3
Memory/Comp-Analysis:	CA

\*QNUM 032 Ro 57  
\*HNUM SRO 32  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Pelton  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 600000 AA2.13 {3.2/3.8}  
\*QUESTION

The reactor plant is operating at 100% power. An auxiliary operator contacts the control room and reports that they observed a fire in the auxiliary relay room. The operator also reports that it appears that a number of electrical panels have been significantly damaged.

Which of the following describes the impact that the above conditions have on continued operation of the reactor plant:

- A. Plant at-power operation can continue.
- B. The plant will be immediately shutdown in accordance with GOPs 22.000.03 and 22.000.04.
- C. Plant at-power operation can continue provided the fire is extinguished within one hour from the time the fire was initially reported and the fire brigade leader has initiated a fire alarm incident report.
- D. The reactor will be scrammed using the manual scram pushbuttons.

\*ANSWER d.

\*REFERENCES AOP 20.000.22, L/R; AOP 20.000.18, L/R.

K/A Number: 600000 AA2.13  
Direct/New/Modified: Modified (Fermi exam bank EQ-OP-802-2017-000-001-003)  
Tier/Group: 1/2  
SRO/RO/Both Level: B  
K/A Importance: 3.2/3.8  
Level of Difficulty (1 - 5): 2  
Memory/Comp-Analysis: CA

\*QNUM 034 R058  
\*HNUM SRO 33  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Peterson  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295032 K1.03 [3.5/3.9]  
\*QUESTION

The plant is operating at full power when annunciator 1D66, Steam Leak Detection Ambient Temp High, is received, and RWCU receives an isolation signal. An operator sent to RR H11-P614 reports the following:

G33-TSE-N600A, RWCU Pump Rm A, indicates 181°F  
G33-TSE-N600B, RWCU Pump Rm B, indicates 138°F  
G33-TSE-N600C, RWCU Hx Rm, indicates 122°F

Which one of the following actions is required?

- A. Restore RWCU System operation using only RWCU Pump A.
- B. Verify RWCU System is isolated.
- C. Depress the Manual Scram Pushbuttons.
- D. Place the Mode Switch in SHUTDOWN, and initiate Emergency depressurization.

\*ANSWER B

\*REFERENCE 29.100.01 Sheet 5 ; Bank Quest. Ref, EQ-OP-802-3005-000-0001-007  
APPLICANT only requires Table 12 from EOP 29.100.01 Sh 5

K/A Number: 295032 K1.03 [3.5/3.9]  
Direct/New/Modified: Direct  
Tier/Group: 1/3  
SRO/RO/Both Level: Both  
K/A Importance: 3.5  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Comprehension

\*QNUM 035 R059  
\*HNUM SNo 34  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Peterson  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295035 EA 1.02 {3.8/3.8}  
\*QUESTION

Which one of the following indicates a loss of Secondary Containment Integrity?

- A. Both trains of Standby Gas Treatment System are inoperable.
- B. T4100-F011, RBHVAC Sply Inbd Iso Damper INOPERABLE and CLOSED.
- C. Annunciator 8D24, RAIL AIRLOCK DOOR SEAL PRESS LOW activated.
- D. T41-R800B, Div 2 CR And RB Diff Press Rec (COP H11-P817) indicating -0.130 inches water gauge.

\*ANSWER A

\*REFERENCE 20.000.11 ; 23.404; ARP 17D46; ST-OP-802-2007-001;  
Bank Ques ref. EQ-OP-802-2007-000-0001-005

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K/A Number: 295035 EA 1.02 {3.8/3.8}  
Direct/New/Modified: Modified  
Tier/Group: 1/3  
SRO/RO/Both Level: Both  
K/A Importance: 3.8  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: CA 1

*Memory*

\*QNUM ~~036~~ R060  
\*HNUM SRO 35  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Peterson  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295036 K2.03 {2.8/3.1}

\*QUESTION

29.100.01, SH 5, Secondary Containment and Rad Release, directs operating available sump pumps whenever Secondary Containment area or sump levels exceed their Max Normal Operating levels. This action is based on:

- A. Minimizing the spread of containment within the Secondary Containment.
- B. Containing leakage from a primary system within systems design for storage of radioactive liquids.
- C. Preventing the uncontrolled release of liquid radioactive effluents from the Secondary Containment.
- D. Maintaining water levels below the point at which equipment required for safe shutdown will fail.

\*ANSWER D

\*REFERENCE ARP 2D82, 29.100.01 SH 5 ; Bank Quest. Ref.  
EQ-OP-802-3005-000-0001-004

K/A Number: 295036 K2.03 {2.8/3.1}  
Direct/New/Modified: Direct  
Tier/Group: 1/3  
SRO/RO/Both Level: Both  
K/A Importance: 2.8  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 037 R061  
\*HNUM 5 R0 36  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 201001 K2.03 {3.5/3.6}  
\*QUESTION

Select the set of statements that match the information requested.

The backup scram valves are (1) powered solenoid valves; and these solenoid valves (2) to isolate and vent off the scram air header.

- A. (1) 130 VDC; and (2) energize.
- B. (1) 130 VDC; and (2) deenergize.
- C. (1) 120 VAC; and (2) energize.
- D. (1) 120 VAC; and (2) deenergize.

\*ANSWER A

\*REFERENCE ST-OP-315-0010-001 & 0027-001,  
Quad Cities 1990/03/19 exam question #13913

K/A Number: 201001 K2.03 [3.5/3.6]  
Direct/New/Modified: Direct  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 3.5  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 040 Ro 62  
\*HNUM SRO 37  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 203000 A1.08 (3.7/3.8)  
\*QUESTION

Given the following conditions:

- The plant was operating at 100% power when a LOCA occurred.
- Drywell pressure increased to 1.90 psig.
- All equipment responded to the LOCA as designed.
- Fifteen (15) minutes after the LOCA occurred, a Loss Of Offsite Power (LOOP) to Division I 4160v ESF buses occurred.
- All equipment responded as designed to the Div I LOOP.

Based on the conditions described above, select the statement which correctly describes the response of Division I LPCI to the LOCA then to the Loss Of Offsite Power.

	<b>LOCA Response</b>	<b>LOOP Response</b>
A.	Auto start signal	Auto shed from bus, then auto restarted
B.	Start permissive signal	Load sequence is auto reset, then auto restarted
C.	Auto start signal	Auto shed from bus, then must be manually started
D.	Start permissive signal	Load sequence must be manually reset, then manually restarted

\*ANSWER A

\*REFERENCE Emergency Diesel Generators - ST-OP-315-0065-001

Direct/New/Modified: New  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 3.7  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Analysis

\*QNUM 041 Ro 63  
\*HNUM SAD 38  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 203000 A4.07 (4.5/4.5)  
\*QUESTION

The plant is in COLD SHUTDOWN with RHR loop "A" operating in the Shutdown Cooling Mode. The Drywell is inerted. A "Fill and Vent" is in progress on RHR loop "B" per SOP 23.205 "Residual Heat Removal System" with E1100-F088, RHR Keep Fill Station Bypass Valves CLOSED and E1150-F015, E1150-F017B, E1100-F208, RHR Div 2 Keep Fill Isolation Valves OPEN.

Which of the following statements is true with respect to expected reactor pressure vessel (RPV) water level indications in the control room?

- A. RPV level will increase because "keep fill" flow path will be lined up to the RPV.
- B. RPV level will increase because water will be siphoned into the RPV from the TORUS.
- C. RPV level will decrease because a siphon path is set up through the injection line vent valves.
- D. RPV level will remain the same, because the amount of water injected is balanced by the amount drained through the vent valves.

\*ANSWER A

\*REFERENCE  
SOP 23.205  
EQ-OP-315-0241-000-004-001

Direct/New/Modified: Modified  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 4.5  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: Analysis

\*QNUM ~~043~~ R064  
\*HNUM SRO 39  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 209001 K2.03  
\*QUESTION

A SCRAM is initiated by high drywell pressure. Initial conditions after the scram are as follows:

All control rods are inserted to 00.  
RPV pressure is 900 psig and trending down very slowly.  
Drywell pressure is >2.02 psig and trending up  
RPV level is 50 inches and trending down.

Subsequently, emergency depressurization is initiated with reactor pressure >750 psig. A complete loss of Division I ESS 130V D. C. occurs when the ADS SRV=s are opened.

Given these conditions, which one of the following statements describes the impact on operation of the Div I Core Spray System (CSS)?

- A. DIV I CSS pumps will automatically shutdown due to a loss of control power.
- B. DIV I CSS Inboard/Outboard Isolation Valves, F005A/F004A will automatically close.
- C. Div I CSS Outboard Isolation Valve, F004A, must be locally opened by an operator.
- D. DIV I CSS Inboard Isolation Valve, F005A will remain open and Outboard Isolation Valve, F004A automatically open when RPV pressure is < 461.

\*ANSWER C

\*REFERENCE

STP-OP-315-0040-001, figure 4  
K/A Number: 209001 K2.03 {2.9/3.1}  
Direct/New/Modified: New  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 2.9  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: Analysis

\*QNUM 044 *Ro65*  
 \*HNUM *SRO40*  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2001/06/14  
 \*FAC 341 Fermi 2  
 \*RTYP BWR-GE4  
 \*EXLEVEL B  
 \*EXMNR PTYOUNG  
 \*QVAL  
 \*SEC  
 \*SUBSORT  
 \*KA 209001 A1.08  
 \*QUESTION

The reactor was operating at 80% power and the Division II Core Spray system was in full flow test when a LOCA occurred. The following conditions exist after the LOCA:

- Control rods all rods in
- RPV pressure 250 psig (lowering)
- RPV water level +40" (lowering)
- Drywell pressure 19 psig (rising)
- ECCS Systems operating as designed

Based on these conditions:

the Div II Core Spray Pumps are (1)  
 the Div II Core Spray System Minimum Flow Bypass Valve F031B is (2)  
 the Div II Core Spray System full flow test valve F015B is (3)  
 the Div II Core Spray System injection line check valve F006B is (4) ?

- A. (1) not running (2) closed (3) closed (4) closed
- B. (1) not running (2) open (3) closed (4) closed
- C. (1) running (2) closed (3) closed (4) open
- D. (1) running (2) open (3) open (4) open

\*ANSWER C

\*REFERENCE ST-OP-315-0040-001  
 EQ-OP-202-0501-000-A003-021, 22, & 25  
 EQ-OP-315-0140-000-0005-006

K/A Number: 209001 A1.08 {3.3/3.2}  
 Direct/New/Modified: Modified  
 Tier/Group: 2/1  
 SRO/RO/Both Level: Both  
 K/A Importance: 3.3  
 Level of Difficulty (1 - 5): 3  
 Memory/Comprehension-Analysis: Analysis

\*QNUM 045 Po 66  
\*HNUM SRO 41  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 211000 K1.05  
\*QUESTION

The P603 operator has rotated the SLC injection control switch to the Pump A position. No other isolation signals have been present for the RWCU system. How does the RWCU system respond?

- A. G3352-F001, RWCU SUPPLY INBD ISO VLV, Closes  
G3352-F004, RWCU SUPPLY OTBD ISO VLV, Closes
- B. G3352-F004, RWCU SUPPLY OTBD ISO VLV, Closes  
G3352-F220, RWCU TO FW OTBD CTMT ISO VLV, Closes
- C. G3352-F001, RWCU SUPPLY INBD ISO VLV, Closes  
G3352-F119, RWCU SUPPLY SUCT ISO VLV, Closes
- D. G3352-F220, RWCU TO FW OTBD CTMT ISO VLV, Closes  
G3352-F119, RWCU SUPPLY SUCT ISO VLV, Closes

\*ANSWER B

\*REFERENCE

EQ-OP-315-0108-000-0005-004  
ST-OP-315-0008  
ST-OP-315-0014

K/A Number: 211000 K1.05 {3.4/3.6}  
Direct/New/Modified: Direct  
Tier/Group: 2/1  
SRO/RO/Both Level: B  
K/A Importance: 3.4  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 046 Ro 67  
\*HNUM SRO42  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 212000 K4.03 {3.0\*/3.1\*}  
\*QUESTION

Which of the following Reactor Protection System (RPS) components provide interlocks for the specific purpose of preventing multiple power sources from supplying the same RPS bus simultaneously?

- A. NORMAL-ALTERNATE Selector Switch.
- B. RPS MG motor ON and OFF pushbuttons.
- C. Electrical Protection Assembly (EPA) circuit breakers.
- D. RPS Alternate Feed Transformer supply breakers and RPS MG supply breaker Anti-Bus Transfer device.

\*ANSWER A

\*REFERENCE

SOP 23.316, Rev. 40 and ST-OP-315-0027-001, Rev. 10

K/A Number: 212000 K4.03 {3.0\*/3.1\*}  
Direct/New/Modified: New  
Tier/Group: 2/1  
SRO/RO/Both Level: B  
K/A Importance: 3.0\*  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~047~~ R068  
\*HNUM SR043  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 215003 K6.02 {3.6/3.8}  
\*QUESTION

The loss of Division II 24/48 VDC will result in:

- A. INOP trips generated for APRM Channels B/D.
- B. INOP trips generated for IRM Channels B/F/D/H.
- C. Loss of power to the Radwaste Effluent Radiation Monitor (D11-K604) and a close signal to G1100-F733 (Blowdown Discharge Trip valve).
- D. The following Primary Containment Isolation valves closing: T4803-F601, DW INLET ISO VLV; T4803-F602, DW EXH ISO VLV; T4800-F404, TORUS INLET ISO VLV; and T4600-F400, TORUS EXH ISO VALVE.

\*ANSWER B

\*REFERENCE ST-OP-315-0064-002, DC Electrical Distribution, ST-OP-315-0023-001, Intermediate Range Monitoring, and AOP, 20.300.2448VDC

K/A Number: 215003 K6.02 {3.6/3.8}  
Direct/New/Modified: New  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 3.8  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 049 Ro 69  
\*HNUM SRO 44  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 215005 A3.05 {3.3/3.3}  
\*QUESTION

The plant is stable at 90% RTP, control rods are being withdrawn to raise the flow control line. Control rod 26-27 is selected for withdrawal. APRM #2=s Recirculation Flow Processing unit fails downscale, what protective functions, if any, automatically occur?

- A. No protective functions occur.
- B. Control Rod Block due to APRM Simulated Thermal Power Upscale.
- C. Half SCRAM and Control Rod Block due to APRM (#2) Simulated Thermal Power Upscale and Trip.
- D. Control Rod Block due to APRM (#2) Simulated Thermal Power Upscale Trip and RBM (B) INOP.

\*ANSWER B

\*REFERENCE

ST-OP-315-0024-001  
EQ-OP-315-0124-000-0001-002

K/A Number: 215005  
Direct/New/Modified: Modified  
Tier/Group: 2/1  
SRO/RO/Both Level: B  
K/A Importance: 3.3  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Analysis

\*QNUM 051 R070  
\*HNUM  
\*ANUM SRO 45  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA .217000.K5.02 {3.1/3.1}  
\*QUESTION

Given the following conditions:

- Reactor Core Isolation Cooling (RCIC) is operating in the Test Mode
- E51-R614, RCIC Pump Flow Controller is in "Automatic"
- RCIC turbine speed is 2950 rpm
- P1100-F606, CST Common Rtrn Iso Valve is OPEN
- E41-K820, Test Iso/PCV E41-F011 Ctrlr, is in MANUAL at 20% OPEN

Which of the following describes the expected response of RCIC turbine speed and system flow if the operator throttles PCV E41-F011 an additional 5% in the "CLOSED" direction?

(Compare the conditions after they stabilize to before the valve was throttled.)

- A. RCIC turbine speed lowers  
System indicated flow goes down
- B. RCIC turbine speed lowers  
System indicated flow remains unchanged
- C. RCIC turbine speed raises  
System indicated flow remains unchanged
- D. RCIC turbine speed raises  
System indicated flow goes up

\*ANSWER C  
\*REFERENCE ST-OP-315-0043-001, ST-OP-315-0039-001, SOP 23.206  
INPO Question #8525, Hope Creek Unit 1

K/A Number: .217000.K5.02 {3.1/3.1}  
Direct/New/Modified: Direct  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 3.1  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Comprehension

\*QNUM 052 Ro 71  
\*HNUM  
\*ANUM SRO 46  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 218000 K5.01 {3.8/3.8}  
\*QUESTION

A small break LOCA has occurred in the drywell. RCIC and CRD are the only high pressure injection sources available. All low pressure ECCS pumps are operating on minimum flow.

At time = 0, the following conditions exist:

RPV Pressure is 875 psig and slowly lowering.  
RPV water level is 42 inches and lowering at 5 inches per minute.  
Drywell Pressure is 1.3 psig and raising at 0.1 psig per minute.

Assuming NO operator action, ADS will initiate in?

- A. 3 minutes 49 seconds.
- B. 5 minutes 33 seconds.
- C. 8 minutes 33 seconds.
- D. 10 minutes 49 seconds.

\*ANSWER B

\*REFERENCE  
ST-OP-315-0042-001  
EQ-OP-315-0142-000-0004-010

K/A Number: 218000  
Direct/New/Modified: Modified  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 3.8  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Analysis

\*QNUM 053 8072  
\*HNUM SRO47  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 223001 K4.03 {3.7/3.8}  
\*QUESTION

The plant was operating at 100% power when a transient caused a reactor scram. All systems responded as designed. The following are current plant conditions:

- Reactor power is 0% with all rods fully inserted.
- RPV pressure is 735 psig and trending up.
- RPV level is 164 inches wide range level and trending up.
- Drywell pressure is 0.7 psig and steady.

Assuming **NO** operator action has been taken, which of the following correctly identifies the plant response to these conditions?

- A. Drywell and Suppression Pool Ventilation System isolation has occurred.
- B. Torus Water Management System isolation has occurred.
- C. Nitrogen Inerting System isolation has occurred.
- D. Main Steam Line isolation has occurred.

\*ANSWER D

\*REFERENCE  
ST-OP-315-0048-001  
SOP 23.601

K/A Number: 223001 K4.03 {3.7/3.8}  
Direct/New/Modified: New  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 3.7  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: CA

\*QNUM 054 Ro 73  
\*HNUM  
\*ANUM SRo 48  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 223001 K5.08 {2.7/2.8}  
\*QUESTION

The plant is in Mode 3, RHR 'A' has recently been placed in service in the Shutdown Cooling Mode. Due to distractions during shift turnover the cooldown rate has not been maintained and the following conditions exists:

- B31-N111A Reactor Vessel (Shutdown Cooling Cut-in Permissive Interlock) Pressure - High indicates 86 psig
- B31-N111B Reactor Vessel (Shutdown Cooling Cut-in Permissive Interlock) Pressure - High indicates 100 psig

Which of the following correctly identifies the Residual Heat Removal System response to these plant conditions?

- A. All PCIS Group 4 valves will isolate.
- B. Valves E1150- F009, Shutdown Cooling Suction Valve, and E1150- F022, RPV Head Spray Isolation Valve, will isolate.
- C. Valves E1150- F008, Shutdown Cooling Suction Valve, and E1150- F023, RPV Head Spray Isolation Valve will isolate.
- D. RHR "A" will continue to operate in the Shutdown Cooling Mode.

\*ANSWER C

\*REFERENCE 23.601

K/A Number: 223001 K5.08 {2.7/2.8}  
Direct/New/Modified: New  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 2.7  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: M

\*QNUM 056  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 239002 K6.04 {3.0/3.2}  
\*QUESTION

R074  
SR049

The plant has experienced a complete loss of Division 1 DC busses.  
Which SRVs are available for manual pressure control?

- A. B21-F013H and F013F.
- B. B21-F013M and F013F.
- C. B21-F013A and F013J.
- D. B21-F013E and F013J.

\*ANSWER B

\*REFERENCE  
EQ-OP-202-0201-000-0208-001

K/A Number: 239002 K6.04 {3.0/3.2}  
Direct/New/Modified: Direct  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 3.0  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~058~~ 8075  
\*HNUM SR0 50  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 241000 K1.08 {3.6/3.7}  
\*QUESTION

The plant is operating at 20% power.  
The Generator is providing an output of 200MW.  
The TURBINE FLOW LIMIT is set at 25%.  
The REACTOR FLOW LIMIT is set at 115%.  
The PRESSURE REGULATOR is set at 944 psig.  
The Turbine Bypass Valves are CLOSED.  
The SPEED/LOAD is set at 300MW.

If reactor power were INCREASED to 45% power, without any further operator action, which of the following would occur?

	<b>Turbine Control Valves</b>	<b>Turbine Bypass Valves</b>
A.	Would OPEN further	Would OPEN
B.	Would OPEN further	Remain CLOSED
C.	Remain at their PRESENT position	Would OPEN
D.	Remain at their PRESENT position	Remain CLOSED

\*ANSWER A

\*REFERENCE  
Fermi 2 Bank, EQ-OP-315-0145-000-0010-005  
LaSalle 2000 NRC exam Question #58  
K/A Number: 241000 K1.08  
Direct/New/Modified:Direct  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance:3.6  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Comprehension

\*QNUM     059                   Ro 76  
\*HNUM  
\*ANUM                           SR051  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE    2001/06/14  
\*FAC      341      Fermi 2  
\*RTYP     BWR-GE4  
\*EXLEVEL   B  
\*EXMNR     PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA        259001 A1.04 {2.8/2.7}  
\*QUESTION

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

- Master Feedwater Level Control Station, C32-R618 is in Auto
- North Reactor Feed Pump Controller, C32-R616A is in Auto
- South Reactor Feed Pump Controller, C32-R616B is in Manual
- Level Control Mode Select switch in three element

The N RFP Minimum Flow Control Valve, F400B, fails open due to a loss of air to the valve. Assuming no operator action, which of the following describes the Feedwater system response to these plant conditions?

- A. The S RFPT speed increases and the N RFPT speed remains the same.
- B. The N RFPT speed increases and the S RFPT speed remains the same.
- C. This failure will cause DCS logic to automatically force the South Reactor Feed Pump Controller, C32-R616B, to automatic and both RFPT speeds increase.
- D. This failure will cause DCS logic to automatically force the South RFP Minimum Flow Isolation Valves, F615, to close allowing the FWCS to maintain RPV level.

\*ANSWER        B

\*REFERENCE     ST-OP-315-0046 and ST-OP-315-0007

K/A Number: 259001 A1.04 {2.8/2.7}  
Direct/New/Modified: New  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 2.8  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Comprehension

*060* *R077*  
*SR052*  
\*QNUM  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 259002 A3.06 {3.0/3.0}  
\*QUESTION

The Reactor Feed Pumps are being controlled with the Feedwater Reactor Level Control Station in AUTOMATIC and the Startup Level Control Valve (SULCV) Mode Switch in RUN, when a Reactor Scram occurs. Given the following post scram feedwater actions:

- 1 - High/Low RFP speed limited.
- 2 - RFP motor operated discharge valve receives full closed signal.
- 3 - SULC transfer to AUTO.
- 4 - Level setdown initiated.

Assuming no operator action is taken, which action(s) would occur within 15 seconds following the Scram?

- A. 1 And 2.
- B. 2 And 3.
- C. 1.
- D. 4.

\*ANSWER D

\*REFERENCE ST-OP-315-0046-001; EQ-OP-315-0146-000-0004-004

K/A Number: 259002 A3.06 {3.0/3.0}  
Direct/New/Modified: Direct  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 3.0  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~06T~~ *Ro 78*  
\*HNUM *SRO 53*  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 261000 K1.07 {3.1/3.2}  
\*QUESTION

Following a Loss of Coolant Accident, the Standby Gas Treatment System has been in service for several hours venting the drywell and torus in accordance with 29.ESP.07, Primary Containment Venting. Chemistry reports that stack release rates are elevated. Which of the following situations could explain the elevated release?

- A. Prefilter differential pressure increase of 5.0 inches water.
- B. Moisture Separator differential pressure increase of 1.0 inches water
- C. Charcoal Adsorber temperature exceeding the temperature switch setting.
- D. Charcoal Adsorber Blanket Heater Temperature Controller failure below the control setpoint.

\*ANSWER C

\*REFERENCE ST-OP-315-0020-001, EQ-OP-315-0120-000-0007-003, and EQ-OP-315-0120-000-0008-001

K/A Number: 261000 K1.07 {3.1/3.2}  
Direct/New/Modified: Modified  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 3.1  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: Comprehension

\*QNUM ~~063~~ 079  
\*HNUM 580 54  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 264000 K3.01 {4.2/4.4}  
\*QUESTION

A loss of offsite power occurred and the following conditions exist:

- 345kV System deenergized
- 120kV System deenergized
- 13.8kV Peaker Bus 1-2B deenergized
- Div 1 EDGs running and tied to the ESF Buses
- Div 2 EDGs failed to start

Operator actions have yet to be taken. Assuming all other systems operate as expected, which of the following Low Pressure ECCS pump configurations would be available during this event?

- A. RHR Pump A & Core Spray Pump A  
RHR Pump C & Core Spray Pump C
- B. RHR Pump C & Core Spray Pump C  
RHR Pump B & Core Spray Pump B
- C. RHR Pump B & Core Spray Pump B  
RHR Pump D & Core Spray Pump D
- D. RHR Pump A & Core Spray Pump A  
RHR Pump D & Core Spray Pump D

\*ANSWER A

\*REFERENCE EQ-OP-202-0201-000-0202-006, ST-OP-0065-001 & 0058-001  
6SD721-2500-01, One Line Dia Plant 4160V & 480V System Service Unit 2  
K/A Number: 264000  
Direct/New/Modified: Modified  
Tier/Group: 2/1  
SRO/RO/Both Level: Both  
K/A Importance: 4.2  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 006 *Rd 80*  
\*HNUM *SR055*  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 202001 A3.07 {3.3/3.3}  
\*QUESTION

The North RR MG Set is being returned to service in accordance with SOP 23.138.01, "REACTOR RECIRCULATION SYSTEM," Section 8.0, "RR MG SET STARTUP WITH REACTOR NOT SHUT DOWN UNDER ALL CONDITIONS."

Approximately 13 seconds after starting the North RR MG Set you observe the following:

The North RR MG Set Field Breaker is closed

The North RR MG Set ammeter has decreased to approximately 320 amps.

B3105-F031A, N RR Pump Discharge Valve red and green indicating lights extinguish.

Which of the following describes the response of the recirculation pump?

The North Recirculation Pump will:

- A. continue to run until manually tripped.
- B. trip on overcurrent due to runout flow.
- C. trip when the 105 second discharge valve timer times out.
- D. trip after a total of 15 seconds due to incomplete startup sequence.

\*ANSWER C

\*REFERENCE SOP 32.138.01 Reactor Recirculation System  
ST-OP-315-0004-001

K/A Number: 202001  
Direct/New/Modified: Modified  
Tier/Group: 2/2  
SRO/RO/Both Level: Both  
K/A Importance: 3.3  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Comprehension

\*QNUM 068 R081  
\*HNUM SRO 56  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR EQW B  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 205000 K3.02 {3.2/3.3}  
\*QUESTION

The Unit is in Mode 3 with both recirc pumps secured. Shutdown cooling is being provided by RHR loop A. Moderator temperature is 180°F, with a cooldown in progress. Then F007A the RHR Pump A/C Recirc Valve fails open. When the F007A valve is reclosed, vessel level has dropped to 186 inches on the Narrow Range level indicators.

Which of the following is a concern?

- A. RPV level is too low for continuous operation with only one loop of shutdown cooling.
- B. RPV level is too low for continuous operation with only one operating recirc pump.
- C. RPV level is low enough to generate a low level scram signal.
- D. RPV level is low enough to generate a RHR Shutdown Cooling Isolation signal.

\*ANSWER A  
\*REFERENCE TR 3.4.4

K/A Number: 205000 K3.02 {3.2/3.3}  
Direct/New/Modified: Modified  
Tier/Group: 2/2  
SRO/RO/Both Level: Both  
K/A Importance: 3.2/3.3  
Level of Difficulty (1 - 5): 4  
Memory/Comprehension-Analysis: CA

\*QNUM ~~072~~ Rv 82  
\*HNUM SR057  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 226001 K1.02 {2.9/3.1}  
\*QUESTION

Which statement correctly describes the Residual Heat Removal (RHR) system flow rate response for the given Mode of operation?

- A. Each RHR pump is mechanically restricted to prevent exceeding 10,000 gpm during LPCI injection.
- B. Either division of RHR can inject at the loop full flow rate of 14,000 gpm during RHR Shutdown Cooling Mode.
- C. Because of the size of the spray nozzles, Torus Spray Mode injection flow rate is not limited and can support full RHR division flow.
- D. Because of the size of the spray nozzles, Drywell Spray Mode injection flow rate is not limited and can support full RHR pump flow.

\*ANSWER D  
\*REFERENCE ST-OP-315-0041-001 and SOP 23.205

K/A Number: 226001  
Direct/New/Modified: New  
Tier/Group: 2/2  
SRO/RO/Both Level: Both  
K/A Importance: 2.9  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~074~~ Ro 83  
\*HNUM  
\*ANUM SRO 58  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 239001 K2.01 {3.2/3.3}

\*QUESTION

Which of the following statements correctly identifies the electrical power to the Main Steam Isolation Valve (MSIVs) isolation solenoids?

- A. E.S.S. Bus 72
- B. Modular Power Unit
- C. Uninterruptible Power Supply
- D. RPS Distribution Cabinet

\*ANSWER D  
\*REFERENCE ST-OP-315-0005-001

K/A Number: 239001  
Direct/New/Modified: New  
Tier/Group: 2/2  
SRO/RO/Both Level: Both  
K/A Importance: 3.2  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 076  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 262001 A4.02 {3.4/3.4}  
\*QUESTION

Ro 84  
SRO 59

Which of the following states the consequences of improperly setting the generator output voltage with respect to system voltage during manual synchronization?

- A. If generator output voltage is less than system voltage, a VAR flow will occur from the system to the generator.
- B. If generator output voltage is greater than system voltage, a VAR flow will occur from the system to the generator.
- C. If generator output voltage is less than system voltage, the generator will accelerate to increase voltage to match the system voltage.
- D. If generator output voltage is greater than system voltage, the generator will reduce speed to reduce voltage to match the system voltage.

\*ANSWER A

\*REFERENCE

BWR Fundamentals General Physics Corp - Ferm1 2

K/A Number: 262001 A4.02 {3.4/3.4}

Direct/New/Modified: New

Tier/Group: 2/2

SRO/RO/Both Level: Both

K/A Importance: 3.4

Level of Difficulty (1 - 5): 3

Memory/Comprehension-Analysis: Comprehension

\*QNUM 077 R085  
\*HNUM SRO60  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 262002 A4.01 {2.8/3.1}  
\*QUESTION

The plant is MODE 3. UPS "B" is being manually transferred from the alternate power supply to the normal power supply in accordance with SOP 23.308.01 "UNINTERRUPTIBLE POWER SUPPLY SYSTEM."

Select the statement which correctly identifies the main control room plant parameter indications impacted if improper operation results in the loss of UPS "B".

- A. B31-N028D, Recirc Pump B Discharge Pressure  
B31-N601B, Recirc Pump B Suction Temperature  
B31-N006B, Recirc Pump B Seal Cavity #1 Pressure
- B. B21-R610, RPV Core Level Recorder  
B21-R623A, Post Accident Monitoring Recorder  
B21-R604A, Wide Range Reactor Water Level Ind
- C. C32-R605A, Div I RPV Pressure  
C32-R607, Reactor Flow Recorder  
RPIS indications on Full Core Display
- D. C32-R603B & D MSL Flow  
C11-J601, Rod Worth Minimizer  
C32-R605B, Div II RPV Pressure

\*ANSWER D  
\*REFERENCE 20.300.SBO, 20.308, and 20.308.01

K/A Number: 262002 A4.01 {2.8/3.1}  
Direct/New/Modified: New  
Tier/Group: 2/2  
SRO/RO/Both Level: Both  
K/A Importance: 2.8  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~078~~  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 271000 A1.12 {3.1/3.5}

R086 }  
SR061 } Question Replaced

\*QUESTION  
The plant is operating at 96% power. The Off-Gas Radiation Monitor reading is 150mr/hr, and the Main Steam Line (MSL) Radiation Monitor reading is 1000mr/hr. Hydrogen Water Chemistry is then placed in service at 80 scfm hydrogen flow. 12 hours later, the Patrol NSO takes Off-Gas and MSL, radiation readings. What would be expected radiation levels at this time?

- A. MSL Rad = 1000 mr/hr  
Off-Gas Rad = 120 mr/hr
- B. MSL Rad = 2000 mr/hr  
Off-Gas Rad = 240 mr/hr
- C. MSL Rad = 5500 mr/hr  
Off-Gas Rad = 170 mr/hr
- D. MSL Rad = 11,000 mr/hr  
Off-Gas Rad = 340 mr/hr

\*ANSWER C  
\*REFERENCE ST-OP-315-1101; ST-OP-315-0035; 23.625; EQ-OP-1101-000-0005-005  
[licensee needs to verify the references for this bank question]

K/A Number: 271000 A1.12 {3.1/3.5}  
Direct/New/Modified: Direct  
Tier/Group: 2/2  
SRO/RO/Both Level: Both  
K/A Importance: 3.1  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: Comprehension

\*QNUM 080 R087  
\*HNUM  
\*ANUM SRO 62  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 286000 K2.02 {2.9/3.1}  
\*QUESTION  
Electric Fire Pump, C002, is powered from?

- A. 4160VAC Bus 11EB
- B. 4160VAC Bus 68K
- C. 4160VAC Bus 69K
- D. 4160VAC Bus 69J

\*ANSWER B

\*REFERENCE ST-OP-315-0072-001

K/A Number: 286000 K2.02 {2.9/3.1}  
Direct/New/Modified: New  
Tier/Group: 2/2  
SRO/RO/Both Level: Both  
K/A Importance: 2.9  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~081~~ R088  
\*HNUM SRO 63  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 290001 K1.02 {3.4/3.6}  
\*QUESTION

The Reactor Building to Suppression Pool vacuum relief system is composed of a self-actuated vacuum breaker and an air operated butterfly valve in series.

Which of the following describes how this system operates?

- A. A Reactor Building to Suppression Pool differential pressure of 0.25 psid actuates the vacuum breaker and butterfly valve to open.
- B. A Reactor Building to Suppression Pool differential pressure of 0.5 psid actuates the vacuum breaker to open and the butterfly valve to open.
- C. A Reactor Building to Suppression Pool differential pressure of 0.25 psid actuates the vacuum breaker to open, and a Reactor Building to Suppression Pool differential pressure of 0.5 psid actuates the butterfly valve to open.
- D. A Reactor Building to Suppression Pool differential pressure of 0.25 psid actuates the butterfly valve to open, and a Reactor Building to Suppression Pool differential pressure of 0.5 psid actuates the vacuum breaker valve to open.

\*ANSWER D  
\*REFERENCE 23.425.02, ST-OP-315-0016-001, & EQ-OP-315-0116-000-0001-007

K/A Number: 290001 K1.02 {3.4/3.6}  
Direct/New/Modified: Direct  
Tier/Group: 2/2  
SRO/RO/Both Level: Both  
K/A Importance: 3.4  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: M

\*QNUM 082 R089  
\*HNUM SRO 64  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 290003 K4.01 {3.1/3.2}  
\*QUESTION

From the following select the statement that correctly identifies the Control Center HVAC System reconfiguration logic.

- A. The Chlorine Mode will automatically initiate 2 out of 2 Chlorine Detectors.
- B. The Recirculation Mode will automatically initiate from 2 out of the 4 Emergency Intake Radiation Monitors.
- C. The Recirculation Mode will automatically initiate from either Div I or Div II High Reactor Building Ventilation Exhaust Radiation Monitor.
- D. The Purge Mode will automatically initiate from any other mode upon detection of Fire in either the Relay Room or Cable Spreading Room.

\*ANSWER C

\*REFERENCE

ST-OP-315-0073-001

K/A Number: 290003 K4.01 {3.1/3.2}

Direct/New/Modified: New

Tier/Group: 2/2

SRO/RO/Both Level: Both

K/A Importance: 3.1

Level of Difficulty (1 - 5): 3

Memory/Comprehension-Analysis: Memory

\*QNUM ~~083~~ RO 90  
\*HNUM SR0 65  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 300000 K1.03 {2.8/2.9}  
\*QUESTION

Operation of the Primary Containment Pneumatic Supply (PCPS) using the Noninterruptible Air Supply (NIAS) is avoided because:

- A. the lower operating pressure effects gas operated valve stroke times.
- B. prolonged operation could increase Primary Containment oxygen levels.
- C. the lower operating pressure results in Primary Containment leakage into the Noninterruptible Air Supply.
- D. the moisture and oxygen content effects in-line pressure regulator operation resulting in component overpressurization.

\*ANSWER B

\*REFERENCE ST-OP-315-0019-001  
SOP 23.406

K/A Number: 300000 K1.03 {2.8/2.9}  
Direct/New/Modified: Modified  
Tier/Group: 2/3  
SRO/RO/Both Level: Both  
K/A Importance: 2.8  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 084 Ro 91  
\*HNUM 5RO 66  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Peterson  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 233000 A4.05 {2.7/3.1}  
\*QUESTION

A full core off-load of fuel at the end of a cycle plus the remaining decay heat of the spent fuel from a previous cycle are in the Spent Fuel Pool at the same time. Fuel Pool Temperature has slowly risen over the last few hours. What supplemental heat removal capability is available to prevent the Spent Fuel Pool from exceeding its design temperature during this maximum heat load?

- A. Standby Feedwater System may be cross connected to supply cooling water to the Fuel Pool Cooling and Cleanup (FPCCU) System to increase the heat removal capability of the FPCCU System.
- B. The Reactor Water Cleanup System may be connected to the FPCCU System to increase the heat removal capability of the FPCCU System.
- C. The Residual Heat Removal System may be connected to the FPCCU System to increase the heat removal capability of the FPCCU System.
- D. Emergency Equipment Cooling Water may be started to increase the heat removal capability of the FPCCU Heat Exchangers.

\*ANSWER C

\*REFERENCE ST-OP-315-0015-001; Bank Ques Ref.EQ-OP-315-0215-000-0004-001

K/A Number: 233000 A4.05 {2.7/3.1}  
Direct/New/Modified: Modified  
Tier/Group: 2/3  
SRO/RO/Both Level: Both  
K/A Importance: 2.7  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Comprehension

\*QNUM 086  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Peterson  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 288000 K6.03 {2.7/2.7}  
\*QUESTION

Ro 92  
SRO 67

Reactor Building HVAC components (including major valves F008, Reactor Bldg Outboard/Div II Exhaust Isol. Damper, and F010, Reactor Bldg Outboard/Div II Supply Isol. Damper) shifted to their fail-positions. Which one of the following caused the RB HVAC system to isolate?

- A. Loss of Non-Interruptible Air System
- B. Loss of Interruptible Air System
- C. Actuation of Eberline SPING-4A
- D. Loss of 120 VAC Instrument and Control Power

\*ANSWER B

\*REFERENCE

K/A Number: 288000 K6.03 {2.7/2.7}  
Direct/New/Modified: New  
Tier/Group: 2/3  
SRO/RO/Both Level: Both  
K/A Importance: 2.7  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 087 R093  
\*HNUM SRO 68  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Peterson  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 290002 K5.05 {3.1/3.3}  
\*QUESTION

Nil-Ductility Transition Temperature (NDTT) shift is accounted for during design life of the plant to minimize the possibility of brittle fracture of the reactor pressure vessel and internals. Which one of the following will result in NDTT to shift to the right of the temperature curve?

- A. temperature embrittlement
- B. core shroud cracking
- C. chloride stress corrosion
- D. neutron flux

\*ANSWER D

\*REFERENCE ST-OP-315-0002-001; 22.000.05

K/A Number: 290002 K5.05 {3.1/3.3}  
Direct/New/Modified: New  
Tier/Group: 2/3  
SRO/RO/Both Level: Both  
K/A Importance: 3.1  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~089~~ RO 94  
\*HNUM SRO 69  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Hopkins  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA Generic 2.1.32, {3.4/3.8}  
\*QUESTION

WHICH of the following is the reason that, during startup, the reactor vessel level control remains on the Startup Level Control Valve (SULCV) until the operating reactor feed pump **suction flow** is greater than 35%?

- A. To prevent fluctuations in reactor power.
- B. To prevent erratic changes in feed pump speed.
- C. To prevent oscillations of the feed pump minimum flow valve.
- D. To prevent low suction pressure trip of the operating feed pump.

\*ANSWER C

\*REFERENCE

General Operating Procedure, 22.000.02, Revision 47, Plant Startup to 25% Power.  
Student Text ST-OP-802-1001-001, General Operating Procedures, Revision 3.  
Learning Objective 01-08, AState the basis for each of the precautions and/or limitations applicable to Plant Startup to 25% Power. @

NOTE: Ask facility if any of the other distractors are correct during prep week.

K/A Number: 2.1.32  
Direct/New/Modified: Modified (Old Fermi EQB, QNUM 19355, 05/04/1992)  
Tier/Group: 3, Conduct of Operations  
SRO/RO/Both Level: BOTH  
K/A Importance: 3.4  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~001~~ R0 95  
\*HNUM  
\*ANUM SRO 70  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.2.22  
\*QUESTION

From the given statements select the one that correctly describes the operational leakage allowed from the reactor coolant system.

Reactor Coolant System operational LEAKAGE shall be limited to:

- A. pressure boundary leakage
- B.  $\leq 5$  gpm TOTAL LEAKAGE.
- C.  $\leq 25$  gpm TOTAL LEAKAGE averaged over the previous 24 hours and  $\leq 5$  gpm increase in unidentified LEAKAGE in the previous 12 hour period.
- D.  $\leq 25$  gpm TOTAL LEAKAGE averaged over the previous 24 hours and  $\leq 2$  gpm increase in unidentified LEAKAGE in the previous 24 hour period.

\*ANSWER D  
\*REFERENCE EQ-OP-315-0102-000-0007-003 and 007; ITS 3.4.4

K/A Number: 2.2.22  
Direct/New/Modified: Direct  
Tier/Group: 3/  
SRO/RO/Both Level: Both  
K/A Importance: 3.4  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~094~~ RO 96  
\*HNUM  
\*ANUM SRO 71  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.3.1 {2.6/3.0}  
\*QUESTION

During a tour of the reactor building, you noticed an area that was posted as "No Loitering."  
From a radiological perspective, since the area was posted as "No Loitering," the radiation dose rate is at least:

- A. 1.0 mRem/hr
- B. 2.5 mRem/hr
- C. 5.0 mRem/hr
- D. 10.0 mRem/hr

\*ANSWER B

\*REFERENCE MRP04, Revision 8, Radiation Protection Conduct Manual, Enclosure A.

K/A Number: 2.3.1  
Direct/New/Modified: New  
Tier/Group: 3  
SRO/RO/Both Level: Both  
K/A Importance: 2.6/3.0  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM ~~096~~ R097  
\*HNUM SRO 72  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.3.10 {2.9/3.3}  
\*QUESTION

Independent Verification of a valve lineup in the A RWCU pump room may be waived if:

- A. the CRNSO made an explanatory log entry.
- B. a licensed NSO performed the initial lineup.
- C. two qualified operators performed the lineup simultaneously.
- D. the expected dose rate would exceed 100 mRem.

\*ANSWER D

\*REFERENCE EQ-OP-213-0041-000-A004-001; MOP02

K/A Number: 2.3.10  
Direct/New/Modified: Direct  
Tier/Group: 3/  
SRO/RO/Both Level: Both  
K/A Importance: 2.9  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 098  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Peterson  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.4.10 {3.0/3.1}  
\*QUESTION

R098  
SR073

An annunciator in the Control Room has alarmed. The operator notes the alarm window is colored and has a 6-digit indication in the lower right hand corner. Which one of the following annunciator characteristics indicates an alarm with multiple input, reflash capability, and is a critical alarm noted on the sequence recorder?

	Annunciator 6-digit Indication	Window Color	Sequence of Events Recorder Indication
A.	068S31	Red	3 asterisk
B.	*068S31	White	0 asterisk
C.	068S31/068S32	Blue	1 asterisk
D.	*068S31	Amber	2 asterisk

\*ANSWER D  
\*REFERENCE ST-OP-315-0089-001

K/A Number: 2.4.10 {3.0/3.1}  
Direct/New/Modified: New  
Tier/Group: 3/  
SRO/RO/Both Level: Both  
K/A Importance: 3.0  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: CA

\*QNUM ~~009~~  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR Peterson  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.4.17 {3.1/3.8}  
\*QUESTION

Ro 99  
SRO 74

Emergency Operating Procedure Flowcharts uses icons in place of words in order to assist the operator in easily understanding the step. Which one of the following icons refers to the statement, "Regardless of NPSH or Vortex Limits?"

- A. Symbol for "regardless of level or power oscillations."
- B. Symbol for "regardless of NPSH or Vortex limits."
- C. Symbol for "use pumps not required for adequate core cooling."
- D. Symbol for "regardless of adequate core cooling."

\*ANSWER B

\*REFERENCE ST-OP-802-3001-001

K/A Number: 2.4.17 {3.1/3.8}  
Direct/New/Modified: New  
Tier/Group: 3/  
SRO/RO/Both Level: Both  
K/A Importance: 3.1  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 100  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL B  
\*EXMNR PALAGI  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.4.34 {3.8/3.6}  
\*QUESTION

Ro 100  
sRo 75

A fire occurs that requires the control room to be abandoned, procedure 20.000.18 "CONTROL OF THE PLANT FROM THE DEDICATED SHUTDOWN PANEL" is entered. How much time does the operating staff have to establish Shutdown Cooling, and what is a factor limiting this time.

- A. 24 hours, beyond this time the 125 volt battery needed for RCIC control power could be depleted.
- B. 10 hours, beyond this time the nitrogen for operation of SRVs could be depleted.
- C. 24 hours, beyond this time the supply of makeup water for continued plant cooldown could be depleted.
- D. 10 hours, beyond this time emergence lighting for local equipment operation could be depleted.

\*ANSWER B  
\*REFERENCE 20.000.18

K/A Number: 2.4.34 {3.8/3.6}  
Direct/New/Modified: New  
Tier/Group: 3/  
SRO/RO/Both Level: Both  
K/A Importance: 3.8  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 101 52076  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295009 K1.01 {4.2/4.2}  
\*QUESTION

A LOCA has occurred outside of the primary containment. Plant conditions are as follows:

Reactor Building Temperature (near all instrument runs) = 220°F and stable.  
Reactor Pressure = 250 psig and stable.  
Drywell Temperature = 155°F and stable.

Assuming the indicated level on each of the below instruments is 163 inches, which level instrument may be used for trending indication?

- A. B21-N027
- B. B21-N080A
- C. B21-N091B
- D. B21-N095C

\*ANSWER C

\*REFERENCE 29-100-01 SH 6, Applicant only needs tables from EOP?

K/A Number: 295009 K101 {4.2/4.2}  
Direct/New/Modified: Direct  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 4.2  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM 102 SRO 77  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR Hopkins  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295010 A2.06 (3.6/3.6)  
\*QUESTION

The plant was operating at 100% power with normal DW cooling in service. During testing, the reactor scrammed due to an erroneous High DW Pressure signal. All systems responded as expected.

Technicians have cleared the erroneous High DW Pressure signal and the plant is ready for startup. Which of the following actions are required to restore normal DW temperature control?

- A. Restore RBCCW to the DW coolers, shift the two-speed DW fans to FAST.
- B. Restore EECW to the DW coolers, RESTART the two-speed DW fans and shift them to FAST.
- C. Secure the second RBCCW pump, down-shift the two-speed DW fans to SLOW.
- D. Shift the DW cooler supply from EECW to RBCCW, down-shift the two-speed DW fans to SLOW.

\*ANSWER A

\*REFERENCES 23.415, Rev.15, Sections 1.1 and 5.1; ST-OP-315-0067-001, Rev.13

K/A Number: 295010 A2.06  
Direct/New/Modified: Direct  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 3.6  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM ~~403~~ SRO 78  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295014 A2.03 4.0/4.3  
\*QUESTION

The plant is operating at 70% rated power when a small increase in main generator megawatts and reactor power is observed. The positions of the control rods and recirculation flow rate have not changed.

Which of the following is the cause of the INCREASE in Main Generator megawatts and the action to be directed?

- A. An SRV has inadvertently lifted; enter 20.000.25, failed safety relief valve.
- B. A turbine bypass valve is partially open; enter TS 3.7.6 for inoperable main steam bypass system.
- C. Xenon is building toward a peak in the core; contact the SNE for direction for inserting rods.
- D. There has been a loss of feedwater heating; enter 20.107.02, loss of feedwater heating.

\*ANSWER D

\*REFERENCE 20.107.02

K/A Number: 295014 A2.03  
Direct/New/Modified: Direct  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 4.3  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: CA

\*QNUM 104 SRO79  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295015 2.4.17 {3.1/3.8}  
\*QUESTION

EOP "RPV Control-ATWS," Sheet 1A, green override statement references the term Hot Shutdown Boron Weight (HSBW). Which of the following conditions is assumed in determining the HSBW?

- A. RPV water at the most reactive temperature.
- B. Reactor core at the most reactive exposure.
- C. All rods fully withdrawn.
- D. RWCU system operating in recirculation mode.

\*ANSWER B.

\*REFERENCE EPG Appendix B, Rev.1, Section 17; ST-OP-802-3002-001, Rev.1, Section V; EQ-OP-202-0111-000-0002-003.

K/A Number: 295015 2.4.17  
Direct/New/Modified: Direct  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 3.8  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: M

\*QNUM 105 SRO 80  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295038 2.4.18 (2.7/3.6)  
\*QUESTION

A torus pressure or temperature rising above which one of the following limits would require the torus to be vented IRRESPECTIVE of the Offsite Radioactivity Release Rate?

- A. pressure suppression pressure (PSP)
- B. primary containment pressure (PCPL)
- C. SRV tail pipe level limit (SRVTPLL)
- D. heat capacity limit (HCL)

\*ANSWER B

\*REFERENCE ST-OP-802-3004-001

K/A Number: 295038 2.4.18  
Direct/New/Modified: New  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 3.6  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: M

\*QNUM 106 SRO 81  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295030 2.4.20 {3.3/4.0}  
\*QUESTION

The Emergency Operating Procedures require emergency depressurization if torus water level cannot be maintained above -38 inches.

What is the basis for requiring emergency depressurization at this point?

- A. Prevent exceeding LPCI NPSH requirements.
- B. Prevent exceeding SRV tailpipe back pressure limits.
- C. Steam discharged from HPCI will not be suppressed.
- D. Suppression of steam discharged from the downcomers cannot be assured.

\*ANSWER D

\*REFERENCE EQ-OP-802-3004-000-0007-001; ST-OP-802-3004-001

K/A Number: 295030 2.4.20 {3.3/4.0}  
Direct/New/Modified: Direct  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 4.0  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: Memory

107 SRd 82  
\*QNUM  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 295031 A2.04 4.6/4.8  
\*QUESTION

The reactor has failed to scram and the following conditions exist :  
Reactor power.....8 %  
SRVs.....5 open  
RPV pressure.....214 psig (slowly lowering)  
RPV water level.....unknown  
Drywell pressure.....8 psig  
Drywell temperature....225 degrees F (rising)  
RPV injection.....RHR, CRD, SBFW, and Heater Feedpumps injecting

Given these conditions, the EOP directs which of the following?

- A. Initiate torus and drywell sprays.
- B. Vent the primary containment to avoid automatic ECCS initiations.
- C. Lineup Core Spray and inject into the RPV until RPV pressure is greater than 215 psig.
- D. Lineup Core Spray and inject into the RPV until RPV pressure is greater than or equal to 64 psig above torus pressure.

\*ANSWER C.

\*REFERENCE EQ-OP-202-0101-000-0106-002, EOP-OP-29.100.01 SH 1A (FSL-OR1)  
EOP-OP-29.100.01 SH 3A (Step FSRF-13) SROs need EOP, or are they required to recognize CS and pressure requirements based on conditions?

K/A Number: 295031 EA2.04  
Direct/New/Modified: Direct  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 4.8  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM        108 SR 83  
 \*HNUM  
 \*ANUM  
 \*QCHANGED   FALSE  
 \*ACHANGED   FALSE  
 \*QDATE  
 \*FAC        341        Fermi 2  
 \*RTYP       BWR-GE4  
 \*EXLEVEL   S  
 \*EXMNR     Bielby  
 \*QVAL  
 \*SEC  
 \*SUBSORT  
 \*KA        295038 A2.03 {3.5/4.3}  
 \*QUESTION

While operating the reactor in the RUN mode, a restriction of cooling water flow through a fuel bundle causes fuel clad overheating and fission product release into the reactor coolant. The reactor fails to scram when the MSIVs receive an automatic isolation signal. The following plant conditions exist:

Reactor power.....18%  
 Reactor pressure.....940 psig  
 RPV water level..... +100 inches  
 Main Steam Line B.....Inboard & Outboard MSIVs failed open  
 Main Turbine.....tripped  
 Site boundry release (Adult Thyroid).....4.90 R(rising)

Given the above conditions, which of the following actions are required?

- A. Use Main Turbine BPVs to commence a reactor cool down at less than a 90 deg F/Hr rate.
- B. Use HPCI and RCIC in the test mode to lower RPV pressure.
- C. Use the SRVs to commence a reactor cool down at less than a 90 deg F/Hr rate.
- D. Perform Emergency RPV Depressurization.

\*ANSWER        D.

\*REFERENCE        Provide these references for SROs: 29.100.01, Sh.5, Rev.7 (Step RR-4); EP-101, Enclosure B (Tab A), Rev.25

K/A Number:                    295038 EA2.03  
 Direct/New/Modified:        Direct  
 Tier/Group:                    1/1  
 SRO/RO/Both Level:         S  
 K/A Importance:                4.3  
 Level of Difficulty (1 - 5):    3  
 Memory/Comprehension-Analysis: CA

\*QNUM ~~109~~ SR-84  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR Hopkins  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA206000 G.2.2.25, {2.5/3.7}  
\*QUESTION

Select the statement that describes the Technical Specification basis for HPCI being operable in Modes 1, 2, and 3 when reactor steam dome pressure is greater than 150 psig.

- A. Ability to maintain reactor vessel water level above TAF for the design basis accident over a wide range of reactor pressures.
- B. Ability to provide core cooling for the design basis accident until the ADS/low pressure ECCS has flooded the reactor vessel.
- C. Ability to maintain reactor vessel water level above the feedwater sparger if the vessel has been isolated and feedwater has been lost.
- D. Ability to provide core cooling for a small break loss of coolant accident with the reactor near rated pressure.

\*ANSWER D

\*REFERENCE

Technical Specification Bases B.3.5.1; ST-OP-315-0039-001, Revision 10

K/A Number: 206000 G.2.2.25

Direct/New/Modified: New

Tier/Group: 2 /1

SRO/RO/Both Level: SRO

K/A Importance: 3.7

Level of Difficulty (1 - 5): 2

Memory/Comprehension-Analysis: Memory

\*QNUM 110 SR085  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR Hopkins  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 216000, G.2.4.21 {3.7/4.3}

\*QUESTION

According to TS basis, in order for the reactor vessel water level Fuel Zone indication to be operable, the uncompensated level signal must be modified using another parameter. Select the parameter that is used to compensate the level signal.

- A. Reactor pressure
- B. Drywell temperature
- C. Calibrated jet pump flow
- D. Average recirculation loop temperature.

\*ANSWER A.

\*REFERENCE TS Bases, B 3.3.3.1.

K/A Number: 216000, G.2.4.21  
Direct/New/Modified: New  
Tier/Group: 2 /1  
SRO/RO/Both Level: SRO  
K/A Importance: 4.3  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM *111 SRd 86*  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR Hopkins  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 239002 A206  
\*QUESTION

The plant had been operating at 100% power for 250 days. A toxic gas in the relay room made it uninhabitable and required the control room to be evacuated. The reactor and main turbine were tripped from the control room and the Remote Shutdown Panel (RSP) was manned.

At the RSP, the following plant parameters were observed:

- Reactor water level 200 inches (steady)
- RPV pressure cycling between 935 and 1047 psig.

Which of the following correctly describes the reason for the cycling reactor pressure AND required actions to be taken at the RSP to regain control of reactor pressure?

- A. SRV-A did not operate as designed; take manual control of SRV-G.
- B. SRV-G did not operate as designed; take manual control of SRV-A.
- C. SRV-A did not operate as designed; take manual control of SRV-A.
- D. SRV-G did not operate as designed; take manual control of SRV-G.

\*ANSWER C

\*REFERENCE AOP 20.000.19, Action E-6; ST-OP-315-00055-001, Revision 12, pg. 19; EQ-OP-802-2017-000-0001-009

K/A Number: 239002 A206  
Direct/New/Modified: Modified  
Tier/Group: 2 /1  
SRO/RO/Both Level: SRO  
K/A Importance: 4.3  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM 42 SR 87  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR Hopkins  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 264000 A209  
\*QUESTION

The plant was operating at 100% power. An electrical transient in the 120 KV switchyard caused the 4160V circuit breakers 64-B6 (normal feed) and 64-B8 (X-tie to EDG bus) to open and the 4160V bus 64B to de-energize.

The plant is currently stable at 100% power, and indications from the 120 KV switchyard are stable. Which of the following describes the status of EDG 11 AND the conditions needed to re-energize Bus 64B?

- A. EDG 11 is running unloaded; re-energize bus 64B from EDG 11.
- B. EDG 11 is running unloaded; delay re-energizing bus 64B until the bus fault is corrected.
- C. EDG 11 did not start; manually start EDG 11 and re-energize bus 64B from EDG 11.
- D. EDG 11 did not start; delay re-energizing bus 64B until the bus fault is corrected.

\*ANSWER D  
\*REFERENCE AOP 20.30064B, Revision 0; AOP 20.307.01, Revision 0.

K/A Number: 264000 A209  
Direct/New/Modified: New  
Tier/Group: 2 /1  
SRO/RO/Both Level: SRO  
K/A Importance: 4.1  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Comprehension-Analysis

\*QNUM 443 SR088  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 201006 A2.02 {2.6/2.9}  
\*QUESTION

A reactor startup is in progress and reactor power is 68%. The Steam Flow input into the RWM Low Power Set Point circuitry, fails low.

What is the effect on the RWM and how is control rod movement continued in accordance with tech specs?

- A. Blocks will be displayed but not enforced; rods must be individually bypassed for movement.
- B. All RWM functions are inoperable; rods may be moved only by use of the EMER IN control switch.
- C. Transition Zone (LPAP) is in effect; a second operator must verify all rod movements until power is reduced to 10%.
- D. LPSP is in effect; RWM may be bypassed and rod movements continued.

\*ANSWER D

\*REFERENCE EQ-OP-315-0113-000-0007-011; ST-OP-315-0013, TS bases 3.3.2.1

K/A Number: 201006 A2.02  
Direct/New/Modified: Direct  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 2.9  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM 114 SR089  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 230000 A2.04 {3.5/3.6}  
\*QUESTION

The plant was operating at full power when a DW leak event caused the plant to scram. Subsequent to the scram, plant conditions were as follows:

- Drywell pressure 8 psig (lowering slowly)
- Torus pressure 7.5 psig (lowering slowly)
- Torus temperature 98 degrees F (increasing)
- RPV level 175 inches (steady)
- RPV pressure is 50 psig (steady)
- RHR pumps B & D running in AUTO, injecting into the RPV.
- RHR pump C running in MANUAL OVERRIDE, in torus cooling and spray with cooling maximized through the RHR heat exchanger
- RHR E1150-F010, RHR Crosstie valve, CLOSED
- All other systems operating normally

If a short on the 4160V bus 64B causes a bus lockout, what action would be taken to control RPV and containment parameters?

- A. Start RHR pump A and shift Division 1 RHR to RPV injection; shift Division 2 RHR to torus cooling and sprays.
- B. Isolate Division 1 RHR torus cooling and spray path; start RHR pump A, and restore Division 1 RHR in torus cooling and sprays.
- C. Reopen E1150-F010, RHR Crosstie valve, and E1150-F048A, RHR heat exchanger bypass valve; use RCIC to augment RPV level control.
- D. Place Division 2 RHR in torus cooling and sprays; use Core Spray to augment RPV level control.

\*ANSWER D  
\*REFERENCE ST-OP-315-0041, 23.205  
K/A Number: 230000 A2.04  
Direct/New/Modified: New  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 3.6

Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM 415 SRO 90  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR PTYOUNG  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 272000 A2.11 {3.4/3.7}  
\*QUESTION

The plant was refueling (Mode 5) and the following indications/alarms were received in the main Control Room:

3D31, "Div I/II FP Vent Exhaust Radiation Monitor Upscale"  
3D35, "Div I/II FP Vent Exhaust Radiation Monitor Upscale Trip"  
16D1, "RB Refueling Area Fifth Floor High Radiation"  
17D14, "Div I/Div II SGTS AUTO Start"  
8D35, "Div 1 SGTS Air Flow Stopped"  
8D46, "ADiv 1 Reactor Bldg Pressure High/Low"  
Secondary Containment pressure -0.7 inches water.

As the Control Room Supervisor, which of the following actions would be correct?

- A. Direct RBHVAC restarted, CCHVAC shifted to RECIRC, and enter 20.000.02, "Abnormal Release of Radioactive Material."
- B. Direct RBHVAC tripped, CCHVAC shifted to RECIRC mode to minimize release, and enter 20.000.07, "Fuel Cladding Failure."
- C. Direct verification of RBHVAC running, SGTS running, and enter 29.100.01, Sheet 5, "Secondary Containment Control due to high reactor building pressure."
- D. Direct verification of RBHVAC tripped, SGTS running, and enter 29.100.01, Sheet 5, "Secondary Containment Control due to high area radiation levels."

\*ANSWER D  
\*REFERENCE ST-OP-802-2018-001; ARPs 16D1 and 8D46; 29.100.01, Sheet 5  
K/A Number: 272000 A2.11 {3.4/3.7}  
Direct/New/Modified: New  
Tier/Group: 3/  
SRO/RO/Both Level: S  
K/A Importance: 3.7  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM 116 SR0 91  
 \*HNUM  
 \*ANUM  
 \*QCHANGED FALSE  
 \*ACHANGED FALSE  
 \*QDATE 2001/06/14  
 \*FAC 341 Fermi 2  
 \*RTYP BWR-GE4  
 \*EXLEVEL S  
 \*EXMNR Peterson  
 \*QVAL  
 \*SEC  
 \*SUBSORT  
 \*KA 2.1.25 (2.8/3.1)  
 \*QUESTION

Following a LOCA and reactor scram at 0036, the operating crew established the following conditions at 0937:

- Reactor pressure.....82 psig
- Torus pressure.....17 psig
- SRVs..... Six open
- RPV level instruments.....Upscale
- Reactor power.....All rods fully inserted
- RHR Pumps.....Four injecting to RPV
- Core Spray Pumps.....Two injecting to RPV

At 1038, the Core Spray Pumps tripped, and RPV pressure dropped to 64 psig. At 1049 the operating crew placed the other two Core Spray Pumps in service, and restored RPV pressure to 82 psig.

As the Control Room Supervisor directing EOP activities:

- 1) At what time (clock time) would you direct the operating crew to shutdown all RPV injection systems, open E11-F024A and E11-F024B for the purpose of lowering the reactor water level, AND;
- 2) How long should you wait (wait time) for RPV water level to come back on scale OR to reestablish RPV injection?

	<u>Clock Time</u>	<u>Wait Time (minutes)</u>
A.	1130	5.0
B.	1141	7.5
C.	1204	8.0
D.	1215	9.0

Answer: B

\*REFERENCE 29.100.01, SH 3, Rev 6 (Step RF-9, NOTE; Step RF-16); 29.100.01, SH 3, Rev 6 (Table 6, Table 7); 29.100.01, SH 6, Rev 8 (Max Core Uncovery Time Limit Curve); EQ-OP-802-3002-000-0007-011; EQ-OP-802-3002-000-0007-006

This question will require giving the applicants copies of EOPs 29.100.01, Sheets 3 and 6. Explanation: This question requires calculating the Flooding Completion Time (Table 6) and the Maximum Core Uncovery Time (Table 7). It requires understanding the Note in step RF-9, to add the min. core flooding interval time of 52 min. to time 1049, instead of 1038, to get Clock Time of 1141. The 52 min. is for six SRVs open. The Wait Time or Max Core Uncovery Time Limit, is obtained by calculating the total time after shutdown, from reactor scram to Flooding Completion Time or Clock Time (between 0036 and 1141). Using this total amount of time of 11 hours and 5 min. or 665 min, the Max Core Uncovery Time Limit Curve give you 7.5 min.

K/A Number: 2.1.25

Direct/New/Modified: Modified

Tier/Group: 3/

SRO/RO/Both Level: SRO

K/A Importance: 3.1

Level of Difficulty (1 - 5): 4

Memory/Comprehension-Analysis: CA

\*QNUM .117 SR0 92  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR Peterson  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.1.4 {2.3/3.4}  
\*QUESTION

You are the Shift Manager on night shift, and the shift (site) is at the minimum operating shift complement. A Nuclear Operator (NO) is supporting tagout activities on an RHR pump planned for maintenance the following day. While observing the tagout activities, you observe the NO display aberrant behavior. While you counsel the NO you believe you smell alcohol on his breath. As his supervisor what action(s) must be taken?

Note: The time is 0400 and the NO is a Fire Brigade member.

- A. Ensure that the operator is escorted out of the control room (vital area); call the Fitness for Duty Program Manager in the morning to arrange for a drug/alcohol test; ensure that the operator's portion of the tagout work is reviewed immediately. Fire Brigade staffing is maintained as long as the operator is on site.
- B. Ensure that the operator is escorted and detained off-site; call the Fitness for Duty Program Manager to arrange for a drug/alcohol test; ensure that the operator's portion of the tagout work is reviewed prior to the start of the maintenance work. Call in another operator for Fire Brigade Staffing.
- C. Ensure Security detains the operator in the security building; ensure that the operator is immediately tested for drug/alcohol; ensure that the tagout is re-performed by another operator. Assign one of the two Safe Shutdown operators, qualified as Fire Brigade, to the Fire Brigade until the next shift.
- D. Immediately call the Fitness for Duty Program Manager; ensure the operator is relieved from all duties except Fire Brigade; take no other sanctions against the operator until the operator can be tested and confirmed positive for drug/alcohol.

\*ANSWER B  
\*REFERENCE MGA10, MOP03, MOP10  
K/A Number: 2.1.4  
Direct/New/Modified: New  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 3.4  
Level of Difficulty (1 - 5): 4  
Memory/Comprehension-Analysis: CA

\*QNUM 418 SR 93  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR Peterson  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.1.14 {2.5/3.3}  
\*QUESTION

During routine Technical Specification Surveillance testing, the NSO identified a potential operability concern and reported it to the Shift Manager. The Shift Manager was unable to determine if the piece of equipment was operable or not. Per MES27, Verification of System Operability, who or what department would the Shift Manager contact and refer his questions to?

- A. Superintendent Operations
- B. Onsite Review Organization (OSRO)
- C. Nuclear Licensing
- D. System Engineering

\*ANSWER D  
\*REFERENCE MES27; EQ-OP-802-4101-000-0010-003

K/A Number: 2.1.14  
Direct/New/Modified: Direct  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 3.3  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM 119 SRO 94  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR PALAGI  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.2.11 {2.5/3.4}  
\*QUESTION

You are an SRO reviewing a Temporary Change Notice (TCN) for Interim Approval. Which of the following would be a reason that you must reject the TCN?

- A. The other person who provided Interim Approval did so via telephone conference never having seen the TCN.
- B. The TCN was written against a contractor procedure.
- C. The TCN was written against a procedure for a system that was out-of-service.
- D. The TCN was written against an administrative procedure.

\*ANSWER D

\*REFERENCE MGA04, Rev. 8

K/A Number: 2.2.11  
Direct/New/Modified: New  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 3.4  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: M

\*QNUM ~~120~~ SRO 95  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR PALAGI  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.2.26 {2.5/3.7}  
\*QUESTION

Which of the following personnel have lead responsibility for fuel movement during refueling and core alterations.

- A. The Supervisor, Reactor Engineering.
- B. The Nuclear Shift Supervisor.
- C. The Refuel Floor Supervisor.
- D. The Superintendent, Operations.

\*ANSWER A

\*REFERENCE Procedure MOP13, Rev 6

K/A Number: 2.2.26  
Direct/New/Modified: New  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 3.7  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: Memory

\*QNUM        121        SRD 96  
\*HNUM  
\*ANUM  
\*QCHANGED  
\*ACHANGED  
\*QDATE                2001/06/04  
\*FAC                341  
\*RTYP        BWR-GE4  
\*EXLEVEL            S  
\*EXMNR            McNeil  
\*QVAL        1.00  
\*SEC  
\*SUBSORT  
\*KA                2.2.29 (1.6/3.8)  
\*QUESTION

The NSS became ill and had to leave without a turnover. You were assigned to take the NSS watch. You discovered the following plant conditions while assuming the watchstation:

- The plant is in Mode 5, both recirc pumps are inoperable, RHR "A" is in shutdown cooling, RHR "B" is in standby, but a blown fuse was found in the pump's breaker 30 minutes ago. It will be replaced in approximately 55 minutes.
- Core reload is in progress. The tagboard is current and correct; approximately 75% of the core has been re-assembled in the reactor pressure vessel, control rod D10 has been withdrawn to verify its operability.
- Reactor pressure vessel water level is 20' 6" above the vessel flange and constant.
- Channel functional tests on refuel equipment interlock inputs was performed 25 hours ago. All tests were satisfactory.
- The mode switch was verified to be locked in the refuel position at shift turnover.

Based on turnover conditions, which of the following describe your required actions after you have assumed the watch station?

- A. Continue with core reload.
- B. Suspend core alteration due to having control rod D10 withdrawn.
- C. Suspend core alteration due to exceeding channel functional test applicability time limit.
- D. Suspend core alteration due to on train of RHR being inoperable.

\*ANSWER B  
\*REFERENCE T.S. 3.9.3  
K/A Number: 2.2.29  
Direct/New/Modified: New  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 3.8  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

\*QNUM 122 SR 97  
\*HNUM  
\*ANUM  
\*QCHANGED  
\*ACHANGED  
\*QDATE 2001/06/04  
\*FAC 341  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR McNeil  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.3.9 {2.5/3.4}  
\*QUESTION

Step 1.9 of 29.ESP.06, "Primary Containment Venting and Purge for Hydrogen and Oxygen Control," states, "If both divisions of SGTS are operating, shutdown one division of SGTS." Why does 29.ESP.06 require shutdown of one division of SGTS during containment vent and purge?

- A. The excessive flow rate will draw a vacuum in the containment.
- B. This ensures that one charcoal bed is kept in reserve for later use.
- C. This will allow quick shutdown of the containment vent and purge to prevent drywell pressure from going below 5 inches wc.
- D. The excessive flow rate may open the refuel floor blowout panels causing a loss of secondary containment integrity with the potential for a hydrogen explosion.

\*ANSWER B  
\*REFERENCE 29.ESP.06, Rev. 4, Step 1.9, Caution  
K/A Number: 2.3.9  
Direct/New/Modified: New  
Tier/Group: 3/  
SRO/RO/Both Level: SRO  
K/A Importance: 3.4  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: M

\*QNUM 423 SA 98  
\*HNUM  
\*ANUM  
\*QCHANGED  
\*ACHANGED  
\*QDATE 2001/06/04  
\*FAC 341  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR McNeil  
\*QVAL 1.00  
\*SEC  
\*SUBSORT  
\*KA 2.4.6 {3.1/4.0}  
\*QUESTION

The EOPs direct operators to inhibit ADS during an event when RPV level is above TAF. This action will provide time to . . .

- A. begin a manual cooldown to prevent exceeding a 100 deg F/hr cooldown rate.
- B. control the start of ECCS pumps that have not automatically started during the event.
- C. attempt to reverse the decreasing level trend before emergency depressurization is necessary.
- D. to defeat MSIV interlocks, reopen the MSIVs, and dump steam to the main condenser to minimize heat loading on the containment.

\*ANSWER c.

\*REFERENCE ST-OP-802-3003-001; 1999 NRC exam question

K/A Number: 2.4.6

Direct/New/Modified: Modified

Tier/Group: 3/

SRO/RO/Both Level: SRO

K/A Importance: 4.0

Level of Difficulty (1 - 5): 3

Memory/Comprehension-Analysis: M

\*QNUM 124 SRO 99  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR Bielby  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.4.22 {3.0/4.0}  
\*QUESTION

If suppression pool level cannot be maintained above -68 inches, Primary Containment Control EOP Flowchart Step TWL-6 directs the operator to "SECURE HPCI (DISREGARD ADEQUATE CORE COOLING)."

Which of the following describes the bases for RCIC and HPCI operation under the same EOP circumstances (ie, suppression pool water level cannot be maintained above -68 inches)?

- A. RCIC operation may continue because the turbine exhaust energy does not contribute excessively to increasing containment pressure.
- B. RCIC operation may continue ONLY if it is the last operable high pressure injection system available to provide adequate core cooling.
- C. RCIC must be secured at the same time as HPCI to minimize the containment pressure rise.
- D. RCIC must be secured prior to HPCI to prevent erratic turbine operation due to exhaust back pressure fluctuation.

\*ANSWER A.

\*REFERENCE ST-OP-802-3004-001, Rev.2

K/A Number: 2.4.22  
Direct/New/Modified: New  
Tier/Group: 3/  
SRO/RO/Both Level: S  
K/A Importance: 4.0  
Level of Difficulty (1 - 5): 2  
Memory/Comprehension-Analysis: M

\*QNUM 125 SRO 100  
\*HNUM  
\*ANUM  
\*QCHANGED FALSE  
\*ACHANGED FALSE  
\*QDATE 2001/06/14  
\*FAC 341 Fermi 2  
\*RTYP BWR-GE4  
\*EXLEVEL S  
\*EXMNR PALAGI  
\*QVAL  
\*SEC  
\*SUBSORT  
\*KA 2.4.42 (2.3/3.7)  
\*QUESTION

As the result of a reactor accident the NSS has declared a SITE AREA EMERGENCY. It is now several hours after the declaration and the emergency response organization is fully activated for this classification level. Which of the following describes functions that would be carried out at each of the emergency response facilities?

- A. Control Room: operation of plant equipment  
OSC: dispatch of onsite emergency teams  
TSC: making offsite notifications  
EOF: not activated until General Emergency declared
- B. Control Room: communicating current plant conditions to the TSC  
OSC: advising EOF of repair activities status  
TSC: meteorological and offsite dose assessments  
EOF: ensuring the release of accurate information to the public
- C. Control Room: operation of plant equipment  
OSC: direction of maintenance staff  
TSC: direction of Severe Accident Guideline implementation  
EOF: approval of protective action recommendations
- D. Control Room: communicating current plant conditions to the TSC  
OSC: dispatch of onsite emergency teams  
TSC: development of onsite protective actions  
EOF: will not be activated until General Emergency declared

\*ANSWER C  
\*REFERENCE EP-110, Rev.10; 301-01, Rev.13; 303-01, Rev.9  
K/A Number: 2.4.42  
Direct/New/Modified: New  
Tier/Group: 3/  
SRO/RO/Both Level: S  
K/A Importance:  
Level of Difficulty (1 - 5): 3  
Memory/Comprehension-Analysis: CA

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*RO#1* **Written Exam changes from Prep week**

~~RO033~~ Changed Question - Facility feedback, question as written ask knowledge of RO from Refuel Floor, site does not require this level of knowledge from RO  
Replacement Question matched K/A

*RO#2*

~~RO038~~ Distracter C typo

*RO#4*

~~RO042~~ Stem typo

*RO#5*

~~RO048~~ Corrected Answer Key error, correct ans = d vs c.

*RO#7*

~~RO055~~ Distracter D typo

*RO#8*

~~RO057~~ Corrected / in stem, deleted use of acronym SORV and replaced with SRV as appropriate.

*RO#9*

~~RO062~~ Fixed capitalization error in stem, typos in distracters A & B. Added words for enhancement in A through D.

*RO#10*

~~RO064~~ In stem added "backlit" to statement on Exciter reset PB for clarity and corrected typo in EDG11.

*RO#12*

~~RO067~~ Added enhancement to stem - 2D46 Motor tripped alarm in and Center RBCCW pump tripped.

*RO#13*

~~RO069~~ Edited all distracters due to technical accuracy.

*RO#15*

~~RO071~~ Added enhancement in stem - valve EIN

*RO#17*

~~RO075~~ Added enhancements in stem and Distracter D to clarify Emergency Hotwell Supply pump not running.

*RO#24*

~~RO095~~ Added statement in stem that the General RWP for rounds was not included, technical enhancement.

*RO#24/SRO#1*

~~B001~~ Corrected typo in stem

*RO#27/SRO#2*

~~B002~~ Procedure change to scram procedure forced replacement with another question - same K/A.

*RO#30/SRO#5*

~~B005~~ Corrected several typos. Changed Total FW Flow from 3 to 2.5 MLB/hr to be technically correct. Also corrected font variance.

*RO#32/SRO#7*

~~B007~~ Removed "A slight decrease in reactor level" to ensure clarity of stem.

*RO#34/SRO#9*

~~B009~~ Replaced technically incorrect bank question with a bank question that matched K/A.

~~B012~~

*RO 37/SRO 12*

Changed stem to reflect 33 rods vs 3 rods - ensure sufficient reactivity for feedback. Changed position title from NASS to CRS to reflect Fermi2 current standards.

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~~R039/SR014~~

R039/SR014

~~B014~~ Modified due to procedure changes. Change APRM periodicity to enhance reaching correct answer.

~~R040/SR015~~

~~B015~~ Facility feedback, changed stem from 2.4 psia to 2.2 psia to prevent distracter C from being viable answer.

~~R041/SR016~~

~~B016~~ Changed position title in stem.

~~R042/SR017~~

~~B017~~ Changed position title in stem. Changed correct answer to C vs A, batteries still available to provide power.

~~R043/SR018~~

~~B018~~ Changed position title in stem.

~~R044/SR019~~

~~B019~~ Fixed degree symbol in stem

~~R045/SR020~~

~~B020~~ Deleted request for entry conditions to EOP 29.100.01 Sheet 2 Pri Cmmt Control, requiring 3 responses made distracter implausible. Change temperatures for "place Mode Switch in Shutdown " on distracters B and C for increase plausibility.

~~R049/SR024~~

~~B024~~ Change stem from "The plant is in Condition...." to "The plant is in Mode...."

~~R051/SR026~~

~~B026~~ Corrected typo in stem

~~R053/SR028~~

~~B028~~ Replaced original question with one on same K/A due to conflicting information in question stem and another reference.

~~R054/SR029~~

~~B029~~ Corrected typo in stem and changed answer from C to B per facility feedback on Sec Containment EOP.

~~R056/SR031~~

~~B031~~ Change wording in distracter A for "pending" to "and await"

~~R057/SR032~~

~~B032~~ Corrected typos and position titles

~~R058/SR033~~

~~B033~~ Corrected formatting for degree symbols

~~R059/SR034~~

~~B035~~ Changed LOK to memory

~~R060/SR035~~

~~B036~~ Typo distracter A

~~R062/SR037~~

~~B040~~ Changed LOOP to LOP

~~R063/SR038~~

~~B041~~ Deleted statement about RHR in Shutdown Cooling. Added statement that "operator inadvertently opened E1150-F015B.

~~R064/SR039~~

~~B043~~ Corrected typos and Corrected distracters C and D to reflect correct valves.

~~R067/SR042~~

~~B046~~ Corrected typos

~~R069/SR044~~

~~B049~~ Changed "flow control line" to "rod line" in stem.

~~R046/SR021~~

~~B027~~ Changed "3X Normal" in stem to 4X Normal to reflect alarming condition. *AT*

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R073/SR048

~~B054~~ Added inboard and outboard valve identifiers to distracters B and C.

R076/SR051

~~B059~~ Added System nomenclature to F615 in distracter D.

R077/SR052

~~B060~~ Added selection numbers to options in stem and corrected typos in distracters A and B.

R081/SR056

~~B068~~ Changed plant Mode in stem and changed distracter A, plant does not operate with 2 loops of RHR in Shutdown Cooling.

R086/SR061

~~B078~~ Replaced question, insufficient technical data to bank question, replacement is same K/A.

R089/SR064

~~B082~~ Changed distracter A from "..initiate 2 out of..." to ".. initiate from 2 out of.."

R092/SR067

~~B086~~ Changed distracter D from 120V I&C power to UPS, technical accuracy.

SR085

~~S110~~ In stem changed "...reactor vessel water level Fuel Zone indication..." to "reactor vessel Core Level indication.." Clarity enhancement.

SR091

~~S116~~ In stem changed "pressure dropped to 64 psig..." to "...pressure dropped to 62 psig..." Technical accuracy.

SR092

~~S117~~ In distracter B changed "...and detained off-site;..." to "...to the collection facility:..." Technical accuracy.

SR095

~~S120~~ Distracters B and C changed position titles to reflect current plant standards.

SR096

~~S121~~ Changed position titles to reflect current plant standards, changed control rod number and changed wording from "core alteration" to "fuel loading" for technical accuracy.

SR0100

~~S125~~ Changed position titles to reflect current plant standards, changed distracter C EOF functions due to technical accuracy.