U.S. NUCLEAR REGULATORY COMMISSION
WRITTEN EXAMINATION DECEMBER 2000
SENIOR REACTOR OPERATOR

QUESTION 1

The plant is operating at 100%.

The instrument air header in the Auxiliary Building ruptures.

Which one of the following statements describes the response of the CRD System?

(ASSUME NO OPERATOR ACTION.)

	Scram Inlet & Outlet Valves	SDV Vent & Drain Valves	CRD Flow Control Valve
A.	OPEN	OPEN	OPEN
B.	CLOSED	OPEN	OPEN
C.	OPEN	CLOSED	CLOSED
D.	CLOSED	CLOSED	CLOSED

QUESTION 1 **NRC RECORD # WRI 325**
ANSWER: C. **SYSTEM # C111A** **K/A 201001 A2.09: 3.2/3.1**
LP# GG-1-LP-OP-C111A.00
OBJ. 11b; 12 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-01-C11-1 sect 3.1 ***NEW***
MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.6/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 2

The plant has scrammed due to high reactor pressure.

The reactor pressure peaked at 1150 psig.

The plant is now stable at 926 psig and + 17 inches. All systems functioned properly following the scram.

Which one of the following is the correct status of Scram pilot solenoids, Backup scram solenoids, and ARI solenoids?

(ASSUME NO OPERATOR ACTION HAS BEEN TAKEN.)

	SCRAM PILOT VALVE SOLENOIDS	BACKUP SCRAM VALVE SOLENOIDS	ARI VALVE SOLENOIDS
A.	De-energized	Energized	Energized
B.	De-energized	Energized	De-energized
C.	Energized	De-energized	Energized
D.	Energized	De-energized	De-energized

QUESTION 2 **NRC RECORD # WRI 302**
ANSWER: A. **SYSTEM # C71; C11-1A** **K/A 212000 K1.06: 3.5/3.6**
A1.08: 3.4/3.4
LP# GG-1-LP-OP-C7100.00 **A2.20: 4.1/4.2**
OBJ 5d; 3d,e; 6d; 20 **201001 K1.07: 3.4/3.4**
LP# GG-1-LP-OP-C111A.00
OBJ 3j, l; 5c; 7d,e;8e,f,g; 11c **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: E- 1173 - 15-21
E- 6066 - 03, 06
NEW
MODIFIED BANK
WRI17 NRC 3/98
DIFF 2; CA
RO SRO ***BOTH*** **CFR 41.6**
REFERENCE MATERIAL REQUIRED: None

QUESTION 3

The Operator-at-the-Controls is withdrawing SRMs after taking the reactor critical.

All IRMs are on Range 3.

SRM A reads 2×10^4	SRM D reads 6×10^3
SRM B reads 8×10^3	SRM E reads 8×10^4
SRM C reads 2×10^3	SRM F reads 3×10^5

Which one of the following best describes current plant conditions?

A. Half scram, half rod block.

B. Full scram, rod block.

C. Rod block only.

D. No trips or blocks are present.

QUESTION 3 **NRC RECORD # WRI 71**
ANSWER: C. **SYSTEM # C11-2; C51; C71** **K/A 215004 A1.04: 3.5/3.5**
A3.04: 3.6/3.6
LP# GG-1-LP-RO-C1102.02 **201005 K4.03: 3.5/3.5**
OBJ 6
LP# GG-1-LP-OP-C5101.00
OBJ 8b, c **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: **Tech Specs TR 3.3.2.1** NEW
Table TR3.3.2.1-2 MODIFIED ***BANK***
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.5/41.6**
REFERENCE MATERIAL REQUIRED: None

QUESTION 4

The plant is at 100 % power with I & C performing a surveillance on APRM 'A'.

The following indications are illuminated on the H13-P680 panel.

Pushbutton HCU FAULT
Pushbutton ROD DRIFT
Pushbutton SCRAM VLVS
Pushbutton ACKN HCU FAULT

Annunciator "HCU TROUBLE"
Annunciator "CONTROL ROD DRIFT"
Annunciator "APRM CH A/E UPSC TRIP/INOP"
Annunciator "APRM UPSC ALM"
Annunciator "CONTROL ROD WITHDRAWAL BLOCK"
Annunciator "RX SCRAM TRIP"
Annunciator "NEUTRON MON SYS TRIP"

Which one of the following could be a possible cause for ALL of these indications? (ASSUME ALL OTHER INDICATIONS ARE NORMAL.)

A. Loss of RPS Bus 'A'.

B. A single control rod scram.

C. A control rod drifting out of the core.

D. APRM Channel 'A' upscale trip test from I & C only.

QUESTION 4 **NRC RECORD # WRI 306**
ANSWER: B. **SYSTEM # C11-2** **K/A 201005 A4.01: 3.7/3.7**
LP# GG-1-LP-RO-C1102.02
OBJ. 10, 11, 22 SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1
REFERENCE: **04-1-01-C11-2** NEW
sect. 4.7.2 & 4.8.2 ***MODIFIED*** BANK
DIFF 3; CA **04-1-02-H13-P680** **WRI 14 NRC 3/98**
4A2-D4 & E4 & C5 RO SRO ***BOTH*** **CFR 41.6/41.7**
5A-A11; B10; 7A-A2; B3
REFERENCE MATERIAL REQUIRED: None

QUESTION 5

GGNS is operating at 10% power with the mode switch in the STARTUP position.

LPRM 50-27B on APRM H has failed downscale and must be bypassed for troubleshooting.

APRM H has four (4) LPRMs currently bypassed.

After LPRM 50-27B is bypassed, what will APRM H indicate when the Meter Function switch is taken to COUNT?

A. 75

B. 80

C. 85

D. 90

QUESTION 5 **NRC RECORD # WRI 326**
ANSWER:. C. **SYSTEM # C51** **K/A 215005 K6.03: 3.1/3.3**
LP# GG-1-LP-OP-C5104.00
OBJ. 3b; 9b **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 06-OP-1C51-V-0003 ***NEW***
Att I sect 5.2.1g- i MODIFIED BANK
DIFF 2; CA
RO SRO ***BOTH*** **CFR 41.6/41.7**
REFERENCE MATERIAL REQUIRED: None

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QUESTION 6

The plant is operating at 30 % power.

The following Main Steam Isolation Valves have closed:

B21-F022B
B21-F022D
B21-F028B

Which one of the following describes the status of the Reactor Protection System?

A. No RPS actuation.

B. Half Scram on Division I.

C. Half Scram on Division II.

D. Full Reactor Scram.

QUESTION 6 **NRC RECORD # WRI 316**
ANSWER: A. **SYSTEM # B21; C71** **K/A 295020** **AK3.01: 3.8/3.8**
LP# GG-1-LP-OP-C7100.00
OBJ. 6c, d, 9 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: E-1173-15, 16, 17, 18, 19 ***NEW***
MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.9**
REFERENCE MATERIAL REQUIRED: None

QUESTION 7

The plant is operating at rated conditions.

The following indications are illuminated on the H13-P680 panel.

Pushbutton HCU FAULT
Pushbutton ACKN HCU FAULT

Annunciator "HCU TROUBLE"

ASSUME ALL OTHER ANNUNCIATORS AND STATUS LIGHTS ARE NORMAL.

Which one of the following is the probable cause for these indications?

A. HCU Accumulator pressure at 1620 psig

B. Loss of power to RPS bus A

C. A single control rod scram

D. Detectable water in an HCU Instrument Block

QUESTION 7 **NRC RECORD # WRI 341**
ANSWER: D. **SYSTEM # C11-1B** **K/A 201003 A2.08: 3.8/3.7**
LP# GG-1-LP-OP-C111B.00
OBJ. 7a,b **SRO TIER 2 GROUP 3 / RO TIER 2 GROUP 2**
LP# GG-1-LP-RO-C1102.02
OBJ. 10, 22
REFERENCE: 04-1-02-1H13-P680 ***NEW***
4A2-D4, E4; 7A-A2 MODIFIED BANK
DIFF 2; CA 04-1-01-C11-2
Sect 4.7.2.e,f; 4.8.2.a,d RO SRO ***BOTH*** **CFR 41.6/41.10**
REFERENCE MATERIAL REQUIRED: None **43.5**

QUESTION 8

The plant is in a normal electrical alignment at 22 % power when a loss of the Baxter Wilson and Franklin 500 KV transmission lines occurs.

The following are the present plant parameters:

Reactor water level	-50 inches wide range
Reactor pressure	880 psig
Main Condenser Vacuum	13 inches Hg

Reactor Mode switch is in RUN.

Which one of the following identifies the status of the Main Steam Isolation Valves?

(ASSUME NO OPERATOR ACTIONS OCCUR.)

	Inboard Isolation Valves	**Outboard Isolation Valves**
A.	Closed	Open
B.	Open	Closed
C.	Open	Open
D.	Closed	Closed

QUESTION 8 **NRC RECORD # WRI 270**
ANSWER: D. **SYSTEM # B21; M71; C71** **K/A 223002**
A1.01: 3.5/3.5
A2.01: 3.2/3.5
A3.01: 3.4/3.4
2.4.46: 3.5/3.6
2.4.48: 3.5/3.8
LP# GG-1-LP-OP-C7100.00 **2.4.49: 4.0/4.0**
OBJ. 5a,b; 6a,b; 20 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-01-B21-1 Att III NEW
04-1-02-H13-P601 MODIFIED ***BANK***
DIFF 3, CA 19A-E4 **corrected**
E-0001 RO SRO ***BOTH*** **CFR 41.7/41.9/41.10**
REFERENCE MATERIAL REQUIRED: None **43.5**

QUESTION 9

The plant is operating at 100 % power.

Main Steam Isolation Valve B21-F022A inadvertently isolates.

Which one of the following describes the reactor response to this action?

Reactor power will:

A. rise because reactor pressure rises causing a void collapse in the core which adds positive reactivity. The reactor may scram on either high flux or high pressure.

B. rise because core water level rises caused by rising reactor pressure. Power will return to a slightly lower level as the Reactor Water Level Control system lowers reactor water level and the Turbine Control Valves open.

C. be unaffected because the Turbine Control Valves in the other steam lines quickly open to reduce any pressure transient on the reactor.

D. drop initially because the void boundary is pushed lower in the core which adds negative reactivity. As the Turbine Control Valves respond to lower reactor pressure, power rises as the void boundary rises.

QUESTION 9 **NRC RECORD # WRI 201**
ANSWER:. A. **SYSTEM # B21** **K/A 295007** **AA2.02: 4.1/4.1**
LP# **AA2.03: 3.7/3.7**
OBJ. **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: **Tech Spec Bases 3.3.1.1** NEW
FSAR 15.2.4.1.2.2 MODIFIED ***BANK***
DIFF 2, CA **15.2.4.3.3.2**
RO SRO ***BOTH*** **CFR 41.1/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 10

Operators are performing a plant startup per IOI-1.

The Initial Pressure Controller (IPC) is set per the IOI.

Reactor pressure has been stable at 50 psig for the past hour.

The IPC setpoint fails to 0 psig.

Which one of the following describes the operation of the Main Steam Bypass valves and any effect to the Reactor cooldown rate?

The Main Steam Bypass valves will:

A. OPEN, causing Reactor pressure to drop. Administrative cooldown rate will be exceeded.

B. OPEN, causing Reactor pressure to drop. Administrative cooldown rate will stay within limits.

C. CLOSE, causing Reactor pressure to drop. Administrative cooldown rate will be exceeded.

D. CLOSE, causing Reactor pressure to drop. Administrative cooldown rate will stay within limits.

QUESTION 10 **NRC RECORD # WRI 336**
ANSWER: B. **SYSTEM # N32** **K/A 241000** **K3.02: 4.2/4.3**
K3.01: 4.1/4.1
K3.24: 3.2/3.2
LP# GG-1-LP-RO N3202.01 **K3.25: 3.3/3.3**
OBJ. 3a **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
LP# GG-1-LP-OP IOI01.00
OBJ. 3j
REFERENCE: 03-1-01-1 sect 2.2.3; ***NEW***
MODIFIED BANK
DIFF 2; CA **Steam Tables**
RO SRO ***BOTH*** **CFR 41.5/41.7**
REFERENCE MATERIAL REQUIRED: **Steam Tables**

QUESTION 11

The plant is in a startup following a 19 day refueling outage.

All systems are in their proper configuration and the MSIVs are closed.

Recirc Loop temperatures are at 180 °F.

Control rods are being withdrawn to achieve criticality.

The operating CRD Pump trips.

What will be the plant response?

(ASSUME NO OPERATOR ACTIONS)

A. Reactor water level will remain stable at its present level.

B. Reactor water level will rise to the point that a reactor scram is received on high water level.

C. Reactor water level will drop to the point that a reactor scram is received on low water level.

D. The plant will scram due to a loss of charging water pressure to the Hydraulic Control Units.

QUESTION 11 **NRC RECORD # WRI 55**
ANSWER: C. **SYSTEM # C11-1A; G33/36; IOI- 1** **K/A 295022** **AK2.04: 2.5/2.7**
AK2.05: 2.4/2.5
LP# GG-1-LP-OP-G3336.00 **AA1.04: 2.5/2.6**
OBJ 2, 11, 21 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 03-1-01-1 sect. 2.2.5; 3.3.1d; 3.3.3a NEW MODIFIED CLASS ***BANK***
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 12

The plant is operating at 100% power with Hydrogen Water Chemistry in service.

An electrical fault at the Hydrogen Water Chemistry control panel in area 1/113, Turbine Building resulted in a system Emergency Shutdown.

Which one of the following describes the potential hazard that exists with this action?

A. Hydrogen and oxygen levels inside the reactor will become excessive resulting in a Crud burst. Main Steam Line Radiation levels may exceed the High or High-High setpoints.

B. Oxygen depletion may weaken the pipe structures in the condensate system and reactor vessel by flaking off the oxide layers.

C. The Offgas system will have reduced oxygen levels needed to recombine with excessive hydrogen coming from the reactor causing an elevated risk of fire or explosion.

D. Hydrogen is isolated to the Main Generator resulting in a loss of makeup that could lead to lower concentrations of hydrogen and a possible explosion.

QUESTION 12 **NRC RECORD # WRI 332**
ANSWER: C. **SYSTEM # P73; N64** **K/A 271000** **K1.08: 2.3/2.3**
K5.09: 2.6/2.8
LP# GG-1-LP-OP-P7300.04 **K6.06: 2.5/2.5**
OBJ. 16 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
REFERENCE: **04-1-01-P73-1 sect 3.9** ***NEW***
04-1-01-N64-1 sect 3.14 MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.7/41.13**
REFERENCE MATERIAL REQUIRED: None

QUESTION 13

A loss of offsite power has occurred.

The diesel generators have started and re-energized the ESF buses.

Which one of the following best describes the Fire Protection Water System operation?

A. After a time delay, both diesel driven fire pumps will automatically start.

B. The motor driven fire pump will automatically start on low header pressure.

C. Fire water header pressure will be maintained using the static head of the Fire Water Storage Tanks.

D. If system pressure drops below the auto start setpoint and after a time delay, only the 'A' Diesel Driven Fire Pump will automatically start.

QUESTION 13 **NRC RECORD # WRI 333**
ANSWER: A. **SYSTEM # P64** **K/A 286000** **K2.02: 2.9/3.1**
K1.07: 2.8/2.9
LP# GG-1-LP-RO-P6400.00 **K6.01: 3.1/3.1**
OBJ. 6b, c **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
REFERENCE: 04-S-02-1H13-P862 ***NEW***
1A-A1, A2, A4 MODIFIED BANK
DIFF 1, M
RO SRO ***BOTH*** **CFR 41.4/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 14

A plant startup is in progress.

Reactor Water Cleanup is in service blowing down to the Main Condenser.

A chemistry sample of the RWCU Filter Demin effluent indicated resin fines break through.

The Control Room Supervisor has ordered the Filter Demins removed from service.

What is the effect of removing the Filter Demin from service, considering current plant conditions?

A. Due to less resistance to flow, excessive blowdown flow will result. Non-Regenerative Heat Exchanger outlet temperature will rise and RWCU will isolate.

B. Due to chemistry requirements for water entering the hotwell and concerns for elevated corrosion rates in the Condensate system, RWCU blowdown must be suspended.

C. Due to less resistance to flow, excessive blowdown flow may result causing an RWCU system isolation from system differential flow.

D. Blowdown flow may contain excessive amounts of radioactive contaminants resulting in elevated radiation levels in the vicinity of the hotwell and the Condensate System.

QUESTION 14 **NRC RECORD # WRI 343**
ANSWER: D. **SYSTEM # G33** **K/A 204000 A1.07: 2.9/2.9**
2.1.32: 3.4/3.8
LP# GG-1-LP-OP-G3336.00 **2.3.10: 2.9/3.3**
OBJ. 10 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
REFERENCE: 04-1-01-G33-1 sect 3.2 & 5.1.2 Caution ***NEW*** MODIFIED BANK
DIFF 2; CA 03-1-01-1 sect 2.2.5b
RO SRO ***BOTH*** **CFR 41.10/41.12 41.13/43.4/43.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 15

The plant was operating at 63% power when a lube oil line supplying RFPT B ruptured, causing a loss of lube oil to the RFPT B bearings.

Which one of the following describes the results of this event?

A. Reactor Feed Pump A will continue supplying the reactor. Feedwater flow will windmill through RFPT B. The reactor remains at power.

B. Reactor Feed Pump A will continue supplying the reactor. Condensate system pressure will remain up to RFPT B discharge valve, N21-F014B that is closed. The reactor remains at power.

C. Reactor Feed Pump A will continue supplying the reactor. Condensate system pressure will remain up to RFPT B suction valve, N21-F029B that is closed. The reactor remains at power.

D. Reactor Feed Pump A will trip on a low Lube Oil sump level causing a loss of all feedwater flow into the reactor. A reactor scram will result.

QUESTION 15		**NRC RECORD # WRI 338**	
ANSWER: C.	**SYSTEM # N21**	**K/A 259001**	**A3.10: 3.4/3.4**
LP# GG-1-LP-RO N2100.01			**A4.04: 3.1/2.9**
OBJ. 3, 17, 20, 21, 30	**SRO TIER 2 GROUP 2 /**	**RO TIER 2 GROUP 1**	
REFERENCE:	**04-1-02-1H13-P680**	***NEW***	
	2A-A12; B11; B12	MODIFIED	BANK
DIFF 2; CA	**M-1066B**		
		RO SRO ***BOTH***	**CFR 41.4/41.10**
REFERENCE MATERIAL REQUIRED:	None		**43.5**

QUESTION 16

A plant shutdown is in progress with reactor power at 50%.

Which one of the following describes the Digital Feedwater Control system response as the plant shutdown continues?

The Digital Feedwater Control System is selected for three element control and:

A. will require manual transfer to single element prior to Feedwater flow dropping below 30%.

B. will automatically transfer to single element control when Feedwater flow drops below 30%.

C. will require manual transfer to single element prior to Feedwater flow dropping below 40%.

D. will automatically transfer to single element control when Feedwater flow drops below 40%.

QUESTION 16 **NRC RECORD # WRI 339**
ANSWER: B. **SYSTEM # C34** **K/A 259002** **A1.03: 3.8/3.8**
K4.09: 3.1/3.1
LP# GG-1-LP-RO-C3401.00 **K4.10: 3.4/3.4**
OBJ. 1.9 & 1.10 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 03-1-01-2 sect 5.13.4 & 8.10 ***NEW***
04-1-01-N21-1 sect 5.5.1 MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 17

The plant is operating at 70 % power.

Which of the following best describes how the Reactor Water Level Control System will respond to a 'hard' UPSCALE failure of Feedwater Flow Transmitter C34-N002A?

A. The Digital Feed System will recognize the failure, de-select 3 - element control, and maintain reactor water level at the level setpoint.

B. The Digital Feed System will lower feed flow until reactor level drops to 32 inches at which time it will become level dominant, remaining in 3 - element control.

C. The Digital Feed System will lower feed flow and reactor level will stabilize out at a new level below the low level alarm setpoint.

D. The Digital Feed System will lock up the RFPT "A" Speed Controller and hold level at the level setpoint and remain in 3 - element control.

QUESTION 17 **NRC RECORD # WRI 68**
ANSWER: A. SYSTEM # C34 K/A 295009 AA1.02: 4.0/4.0
AA2.02: 3.6/3.7
LP# GG-1-LP-RO-C3401.00 259002 K6.04: 3.1/3.1
OBJ 1.10; 5.2 SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1
REFERENCE: ARI 04-1-02-H13-P680 NEW
2A-C9 MODIFIED ***BANK***
DIFF 2; CA
RO SRO ***BOTH*** **CFR 41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 18

The plant was operating at 80 % power when an Offsite Power fluctuation caused the reactor to scram.

The following subsequent events occurred at the times indicated:

Time	**Event/Manipulation**
09:05:56	Reactor Scram; reactor water level immediately drops to + 8 inches (Narrow Range)
09:06:12	Reactor water level bottom peaks at + 2.5 inches (Narrow Range)
09:06:20	Reactor water level is + 10.4 inches (Narrow Range)

Which one of the following is the setpoint indicated on the Master Level Controller at **Time 09:06:20**?

A. + 12.4 inches

B. + 18.0 inches

C. + 36.0 inches

D. + 54.0 inches

QUESTION 18 **NRC RECORD # WRI 274**
ANSWER: B. **SYSTEM # C34** **K/A 295006 AK2.02: 3.8/3.8**
LP# GG-1-LP-RO-C3401.00 **259002 K4.04: 2.9/2.9**
A3.06: 3.0/3.0
OBJ. 1.8 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: Digital computer logic NEW
MODIFIED ***BANK***
DIFF 1, M **Lesson Plan question**
RO SRO ***BOTH*** **CFR 41.5/41.14**
REFERENCE MATERIAL REQUIRED: None

QUESTION 19

The plant was operating normally at full power rated conditions.

The INFI-90 Feedwater Level Control System was operating normally when the output breaker from inverter 1Y99 tripped and the static switch failed to transfer.

Which one of the following describes the reaction of the Feedwater System to the loss of power?

A. Both Reactor Feed Pump Speed Controllers will lockup at the present speed and shift to emergency manual control.

B. The Feedwater Level Controls will shift to Manual on the Master Controller and lock the signals to the Reactor Feed Pumps at the present settings.

C. The INFI-90 controls in H13-P612 will transfer to the backup power supply leaving the Feedwater Level Control System unaffected.

D. The INFI-90 controls in H13-P612 will shift to the internal battery backup power supply and shift the Master Level Controller to Manual at its present setting.

QUESTION 19 **NRC RECORD # WRI 292**
ANSWER:. C. **SYSTEM # L62; C34** **K/A 262002** **K1.01: 2.8/3.0**
K1.02: 2.8/3.0
LP# GG-1-LP-RO-C3401.00
OBJ. 6.2 & 6.3 SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2
REFERENCE: **E-0035** NEW
04-1-01-N21-1 Att III MODIFIED ***BANK***
DIFF 1, M **J907.0-N1H13-P612-1.4 014**
RO SRO ***BOTH*** **CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 20

The plant is operating at 100%.

The Recirc System FCVs are 67% open when a Recirc Flow Control Valve Runback occurs.

Hydraulic Power Unit "B" TANK LOW and TANK EMPTY status lights illuminate as valve movement begins.

Which one of the following statements describes the response of the Recirculation System?

A. Neither Recirc system HPU will stroke its associated Flow Control Valve.

B. Both Recirc system HPUs will stroke the Flow Control Valves to provide ≈20% valve position.

C. Recirc Pump "A" Flow Control Valve will stroke to provide ≈20% valve position and Recirc Pump "B" Flow Control Valve will stop in mid stroke.

D. Recirc Pump "A" Flow Control Valve will stroke to ≈20% valve position and Recirc Pump "B" Flow Control Valve will slowly stroke to ≈20% valve position using residual HPU pressure.

QUESTION 20 **NRC RECORD # WRI 322**
ANSWER: C. **SYSTEM # B33** **K/A 202002** **K3.06: 3.7/3.7**
LP# GG-1-LP-OP-B3300.01
OBJ. 22, 24b **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: **04-1-02-1H13-P680** ***<u>NEW</u>***
3A-B8 & C7; 4A1-C4 MODIFIED BANK
DIFF 2; CA
RO SRO ***<u>BOTH</u>*** **CFR 41.6/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 21

The plant has undergone a transient that resulted in a Main Turbine trip from 50 % power.

Which one of the following describes the operation of the Recirculation System and the reason for this operation?

A. The Recirc pumps trip to off to reduce the voiding in the core. This prevents exceeding the MCPR Safety Limit at the end of core life.

B. The Recirc pumps shift to slow speed to cause more voiding in the core. This provides additional margin to the MCPR Safety Limit at the end of core life.

C. The Recirc pumps trip to off to reduce the voiding in the core. This prevents exceeding the APLHGR Thermal Limit at the end of core life.

D. The Recirc pumps shift to slow speed to cause more voiding in the core. This provides additional margin to the APLHGR Thermal Limit at the end of core life.

QUESTION 21 **NRC RECORD # WRI 276**
ANSWER:. B. **SYSTEM # B33** **K/A 295005 AK3.02: 3.4/3.5**
LP# GG-1-LP-RO-B3300.01 **202001 K5.05: 3.5/3.6**
K4.13: 3.7/4.0
OBJ. 27a SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 1
REFERENCE: Tech Spec 3.3.4.1 bases NEW
04-1-02-1H13-P680 MODIFIED ***BANK***
DIFF 3, CA 3A-D4; 3A-D10
RO SRO ***BOTH*** **CFR 41.4/41.5/41.6**
REFERENCE MATERIAL REQUIRED: None

QUESTION 22

A LOCA has occurred.

Load Shedding and Sequencing has actuated.

Systems capable of being restored in the Auxiliary Building, Containment, and Drywell have been restored per the Automatic Isolations ONEP.

Unit II Instrument Air compressor has tripped.

Which one of the following describes the current Instrument Air System status?

A. Instrument Air header pressure is completely lost. Nitrogen can be applied to the ADS accumulators using bottles.

B. Unit I Instrument Air compressor automatically started on low Instrument Air receiver pressure and returned the Instrument Air header to normal pressure.

C. Service Air automatically cross-tied to Instrument Air downstream of the Instrument Air dryers and restored the Instrument Air header pressure.

D. Service Air automatically cross-tied to Instrument Air upstream of the Instrument Air dryers and restored the Instrument Air header pressure.

QUESTION 22 **NRC RECORD # WRI 346**
ANSWER: D. **SYSTEM # P53; P52; R21-1** **K/A 300000 K4.02: 3.0/3.0**
LP# GG-1-LP-OP-P5300.00
OBJ. 10, 19f, 21 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
LP# GG-1-LP-RO-P5200.01
OBJ. 9, 13f, 15
REFERENCE: **05-1-02-V-9 sect 3.1.1** ***NEW***
04-1-01-R21-1 Table 1 MODIFIED BANK
DIFF 2; CA **04-1-02-1H13-P870 7A-A3**
RO SRO ***BOTH*** **CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 23

The reactor has scrammed.

A loss of offsite power (LOP) and loss of coolant accident (LOCA) signal were received by LSS eight (8) hours ago.

The ESF buses were restored by their respective diesel generators.

Reactor pressure is being controlled using Safety Relief Valves.

When the handswitch for SRV B21-F051F was taken to OPEN, the valve did NOT change position.

Instrument air system header pressure and ADS receiver pressure indicates 0 psig.

Which one of the following correctly describes a method to allow further operation of this SRV?

A. The SRV can be opened after installing nitrogen bottles in area 9, 139 ft elevation and pressurizing the ADS air header.

B. The SRV can be opened by placing the ‘A’ solenoid (H13-P601) and ‘B’ solenoid (H13-P631) handswitches to OPEN.

C. The SRV can be opened by placing the handswitch on Division I or II Remote Shutdown Panels to OPEN.

D. Due to the loss of instrument air, this SRV will open only in the Safety function.

QUESTION 23 **NRC RECORD # WRI 337**
ANSWER: D. **SYSTEM # E22-2** **K/A 239002 K1.05: 3.1/3.3**
LP# GG-1-LP-RO E2202.01
OBJ. 5a; 9c, f; 15; 18d, 21 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 05-1-02-V-9 sect 3.11 ***NEW***
04-1-01-B21-1 MODIFIED BANK
DIFF 2; CA Sect 4.2.2 & Att II
M-1077C & E RO SRO ***BOTH*** **CFR 41.3**
REFERENCE MATERIAL REQUIRED: None

QUESTION 24

A LOCA has occurred. High Pressure Core Spray is inoperable.

ADS Inhibit Switches are in INHIBIT.

Drywell pressure is 1.05 psig and rising.

Reactor pressure is 890 psig and falling.

Reactor water level is – 160 inches and stable on wide range indication.

ALL systems are functioning as designed and CRD is maximized.

Which one of the following describes the operation of the Automatic Depressurization System (ADS) valves?

A. ADS valves can ONLY be opened using their handswitches.

B. ADS will automatically initiate after the ADS 105 second timer has timed out.

C. ADS can be manually initiated using the ADS Manual Initiation pushbuttons.

D. ADS will automatically initiate after both the 9.2 minute and 105 second timers have timed out.

QUESTION 24 **NRC RECORD # WRI 248**
ANSWER: C. **SYSTEM # E22-2** **K/A 218000** **K5.01: 3.8/3.8**
K4.02: 3.8/4.0
A2.01: 4.1/4.3
A4.04: 4.1/4.1
LP# GG-1-LP-RO-E2202.00 **K4.03: 3.8/4.0**
OBJ. 8d, 10, 21 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04--1-02-H13-P601-18A NEW
A1, A2, B2, C2, E2, H2 MODIFIED ***BANK***
DIFF 1, M **E-1161-005**
RO SRO ***BOTH*** **CFR 41.5/41.7/41.8**
REFERENCE MATERIAL REQUIRED: None

QUESTION 25

A Reactor scram resulted in water level dropping to – 46 inches indicated on Wide Range.

Reactor level has since recovered to + 10 inches indicated on Narrow Range.

Reactor pressure is being maintained with the Turbine Bypass valves.

The maximum Reactor pressure during the transient was 1080 psig.

The Roving Control Room Operator has noticed Suppression Pool temperature is rising.

Which one of the following could be the cause of rising Suppression Pool parameters?

A. SRV tailpipes cooling down following SRV actuation.

B. Steam from Reactor Core Isolation Cooling operation.

C. Water drained from the Scram Discharge Volume to the Suppression Pool.

D. RHR Pumps operating on minimum flow to the Suppression Pool.

QUESTION 25 **NRC RECORD # WRI 211**
ANSWER:. B. **SYSTEM # E51; B21; C11** **K/A 295013 AA1.02: 3.9/3.9**
LP# GG-1-LP-OP-E51.02
OBJ. 4b; 10a; 12a; 20 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**
REFERENCE: ARI 04-1-02-H13-P601 19A-B6; 16A-A4 P870 3A-E3 NEW MODIFIED ***BANK***
DIFF 1, M
RO SRO ***BOTH*** **CFR 41.9**
REFERENCE MATERIAL REQUIRED: None

QUESTION 26

The plant is shutdown with reactor pressure at 100 psig.

Preparations are being made to place RHR in shutdown cooling.

Mechanical Maintenance has a tagging request to close B33-F023B, Recirc Pmp B Suct Vlv and B33-F067B, Recirc Pmp B Disch Vlv for Recirc Pump Seal replacement.

Which one of the following describes the required alignment to allow Shutdown Cooling to be placed in service?

A. Shutdown cooling suction must be aligned to Recirculation loop A. Alignment to Recirculation loop B will provide inadequate net positive suction head for the RHR pump.

B. Shutdown cooling suction must be aligned to Recirculation loop A. The shutdown cooling suction connects to the Recirculation loops on the pump side of each Recirculation loop suction valve.

C. Shutdown cooling CANNOT be used with either Recirculation loop isolated. The Alternate Decay Heat Removal System must be placed in service to remove decay heat from the reactor.

D. Shutdown cooling may be aligned to either RHR A or B. The suction for both shutdown cooling loops is unaffected by the isolation of either Recirculation loop.

QUESTION 26 **NRC RECORD # WRI 342**
ANSWER: D. **SYSTEM # B33; E12** **K/A 202001** **K3.08: 2.8/2.9**
LP# GG-1-LP-OP-B3300.01
OBJ. 36a; 39 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
LP# GG-1-LP-OP-E1200.02
OBJ. 3d
REFERENCE: M-1078E ***NEW***
M-1085B MODIFIED BANK
DIFF 2; CA
RO SRO ***BOTH*** **CFR 41.5/41.6/43.6**
REFERENCE MATERIAL REQUIRED: None

QUESTION 27

The plant is operating at rated conditions.

The Low Pressure Core Spray (LPCS) Jockey Pump has just tripped.

The Auxiliary Building operator reported the circuit breaker has charred wires.

Which one of the following describes the actions to be taken for this event?

A. Have the Auxiliary Building operator apply Condensate Transfer pressure to LPCS to maintain both LPCS and the Feedwater Leakage Control Outboard system operable.

B. Have the Auxiliary Building operator apply Condensate Transfer pressure to LPCS to maintain both LPCS and the Suppression Pool Makeup Division I level instruments operable.

C. Declare both LPCS and the Feedwater Leakage Control Outboard system inoperable. Rack out the LPCS pump circuit breaker.

D. Declare both LPCS and the Suppression Pool Makeup Division I level instruments inoperable. Rack out the LPCS pump circuit breaker.

QUESTION 27 **NRC RECORD # WRI 321**
ANSWER: D. **SYSTEM # E21; E30** **K/A 209001** **K6.08: 2.9/3.0**
K4.02: 3.0/3.2
LP# GG-1-LP-OP-E2100.02
OBJ. 4e, 11, 16 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: **04-1-01-E21-1 sect 3.8** ***NEW***
04-1-02-1H13-P601 MODIFIED BANK
DIFF 1; M **21A-C7; 21A-H8**
RO SRO ***BOTH*** **CFR 41.7/41.8**
REFERENCE MATERIAL REQUIRED: None

QUESTION 28

The plant is in Mode 4 with RHR 'A' in Shutdown Cooling.

RHR 'A' is also aligned to blowdown reactor inventory to the Suppression Pool via the RHR 'A' heat exchanger vent valves (E12-F073A and E12-F074A) due to an RWCU outage.

Reactor level is slowly lowering due to the heat exchanger vent valves E12-F073A and E12-F074A being open.

Which one of the following best describes the response of the RHR 'A' System as reactor water level lowers?
(Assume no further operator actions)

A. At + 11.4 inches, the RHR Suction from the Reactor (E12-F008 & F009), and RHR 'A' Shutdown Cooling Return to Feedwater (E12-F053A) will isolate. RHR 'A' pump trips.

B. At + 11.4 inches, RHR 'A' Heat Exchanger Vents (E12-F073A & F074A), and RHR 'A' Shutdown Cooling Return to Feedwater (E12-F053A) will isolate. RHR 'A' Minimum Flow valve E12-F064A opens.

C. At – 41.6 inches, the RHR Suction from the Reactor (E12-F008 & F009), and RHR 'A' Shutdown Cooling Return to Feedwater (E12-F053A) will isolate. RHR 'A' pump trips.

D. At – 41.6 inches, RHR 'A' Heat Exchanger Vents (E12-F073A & F074A), and RHR 'A' Shutdown Cooling Return to Feedwater (E12-F053A) will isolate. RHR 'A' Minimum Flow valve E12-F064A opens.

QUESTION 28		**NRC RECORD # WRI 5**	
ANSWER: A.	**SYSTEM # E12**	**K/A 205000**	**K4.03: 3.8/3.8**
LP# OP-LOR-ONEP-LP-001-04			**A2.05: 3.5/3.7**
OBJ. 31			**A2.09: 3.6/3.8**
LP# GG-1-LP-OP-E1200			
OBJ. 12	**SRO TIER 2 GROUP 2 /**	**RO TIER 2 GROUP 2**	
REFERENCE:	**05-1-02-III-5 Group 3**	NEW	
	04-1-01-E12-1	MODIFIED	***BANK***
DIFF 1; M	**sect. 4.2.2e(14)**		
	E-1181-43 & 67		
		RO SRO ***BOTH***	**CFR 41.7/41.10/43.5**
REFERENCE MATERIAL REQUIRED:	NONE		

QUESTION 29

The plant is in mode 5 for RF11. Steam Separator removal is in progress.

HPCS and LPCS are the operable ECCS pumps.

RHR ‘C’ injection valve E12-F042C is disassembled for valve disc replacement.

RHR ‘A’ was operating in Shutdown Cooling when power was lost to bus 15AA.

Bus 15AA remains de-energized.

Reactor coolant temperature is 110 °F and rising.

When RHR ‘B’ was being placed in Shutdown Cooling, the pump tripped due to a motor winding phase to phase short.

Which one of the following identifies an available decay heat removal method?
Inadequate Decay Heat Removal ONEP is provided.

A. Alternate Decay Heat Removal using both pumps.

B. LPCS injection with at least two (2) Safety Relief Valves open

C. HPCS injection with the Division II SPMU Dump valves open (after red tags removed).

D. Both CRD pumps making up to the RPV and RWCU draining the RPV to radwaste.

QUESTION 29		**NRC RECORD # WRI 226**		
ANSWER: C.	**SYSTEM # B21; E22; E12; C11; E21; ONEP; IOI Decay Heat Removal**	**K/A 295021**	**AA1.04: 3.7/3.7** **AK3.02: 3.3/3.4** **AK3.05: 3.6/3.8**	
LP# System flow paths & power supplies			**2.4.9: 3.3/3.9**	
OBJ.	**SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 3**			
REFERENCE:	**05-1-02-III-1**	NEW		
	Section 3.2.3e	MODIFIED		***BANK***
DIFF 2, CA	**M-1085**			**corrected**
	M-1096	RO SRO ***BOTH***		**CFR 41.5/43.5**
REFERENCE MATERIAL REQUIRED:		**05-1-02-III-1 w/o immediate actions**		

QUESTION 30

The Control Room has been evacuated due to a freon leak into the Control Room atmosphere. Plant control has been established at the Remote Shutdown Panels.

The plant was scrammed and Reactor water level is dropping. RCIC has tripped on overspeed and the MSIVs have closed. The Control Room Supervisor has directed you to use RHR A in the LPCI mode to restore Reactor water level.

During the lineup of RHR A in LPCI mode, you notice two handswitches for the LPCI A Injection Valve (E12-F042A) on H22-P150.

What is the purpose for two handswitches?

A. One handswitch is used to swap to emergency, removing control from the control room. The other handswitch operates the valve, OPEN or CLOSED.

B. One handswitch is used to remove the auto features. The other handswitch operates the valve, OPEN or CLOSED.

C. One handswitch enables the other handswitch to operate the valve, OPEN and CLOSED.

D. One handswitch is used only when the Division I lockouts have been transferred to insert the pressure interlocks. The other handswitch operates the valve, OPEN and CLOSED.

QUESTION 30 **NRC RECORD # WRI 29**
ANSWER: C. **SYSTEM # C61; E12** **K/A 295016** **AK2.01: 4.4/4.5**
LP# GG-1-LP-RO-C6100-01
OBJ 6c **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**
REFERENCE: **E-1181- 037** NEW
MODIFIED ***BANK***
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 31

Which one of the following is the reason the LPCI Injection Valves, E12-F042A, B, and C, remaining closed at normal reactor vessel pressure following an initiation signal?

A. This allows the RHR pumps time to pressurize the discharge header, thus minimizing the differential pressure across the injection valves.

B. This ensures reactor pressure has fallen sufficiently to prevent exceeding the LPCI subsystems' design pressure.

C. This allows the RHR pumps to develop enough discharge head to overcome reactor pressure prior to injection, preventing back flow of hot reactor water into the LPCI piping.

D. This ensures that reactor pressure has equalized with LPCI pressure to prevent the discharge check valve E12-F041A, B, C from causing RHR system pipe damage.

QUESTION 31 **NRC RECORD # WRI 60**
ANSWER: B. **SYSTEM # E12** **K/A 203000** **K1.17: 4.0/4.0; K4.02: 3.3/3.4**
A3.01: 3.8/3.7; A4.01: 4.3/4.1
A3.08: 4.1/4.1; A4.08: 4.3/4.3
LP# GG-1-LP-OP-E1200.02
OBJ 8I; 14a,b **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: **04-1-01-E12-1 sect. 3.4** NEW
Tech Spec Bases B3.3.5.1 MODIFIED ***BANK***
DIFF 1; M **04-1-02-1H13-P601**
21A-F7; 17A-C3 RO SRO ***BOTH*** **CFR 41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 32

The following plant conditions exist:

Drywell pressure	2.3 psig and rising
Reactor water level	- 80 inches and rising
Reactor pressure	400 psig and lowering

All ECCS systems have been overridden with the pumps to STOP and injection valves to CLOSE.

Then, power to Division I bus was momentarily lost and the bus has been re-energized by the diesel generator.

Which one of the following best describes status of the Division I ECCS?

(ASSUME NO OPERATOR ACTIONS.)

A. Division I ECCS will remain overridden with the pumps stopped and the injection valves closed.

B. Division I ECCS will shed and sequence with the pumps operating on minimum flow. The injection valves remaining overridden closed.

C. Division I ECCS will shed and sequence. The injection valves will cycle open. LPCS will operate on minimum flow and RHR A will inject into the reactor.

D Division I ECCS will shed and sequence. The injection valves will cycle open. RHR A will operate on minimum flow and LPCS will inject into the reactor.

QUESTION 32 **NRC RECORD # WRI 329**
ANSWER: D. **SYSTEM # E12; E21** **K/A 203000** **A3.01: 3.8/3.7; A3.02: 4.0/3.9**
A4.01: 4.3/4.1; A4.02: 4.1/4.1;
LP# GG-1-LP-OP-E1200.02 **K6.01: 3.6/3.7**
OBJ. 8a, i; 9a, g; 14; 20 **209001 A3.01: 3.6/3.6**
LP# GG-1-LP-OP-E2100.02 **A3.02: 3.8/3.7**
OBJ. 8a, c; 9a, g; 11 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H13-P601 ***NEW***
17A-B1, B3, B4, C2, C5
20A-B4, B5, C5; 21A-B7, B8, C8
04-1-01-E12-1 sect 3.3 MODIFIED BANK
DIFF 2, CA **04-1-01-E21-1 sect 3.3 & 3.11**
FSAR figures 5.4-20 & 6.3-69 RO SRO ***BOTH*** **CFR 41.7/41.10/43.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 33

The plant is operating at rated conditions.

DC Bus 11DB has a ground fault resulting in the supply circuit breakers from the battery and both battery chargers tripping.

Electricians and operators have attempted to reset and close the breakers but have been unsuccessful.

Which one of the following describes the status of ECCS Systems?

A. All ECCS will function normally.

B. Division I and III ECCS will function normally. Division II ECCS must be manually started and aligned from the Control Room.

C. Division III ECCS will function normally. Division I and II logics will NOT function to initiate ECCS, the components can be operated manually locally.

D. Division I and III ECCS will function normally. Division II logics will NOT function to initiate ECCS, the components can be operated manually locally.

QUESTION 33 **NRC RECORD # WRI 223**
ANSWER: D. **SYSTEM # L11; E12; E21; E22** **K/A 295004 AA2.04: 3.2/3.3**
LP# GG-1-LP-OP-E2201.00
OBJ. 7b,c; 13b; 20
LP# GG-1-LP-OP-E2100.02
OBJ. 7b,c; 9b; 10b; 16
LP# GG-1-LP-OP-E1200.02
OBJ. 7a,b; 9b; 10b; 13b; 20
LP# GG-1-LP-OP-L1100.02
OBJ. 8a; 17 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: E-1181-65; E-1182-23 NEW
E-1183-21 MODIFIED ***BANK***
DIFF 2, CA **04-1-02-H13-P601**
17A-H2 & H3
RO SRO ***BOTH*** **CFR 41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 34

RCIC was manually initiated for level control following a loss of feedwater.

Reactor level has risen to + 55 inches.

Which one of the following describes the operation of RCIC?

A. RCIC Injection Shutoff valve, E51-F013, will close and RCIC will operate on minimum flow. If Reactor water level drops to < - 41.6 inches, the RCIC Injection Shutoff valve will re-open.

B. RCIC Steam Supply to RCIC Turbine valve, E51-F045, will close securing RCIC. If Reactor water level drops to < - 41.6 inches the RCIC Steam Supply to RCIC Turbine valve will open and RCIC will re-inject into the Reactor.

C. RCIC Turbine Trip/Throttle valve will close securing RCIC. RCIC will require a manual restart if further operation becomes necessary.

D. RCIC Steam Supply to RCIC Turbine valve, E51-F045, will close securing RCIC. RCIC Injection Shutoff valve, E51-F013, will remain open. If Reactor water level drops to < - 41.6 inches the RCIC Steam Supply to RCIC Turbine valve will open and RCIC will re-inject into the Reactor.

QUESTION 34 **NRC RECORD # WRI 328**
ANSWER:. B. **SYSTEM # E51** **K/A 217000 A1.01: 3.7/3.7**
LP# GG-1-LP-OP-E5100.02
OBJ. 8c, i, k, 19 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: E-1185-02, 06, 15, 34, 35 ***NEW*** CLASS
MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.5/41.7/41.10**
REFERENCE MATERIAL REQUIRED: None

QUESTION 35

At 15:30, a LOCA occurred and the following conditions existed:

Drywell pressure	1.84 psig
Reactor water level	–11.6" and stable
High Pressure Core Spray Pump	SECURED
HPCS Initiation Logic	RESET

At 16:00, offsite power was lost, and the ESF buses were re-energized by their respective Diesel Generators.

Which one of the following describes the response of the High Pressure Core Spray System following the loss of power?

A. HPCS will immediately re-initiate on the existing high drywell pressure signal.

B. HPCS will initiate on a low reactor water level or manual initiation only.

C. HPCS will align for injection, but require a manual pump start.

D. HPCS will require manual operation to inject to the vessel in all conditions.

QUESTION 35 **NRC RECORD # WRI 238**
ANSWER: B. **SYSTEM # E22** **K/A 209002** **K2.03: 2.8/2.9**
LP# GG-1-LP-OP-E2201.00 **K2.01: 3.2/3.3**
OBJ. 7a,b,c; 12; 13b; 20 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-01-E22-1 NEW
Section 3.7, 3.10 Elect L/U MODIFIED ***BANK***
DIFF 2, CA **E-1183-023; E-1188-019**
RO SRO ***BOTH*** **CFR 41.7/41.8**
REFERENCE MATERIAL REQUIRED: None

QUESTION 36

The following plant conditions exist:

Reactor water level	- 50 inches on wide range
Reactor pressure	860 psig
Drywell pressure	1.45 psig

Which one of the following best describes a condition that will trip the Division I Diesel Generator?

A. Low turbocharger lube oil pressure

B. Generator loss of excitation

C. High jacket water temperature

D. Loss of control air pressure

QUESTION 36 **NRC RECORD # WRI 334**
ANSWER: D. **SYSTEM # P75** **K/A 264000 K4.02: 4.0/4.2**
LP# GG-1-LP-OP-P7500.01
OBJ. 13a **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H22-P400 1A-F1 ***NEW***
MODIFIED BANK
DIFF 1, M
RO SRO ***BOTH*** **CFR 41.8**
REFERENCE MATERIAL REQUIRED: None

QUESTION 37

The plant is operating at 100 % power with the Electrical Distribution System aligned in the normal preferred lineup.

An internal short on BOP Transformer 12B causes a sudden pressure fault on the transformer.

Which one of the following best describes the resulting availability of power for the Safe Shutdown Systems?

A. Power to ESF 11 and 21 Transformers remains energized.

B. Power to ESF 11 Transformer is lost, however the diesel generators for the affected ESF buses start and assume the load.

C. Power to both ESF 11 and 21 Transformers is lost, however the diesel generators for the ESF buses start and assume the loads.

D. Power to ESF 11 and 21 Transformers is lost and remains unavailable until the faulted transformer's incoming disconnects are manually opened.

QUESTION 37 **NRC RECORD # WRI 205**
ANSWER:. A. **SYSTEM # R27** **K/A 295003** **AA2.05: 3.9/4.2**
LP# GG-1-LP-OP-R2700.03 **AA1.03: 4.4/4.4**
OBJ. 3, 8, 13 SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2
REFERENCE: E-0001 NEW
ARI 04-S-02-H13-P807 MODIFIED ***BANK***
DIFF 2, CA 4A-B6
RO SRO ***BOTH*** **CFR 41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 38

Which one of the following describes the power supply to the 11DF DC Bus?

A. D and E DC sources connected in series.

B. K and L DC sources connected in series.

C. D and E DC sources connected in parallel.

D. K and L DC sources connected in parallel.

QUESTION 38 **NRC RECORD # WRI 331**
ANSWER: B. **SYSTEM # L11** **K/A 263000** **K2.01: 3.1/3.4**
2.1.28: 3.2/3.3
LP# GG-1-LP-OP-L1100.02
OBJ. 6b **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
REFERENCE: **04-1-01-L11-1 sect 4.5.2** NEW
E-1027 MODIFIED ***BANK***
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.4**
REFERENCE MATERIAL REQUIRED: None

QUESTION 39

The following are the current conditions of the RHR A circuit breaker 152-1509:

Racked in open
Control fuses installed
Closing springs charged
Charging motor off

Considering only the current conditions, which one of the following describes the operational status of the circuit breaker?

A. The circuit breaker will electrically close and open locally as many times as required.

B. The circuit breaker will close locally one time only. Once closed the circuit breaker will NOT open.

C. The circuit breaker will close remotely one time only. Once closed the circuit breaker CANNOT be opened remotely.

D. The circuit breaker will close remotely one time only. Once closed the circuit breaker can be opened remotely.

QUESTION 39 **NRC RECORD # WRI 335**
ANSWER: D. **SYSTEM # R21** **K/A 262001** **K4.03: 3.2/3.4**
LP# GG-1-LP-OP-PROC.00 **2.1.29: 3.4/3.3**
OBJ. 42o; 55b(2)
LP# GG-1-LP-OP-E1200.02
OBJ. 14
LP# OP-NOB-EL-LP-011-02
OBJ. 3
LP# GG-1-LP-OP-ELBKR.00
OBJ. 11, 22 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 2**
REFERENCE: 04-1-01-E12-1 sect 3.2.7 ***NEW***
04-S-04-2 sect 4.4 MODIFIED BANK
DIFF 2; CA **02-S-01-2 Att III, III A**
RO SRO ***BOTH*** **CFR 41.4/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 40

The plant is shutdown in mode 4.

ADHR is in service in the Reactor to Reactor mode of operation.

Component Cooling Water temperature is slowly rising.

"CCW HX OUTL TEMP HI" annunciator on H13-P870, has been received.

Which one of the following describes actions to be taken to lower CCW temperature?

A. Start an additional Radial Well pump to raise Plant Service Water flow to the plant.

B. Adjust the CCW temperature controller setting to further open Temperature Control Valve P44-F501.

C. Initiate Standby Service Water 'B' and align flow to the CCW Heat Exchangers.

D. Throttle closed PSW inlet flow to the in service CCW Heat Exchangers.

QUESTION 40 **NRC RECORD # WRI 345**
ANSWER: A. **SYSTEM # P42; P44; E12** **K/A 400000 A4.01: 3.1/3.0**
K1.01: 3.2/3.3
LP# GG-1-LP-OP-E1201.02
OBJ. 10a **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
LP# GG-1-LP-OP-P4200.02
OBJ. 8; 11d, e; 23
LP# GG-1-LP-OP-P4447.00
OBJ. 25
REFERENCE: 04-1-02-1H13-P870 5A-D1 ***NEW***
04-1-01-E12-1 MODIFIED BANK
DIFF 2; CA **sect 5.13.2a (7)**
04-1-01-P42-1 sect 3.9 RO SRO ***BOTH*** **CFR 41.4/41.7**
M-1072A & H
M-1063A
REFERENCE MATERIAL REQUIRED: None

QUESTION 41

The plant is operating at 100 % power.

The Suppression Pool Makeup System inadvertently dumped raising Suppression Pool level to 23.67 feet.

Which one of the following describes the implications of elevated Suppression Pool level with regard to Drywell Pressure?
(Assume NO Drywell leakage.)

Drywell pressure will:

A. drop and cause Suppression Pool water to be drawn over the Weir Wall until Drywell pressure returns to normal.

B. rise and cause elevated Drywell pressure and delay Suppression Pool vent clearing during a postulated DBA LOCA.

C. drop and cause the Drywell normal vacuum relief valves to open and equalize pressure between the Drywell and Containment.

D. rise and cause the SRV tailpipe vacuum breakers to have a differential pressure above the designed operating pressure.

QUESTION 41 **NRC RECORD # WRI 307**
ANSWER:. B. **SYSTEM # M41** **K/A 295010 AK1.02: 2.8/3.1**
LP# GG-1-LP-RO-M4101.01
OBJ. 3e,f; 9; 10
LP# GG-1-LP-OP-E3000.01
OBJ. 2 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: Tech Spec Bases 3.6.2.2 ***NEW***
3.6.5.4 MODIFIED BANK
DIFF 2, CA **FSAR 6.2.7.3.3**
6.2.1.1.3.3.1.5 RO SRO ***BOTH*** **CFR 41.4/41.9/41.14**
REFERENCE MATERIAL REQUIRED: None

QUESTION 42

A LOCA occurred 10 minutes ago. The Drywell, Containment, and Auxiliary Buildings have isolated.

The following plant conditions exist.

Reactor water level	+20 inches narrow range
Reactor pressure	500 psig
Drywell temperature	225 °F
Drywell pressure	1.4 psig
Containment temperature	115 °F
Containment pressure	1.0 psig

Which one of the following describes the means available to remove heat from the Drywell? (The above parameters have existed for the past 6 minutes.)
Automatic Isolations Operator Aid is provided.

A. Drywell Cooling fans only.

B. Drywell Cooling fans by immediately starting the ‘A’ Drywell Chilled Water Pump and Chillers only.

C. Drywell Cooling fans by immediately starting the ‘B’ Drywell Chilled Water Pump and Chillers only.

D. Drywell Cooling fans with the available Drywell Chilled Water Pumps and Chillers after a controlled startup of the system.

QUESTION 42 **NRC RECORD # WRI 313**
ANSWER: D. **SYSTEM # P72; M51; ONEPs** **K/A 295012 AK2.02: 3.6/3.7**
LP# GG-1-LP-RO-M5100.01 **AK2.01: 3.4/3.5**
OBJ. 21 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 05-1-02-III-5 Attachment II Note ***NEW*** MODIFIED BANK
DIFF 2, CA
RO SRO ***BOTH*** **CFR 41.9**
REFERENCE MATERIAL REQUIRED: 05-1-02-III-5 Att II

QUESTION 43

The plant was operating at 100 % power.

Standby Liquid Control (SLC) was being lined up to the SLC Test Tank for surveillance testing.

Operators had opened the SLC Test Tank Outlet Valve, C41-F031 to 50% when a transient occurred causing a plant scram.

Multiple control rods failed to fully insert, resulting in reactor power staying at 45%.

The Shift Manager ordered a Containment evacuation.

Standby Liquid Control A and B injection was ordered.

Which one of the following describes the SLC response with the SLC Test Tank outlet valve 50% open?

A. SLC will inject the contents of the SLC Test Tank into the reactor.

B. SLC will inject the contents of the SLC Boron Tank into the reactor.

C. SLC will inject the contents of the SLC Boron Tank and SLC Test Tank into the reactor.

D. SLC will NOT inject the contents of the SLC Boron Tank into the reactor.

QUESTION 43 **NRC RECORD # WRI 239**
ANSWER: D **SYSTEM # C41** **K/A 211000** **K4.02: 3.0/3.2**
A2.06: 3.1/3.3
LP# GG-1-LP-RO-C4100.01 **A2.07: 2.9/3.2**
OBJ. 8a,b,c,e; 12; 23 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-01-C41-1 section 3.5 NEW
06-OP-1C41-Q-0001 MODIFIED ***BANK***
DIFF 1, M **Section 2.2**
RO SRO ***BOTH*** **CFR 41.6/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 44

Which one of the following identifies the significance of exceeding the designed Drywell internal pressure limit?

A. The Drywell Purge Compressor discharge valve differential pressure limit would be exceeded preventing operation of the Drywell Purge Compressors and the combustible gas control function.

B. The Drywell structure could be breached resulting in the loss of the pressure suppression function resulting in the direct pressurization and potential failure of Containment in a DBA.

C. Upon depressurization, the resultant Suppression Pool surge would cause the structures inside the Drywell to exceed the maximum loading and could result in a compounded failure.

D. Upon depressurization, the Suppression Pool surge would result in the overflowing of the Weir Wall and the degradation of equipment required for accident mitigation in the lower elevation of the Drywell.

QUESTION 44 **NRC RECORD # WRI 259**
ANSWER: B. **SYSTEM # M41** **K/A 295024 EK1.01: 4.1/4.2**
LP# GG-1-LP-RO-M4101.00
OBJ. 4, 5 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: FSAR sect 3.8; 6.2.1.1.1j NEW
Table 6.2-1 MODIFIED ***BANK***
DIFF 1, M
RO SRO ***BOTH*** **CFR 41.9**
REFERENCE MATERIAL REQUIRED: None

QUESTION 45

The plant was operating at rated conditions when an ATWS occurred.

Several SRVs lifted and raised Suppression Pool temperature.

The Control Room Supervisor directed the initiation of Standby Liquid Control.

Level in the reactor was lowered to reduce power production.

The crew is now driving and scramming control rods.

Which one of the following conditions would allow the Control Room Supervisor to consider the Reactor shutdown, terminate Standby Liquid Control, and exit EP-2A?

A. All control rods are at position 00 except for control rod 32-33. It is at position 48.

B. The Reactor Engineer says that subcriticallity can be guaranteed to 200 0F.

C. All control rods are full in except for three. They are in different quadrants and at position 04.

D. Chemistry has confirmed that the Hot Shutdown Boron Weight of SLC has been injected.

QUESTION 45 **NRC RECORD # WRI 33**
ANSWER: A. **SYSTEM #** **K/A 295015** **AK1.01: 3.6/3.9**
EOP Bases
LP# GG-1-LP-RO-EP02A.02
OBJ 2, 3b, e **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: **05-S-01-EP-2A** NEW
Steps 2, 3, 4, 5 & bases MODIFIED ***BANK***
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.1/41.8/43.6**
REFERENCE MATERIAL REQUIRED: **05-S-01-EP-2A**

QUESTION 46

An ATWS has caused Containment conditions to degrade.

Containment Sprays are unavailable.

Which one of the following situations would require operators to Emergency Depressurize the reactor?

A. Containment temperature is 135 °F and lowering.

B. Containment temperature is 135 °F and rising.

C. Containment temperature is 185 °F and lowering.

D. Containment temperature is 185 °F and rising

QUESTION 46 **NRC RECORD # WRI 324**
ANSWER: D. **SYSTEM #** **K/A 295027** **EA1.03: 3.5/3.8**
EOP - 3 Pri Ctmt
LP# GG-1-LP-RO-EP003.00
OBJ 2, 6 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**
REFERENCE: 05-S-01-EP-3 ***NEW***
Step 28 MODIFIED BANK
DIFF 1; M **PSTG App B**
RO SRO ***BOTH*** **CFR 41.9/41.10/43.5**
REFERENCE MATERIAL REQUIRED: 05-S-01-EP-3

QUESTION 47

A flange rupture on the RWCU Regenerative Heat Exchanger inlet has caused a plant Scram and RWCU isolation.

RPV water level dropped to –20 inches on wide range before recovering.

The following conditions exist in the plant:

Reactor level	+36 inches and stable
Reactor pressure	1000 psig and stable
Drywell pressure	+ 1.0 psig and slowly rising
Drywell temperature	110 °F
Containment pressure	+ 1.5 psig
Containment temperature	175 °F
Suppression Pool temperature	86 °F
Suppression Pool level	18.6 feet

Which one of the following describes the available methods to remove heat from the Containment under the present conditions?

A. Containment Coolers and Containment Steam Tunnel Coolers

B. Containment Coolers and Containment Steam Tunnel Coolers without chilled water

C. Containment Coolers, Containment Steam Tunnel Coolers and Containment Spray

D. Containment Coolers and Containment Steam Tunnel Coolers without chilled water, and Containment Spray

QUESTION 47 **NRC RECORD # WRI 323**
ANSWER:. A. **SYSTEM # M71; M41/M41-1** **K/A 295011 AK3.01: 3.6/3.9**
LP# GG-1-LP-RO-EP03.00
OBJ. 3 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**

REFERENCE:	**GGNS PSTG app B**	NEW	CLASS
	05-S-01-EP-3 step 23	***MODIFIED***	BANK
DIFF 3 CA	**M-1079**	**WRI213 NRC 5/00**	**corrected**
		RO SRO ***BOTH***	**CFR 41.4/41.9/ 41.10/43.5**

REFERENCE MATERIAL REQUIRED: **05-S-01-EP-3**

QUESTION 48

Conditions in the plant require Emergency Depressurization.

Which one of the following identifies the minimum suppression pool level required to assure the Safety Relief Valve discharge devices are adequately submerged to prevent steam from passing into the Containment air space?

A. 5.5 feet

B. 10.5 feet

C. 12.5 feet

D. 14.56 feet

QUESTION 48 **NRC RECORD # WRI 308**
ANSWER: B. **SYSTEM # M41** **K/A 295030 EK1.01: 3.8/4.1**
LP# GG-1-LP-RO-EP02.01
OBJ. 11
LP# GG-1-LP-RO-E2202.01
OBJ. 6c **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**
REFERENCE: PSTG App. B RC/P-2 ***NEW***
MODIFIED BANK
DIFF 1, M
RO SRO ***BOTH*** **CFR 41.9**
REFERENCE MATERIAL REQUIRED: None

QUESTION 49

A LOCA occurred 20 minutes ago.

The following parameters exist:

HPCS is injecting to the Reactor.

Reactor Level Fuel Zone	- 80 inches	rising
Suppression Pool Temperature	125°F	rising
Suppression Pool Level	17.5 feet	stable
Containment Temperature	184°F	rising
Containment Pressure	2.8 psig	stable
Containment Hydrogen Concentration	0.8 %	stable
Drywell Hydrogen Concentration	0.4 %	stable
Drywell Temperature	230°F	stable
Drywell Pressure	4.3 psig	stable

Which one of the following best describes the allowances for using Containment Spray and, if used, its expected effects?

A. Containment Spray is NOT allowed because initiation would result in an excessive negative pressure in Containment.

B. Containment Spray is NOT allowed because RHR is required for reactor injection to assure adequate core cooling.

C. Containment Spray may be initiated. Containment temperature should drop due to heat removed from Containment.

D. Containment Spray may be initiated. Containment temperature should rise due to the excessive temperature of the Suppression Pool.

QUESTION 49 **NRC RECORD # WRI 304**
ANSWER: C. **SYSTEM # E12; M41** **K/A 226001** **A1.02: 3.4/3.5**
LP# GG-1-LP-RO-EP03.00
OBJ. 2, 6 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 2**
REFERENCE: 05-1-01-EP-3 steps 6 & 26/27 NEW
PSTG App B third PC override ***MODIFIED*** BANK
DIFF 2, CA **WRI246 NRC 5/00**
RO SRO ***BOTH*** **CFR 41.5/41.9**
REFERENCE MATERIAL REQUIRED: 05-1-01-EP-3

QUESTION 50

An ATWS has occurred. Reactor pressure is being controlled with SRVs.

Standby Liquid Control has been initiated.

Reactor power has just dropped below 4%.

The following conditions exist:

Reactor Power	2 % and stable
Reactor Pressure	1000 psig and stable
Reactor Level	- 100 inches Fuel Zone and stable
Suppression Pool Level	16.5 feet and rising
Suppression Pool Temperature	150 °F and rising
Drywell Pressure	+ 1.0 psig and rising

Which one of the following describes actions to be taken?

A. Maintain RPV water level between -167 and + 53.5 inches and stabilize RPV pressure < 1064.7 psig.

B. Maintain RPV water level between -192 and + 53.5 inches. Lower RPV pressure to 700 – 900 psig, and initiate SPMU.

C. Terminate and prevent all injection into the RPV except for Boron, CRD and RCIC, and lower RPV water level to the top of active fuel.

D. Terminate and prevent all injection into the RPV except for Boron, CRD and RCIC and emergency depressurize the RPV.

QUESTION 50 **NRC RECORD # WRI 301**
ANSWER:. D. **SYSTEM # M41; B21** **K/A 295026 EK2.01: 3.9/4.0**
LP# GG-1-LP-RO-EP03
OBJ. 2, 3
LP# GG-1-LP-RO-EP02A
OBJ. 7, 10h SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2
REFERENCE: 05-S-01-EP2 EP2A Step 33 NEW ***MODIFIED*** BANK
DIFF 2, CA 05-S-01-EP3 Step 15 and HCTL **WRI209 NRC 5/00**
RO SRO ***BOTH*** **CFR 41.7/41.9/41.10/41.14/43.5**
REFERENCE MATERIAL REQUIRED: EP-2A and EP-3

QUESTION 51

The plant is in an emergency condition with 8 SRVs open.

Which one of the following conditions would warrant the bypassing of high Reactor water level isolations/trips for High Pressure Core Spray?

A. LOCA with Reactor water level at –206 inches with Reactor pressure at 800 psig and lowering.

B. LOCA with Reactor water level not determined and Reactor pressure at 800 psig and lowering

C. ATWS with Reactor water level at –206 inches with Reactor pressure at 150 psig and lowering.

D. ATWS with Reactor water level not determined and Reactor pressure at 150 psig and lowering

QUESTION 51 **NRC RECORD # WRI 312**
ANSWER: D. **SYSTEM # EP-2A** **K/A 295008** **AA1.06: 2.8/2.8**
LP# GG-1-LP-RO-EP02A.03
OBJ. 8 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 05-S-01-EP-2A ***NEW***
Steps 92 ATT 5 MODIFIED BANK
DIFF 2, CA
RO SRO ***BOTH*** **CFR 41.4/41.7/41.10/43.5**
REFERENCE MATERIAL REQUIRED: 05-S-01-EP-2A

QUESTION 52

A LOCA occurred 26 hours ago. The following plant conditions exist now:

Reactor power	0% all rods fully inserted
Reactor pressure	0 psig
Reactor level	- 190 inches Fuel Zone and slowly rising
Drywell pressure	4.0 psig
Drywell temperature	200 °F
Drywell Hydrogen conc.	3.2%
Containment pressure	2.4psig
Containment temperature	145 °F
Containment Hydrogen conc.	1.6%

The Radiation Protection Manager estimates that offsite releases will remain below all limits, under all conditions.

With present plant conditions, which one of the following describes the actions to control Hydrogen concentrations in the Containment and Drywell?
Assume any required concurrence from the Emergency Response Organization is granted.

A. Energize the Division I & II Hydrogen Igniters only.

B. Energize the Division I & II Hydrogen Igniters and operate the Drywell Purge Compressors only.

C. Energize the Division I & II Hydrogen Igniters, operate the Drywell Purge Compressors and Hydrogen Recombiners, and vent and purge the Containment only.

D. Operate Containment Sprays, vent and purge the Containment irrespective of Offsite releases, and secure and prevent operation of the Drywell Purge Compressors and Hydrogen Igniters only.

QUESTION 52 **NRC RECORD # WRI 311**
ANSWER: C. **SYSTEM # E61** **K/A 500000** **EA1.03: 3.4/3.2**
EP-3; SAP **2.4.6: 3.1/4.0**
LP# GG-1-LP-RO-EP03.00 **2.4.48: 3.5/3.8**
OBJ. 6 **2.1.25: 2.8/3.1**
LP# GG-1-LP-EP-EPT19.00
OBJ. 2c **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: **05-S-01-EP-3 Steps 54-61** ***NEW***
SAP Hydrogen Control MODIFIED BANK
DIFF 2, CA **Steps 68-95**
RO SRO ***BOTH*** **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED: **05-S-01-EP-3 & SAPs**

QUESTION 53

An ATWS has occurred.

The following plant conditions exist:

Reactor power	10%
Reactor pressure	850 psig and controlled with SRVs between 700 – 900 psig
Reactor level	- 90 inches Fuel Zone
Suppression Pool temperature	123 °F and rising
Suppression Pool level	18.8 feet and rising
Drywell pressure	1.3 psig

Feedwater is being used to control Reactor water level.

Which one of the following describes the actions to be taken with regard to plant control?

A. Maintain RPV water level low in the band between +53.5 inches AND –192 inches.

B. Terminate all injection into the RPV except from Boron, CRD and RCIC, and maintain RPV water level between – 140 inches AND – 192 inches.

C. Terminate all injection into the RPV except from Boron, CRD and RCIC, then maintain RPV level between the level that power went < 4% OR top of active fuel AND –192 inches.

D. Terminate all injection into the RPV except from Boron, CRD and RCIC, then Emergency Depressurize the RPV then maintain RPV pressure above the MARFP OR above –192 inches.

QUESTION 53 **NRC RECORD # WRI 310**
ANSWER: C. **SYSTEM # EP-2A EP-3** **K/A 295037 EA2.07: 4.0/4.2**
LP# GG-1-LP-RO-EP02A.03
OBJ. 6 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: 05-S-01-EP-2A 65, 66, 75, 76, 78, 79, 80, 81 83, 37 Level/Power Control ***NEW*** MODIFIED BANK
DIFF 2, CA
RO SRO ***BOTH*** **CFR 41.10/41.14/ 43.5**
REFERENCE MATERIAL REQUIRED: 05-S-01-EP-2A

QUESTION 54

The following conditions exist in the plant:

Reactor power	0% all rods inserted.
Reactor pressure	230 psig and rising.
Reactor level	- 230 inches Fuel Zone and lowering

6 Safety Relief Valves have been manually opened.
RHR C is injecting into the reactor vessel.

Which one of the following identifies the core cooling adequacy and mechanism per GGNS procedures?

A. Adequate core cooling is NOT assured.

B. Adequate core cooling is assured by Minimum Alternate RPV Flooding Pressure (MARFP) with SRVs and Reactor pressure.

C. Adequate core cooling is assured by Minimum Zero RPV Water Level without RPV injection.

D. Adequate core cooling is assured by Minimum Steam Cooling Water Level.

QUESTION 54		**NRC RECORD # WRI 309**		
ANSWER: A.	**SYSTEM # Eps & Conduct of Ops.**	**K/A 295031**	**EK1.01: 4.6/4.7** **2.1.1: 3.7/3.8** **2.4.21: 3.7/4.3**	
LP# GG-1-LP-RO-EP02.01				
OBJ. 15, 16				
LP# GG-1-LP-OP- PROC.00				
OBJ. 10b3	**SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**			
REFERENCE:	**01-S-06-2 section 5.18**	***NEW***		
	05-S-01-EP-2 steps 69 – 73	MODIFIED		BANK
DIFF 3, CA	**PSTG App. B EPG Cont 3 Steam Cooling**	RO SRO ***BOTH***		**CFR 41.2/41.3/41.10/ 43.5**
REFERENCE MATERIAL REQUIRED:	**05-S-01-EP-2**			

QUESTION 55

A station blackout has occurred.

A fire has been reported in the Division II ESF Switchgear Room on 119 ft elevation, area 10.

Which one of the following best describes the available methods to combat the fire?

A. Fire fighting is limited to the use of portable fire extinguishers only.

B. The Fire Water System Auxiliary Building Isolation Valves can be bypassed by locally opening the motor operated bypass valves to provide water to the hose stations.

C. The CO2 fire suppression system isolation can be overridden and the Auxiliary Building Isolation Valves opened using the Aux Bldg Isolation Manual Bypass Switch.

D. The Fire Water System Auxiliary Building Isolation Valves can be opened after using the Aux Bldg Isolation Manual Bypass Switch to provide water to the hose stations.

QUESTION	**55**		**NRC RECORD # WRI 264**	
ANSWER: B.	**SYSTEM # T10; P64; M71; R21**		**K/A 290001**	**K6.09: 3.4/3.6**
				A2.06: 3.7/4.0
LP# GG-1-LP-OP-M7101.00			**286000**	**A2.09: 2.7/2.8**
OBJ.	**3, 17**			
LP# GG-1-LP-RO-P6400.00				
OBJ.	**3d, 13**	**SRO TIER 2 GROUP 1 /**	**RO TIER 2 GROUP 2**	
REFERENCE:	**05-1-02-V-9 sect. 3.15; 5.4.6**		NEW	
	04-S-01-P64-1 Att III pg 2		MODIFIED	***BANK***
DIFF 1, M	**05-1-02-III-5 sect 3.4.4**			
	M-0035B & E		RO SRO ***BOTH***	**CFR 41.7/41.9**
REFERENCE MATERIAL REQUIRED:	None			

QUESTION 56

Which one of the following describes the Post Accident Reactor Level and Pressure Recorders on H13-P601?

The recorders indicate Wide Range level and pressure as sensed from:

A. D004A & B and shift to fast speed when the RPS low reactor water level or high drywell pressure setpoint is exceeded.

B. D004A & B and shift to fast speed when the RPS low reactor water level or high reactor pressure setpoint is exceeded.

C. D004C & D002 and shift to fast speed when the RPS low reactor water level or high drywell pressure setpoint is exceeded.

D. D004C & D002 and shift to fast speed when the RPS low reactor water level or high reactor pressure setpoint is exceeded.

QUESTION 56 **NRC RECORD # WRI 327**
ANSWER:. B. **SYSTEM # B21** **K/A 216000 A4.01: 3.3/3.1**
LP# GG-1-LP-OP-B2101.00
OBJ. 4b, 8b
LP# GG-1-LP-OP-B2102.00
OBJ. 3c, 4c SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1
REFERENCE: 04-1-02-1H13-P601 ***NEW*** CLASS
17A-F1; 20A-F4 MODIFIED BANK
DIFF 1; M M-1077B
E-1160-56 RO SRO ***BOTH*** **CFR 41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 57

The plant is operating at rated conditions.

The RCIC Room Area Radiation Monitor (D21-RITS-K603) is in alarm.

The following indications are observed:

Control room trip unit red light illuminated.
Control room annunciator “EMERGENCY CORE COOLING ROOMS RADIATION HIGH” is illuminated.
Control room meter and recorder D21-R600 (point 3) are reading 150 mr/hr and stable.
Recorder D21-R600 point 3 is in alarm.
Local audible alarm actuated.
Local red light flashing.

The Control Room operator has depressed and released the RESET pushbutton on the meter face.

Which one of the following is a possible cause of this Area Radiation Monitor alarm?
Area Radiation Monitor location Table is provided.

A. RCIC Room has high radiation present.

B. High voltage to the detector has failed.

C. Check Source pushbutton has been depressed.

D. ARM Function switch is selected to OFF.

QUESTION 57 **NRC RECORD # WRI 318**
ANSWER: A. **SYSTEM # D21** **K/A 295033** **EA1.01: 3.9/4.0**
EA2.03: 3.7/4.2
LP# GG-1-LP-RO-D1721.01
OBJ. 16 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: **04-1-01-D21-1 sect 5.1** ***NEW***
04-1-03-D21-1 MODIFIED BANK
DIFF 1; M **sect 7.2 & Table II**
04-1-02-1H13-P844-1A-D4 RO SRO ***BOTH*** **CFR 41.11/41.12/43.4**
REFERENCE MATERIAL REQUIRED: **04-1-03-D21-1 Att I Table II**

QUESTION 58

The plant is in a Refueling Outage moving irradiated fuel in the Spent Fuel Pool.

The fuel handling operator moving the Fuel Handling Bridge has a spent fuel bundle attached to the grapple.

The bundle is NOT raised high enough to clear the gate from the Transfer Canal into the Spent Fuel Pool.

The spent fuel bundle hits the Transfer Canal gate causing a large bubble to rise from the fuel bundle.

The Fuel Handling Area Radiation Monitor is in alarm.

Which one of the following best describes the actions to be taken and their reason?

A. Stop all fuel movement inside the Containment and evacuate personnel through 208' Auxiliary Building then isolate the Containment to prevent the transfer of fission products into the Containment atmosphere.

B. Isolate the Containment to prevent any airborne radiation from entering the Containment and have the Refueling Floor Health Physicist determine if respirators are required.

C. Place the bundle in a safe condition and evacuate the Fuel Handling Area personnel to prevent overexposure from fission products released into the Auxiliary Building atmosphere.

D. Move the fuel bundle to the Horizontal Fuel Transfer Mechanism and move it to Containment to limit the release of radioactive material into the Auxiliary Building.

QUESTION 58 **NRC RECORD # WRI 208**
ANSWER:. C. **SYSTEM # F11** **K/A 295023 AK3.01: 3.6/4.3**
LP# GG-1-LP-RF-F1101.05
OBJ. 39 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 3**
REFERENCE: 05-1-02-II-8 sect. 2.1 NEW
01-S-06-2 sect 6.7.14 MODIFIED ***BANK***
DIFF 1, M
RO SRO ***BOTH*** **CFR 41.2/41.10/41.12/43.4/43.5/43.6/43.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 59

The plant is in a refueling outage with the refueling platform located over the Dryer Storage Area.

With the Reactor Mode switch in REFUEL, which one of the following WILL PREVENT movement of the refueling platform over the reactor vessel core with the Main Hoist unloaded?

A. All control rods inserted.

B. One control rod is at position 48.

C. Control rod 28-37 selected in gang mode on H13-P680.

D. Control rod 28-37 is selected and is at position 00 on H13-P680.

QUESTION 59 | **NRC RECORD # WRI 16**
ANSWER: C. | **SYSTEM # F11** | **K/A 234000** | **K6.03: 3.0/3.6**
LP# GG-1-LP-RF-F1101.05 | **A3.02: 3.1/3.7**
OBJ. 26; 29a,b; 36 | **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 3**
REFERENCE: 04-1-01-F11-1 Att. V | NEW
MODIFIED | ***BANK***
DIFF 1; M
RO SRO ***BOTH*** | **CFR 41.4/43.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 60

The plant was operating at full power when a surveillance error resulted in a Recirc Flow Control Valve runback.

Reactor Power is presently 79 %.
Total Core Flow is at 62 Mlbm/hr.

Which one of the following best describes the actions to be taken for the present situation?

(05-1-02-III-3 Reduction in Recirculation System Flow Rate is attached.)

A. Immediately scram the reactor.

B. Monitor for thermal hydraulic instability and verify both channels of PBDS are operable.

C. Monitor for thermal hydraulic instability and verify FCBB is ≤ 1.0 within 15 minutes. Insert control rods to exit the region.

D. Monitor for thermal hydraulic instability and verify FCBB is ≤ 1.0 within 15 minutes. Reduce recirculation flow to exit the region.

QUESTION 60 **NRC RECORD # WRI 303**
ANSWER: B. SYSTEM # B33 **K/A 295001 AA2.01: 3.5/3.8**
LP# GG-1-LP-RO-B3300-01 **AK1.02: 3.3/3.5**
OBJ 41, 42, 43, 48 **2.4.4: 4.0/4.3**
LP# OP-LOR-ONEP-LP-001-04 **2.4.11: 3.4/3.6**
OBJ 19 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 05-1-02-III-3 P/F MAP sect. 3.3 for Monitored Region - Recirc FCV Runback in Fast Speed ***NEW*** MODIFIED BANK
DIFF 2; CA
RO SRO ***BOTH*** **CFR 41.5/41.10/43.5**
REFERENCE MATERIAL REQUIRED: 05-1-02-III-3 w/o Imm Actions & Color Power to Flow Map

QUESTION 61

Which one of the following describes the automatic actions that will occur as Main Condenser vacuum degrades to 0 inches Hg vacuum?

A. 21" vac, Main Turbine trip
16" vac, Main bypass valves close
12" vac, Rx feed pumps trip
9" vac, MSIV closure

B. 21" vac, Main Turbine trip
16" vac, Rx feed pumps trip
12" vac, Main bypass valves close
9" vac, MSIV closure

C. 21" vac, Main Turbine trip
16" vac, MSIV closure
12" vac, Main bypass valves close
9" vac, Rx feed pumps trip

D. 21" vac, Main Turbine trip
16" vac, MSIV closure
12" vac, Rx feed pumps trip
9" vac, Main bypass valves close

QUESTION 61 **NRC RECORD # WRI 40**
ANSWER: B **SYSTEM # N62** **K/A 295002 AK1.03: 3.6/3.8**
LP# GG-1-LP-RO-N6200.00
OBJ 8; 18
LP# OP-LO-ONEP-LP-001-00
OBJ 31 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: **05-1-02-V-8 sect. 5.0** NEW
MODIFIED ***BANK***
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.4**
REFERENCE MATERIAL REQUIRED: None

QUESTION 62

The plant is operating at 84% power with ALL Condensate, Condensate Booster, Heater Drain, and Reactor Feed pumps in service.

Condensate pump B trips because of a phase to phase short.

Which one of the following describes the effects to the plant?

A. The Reactor Feed pumps will trip on low suction pressure causing a Reactor scram on low water level. The Feedwater system may be restored following the scram.

B. The Condensate Booster pumps will trip on low suction pressure causing the Reactor Feed pumps to trip and a Reactor scram on low water level. The Feedwater system may be restored following the scram.

C. The Reactor Feed and Condensate Booster pumps will see reduced suction pressure. The Reactor Feed pumps will compensate causing only a momentary change in Reactor water level.

D. The Condensate Booster Pump minimum flow circuit will trip one Condensate Booster pump to prevent suction pressure to the Condensate Booster and Reactor Feed pumps from dropping excessively. Reactor water level changes will be compensated for by the Feedwater Level Control system.

QUESTION 62 | **NRC RECORD # WRI 344**
ANSWER: C. | **SYSTEM # N19** | **K/A 256000 K1.02: 3.3/3.3**
LP# GG-1-LP-OP-N1900.01 | **K3.04: 3.6/3.7**
OBJ. 25 | **SRO TIER 2 GROUP 3 / RO TIER 2 GROUP 2**
REFERENCE: 04-1-02-1H13-P680 | ***NEW***
1A-A2; 1A-A4 | MODIFIED | BANK
DIFF 2; CA 03-1-01-2 sect 7.4
RO SRO ***BOTH*** | **CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 63

The plant is operating at 100 % power.

The Component Cooling Water temperature control valve closes to 25% in response to a temperature controller malfunction.

CCW temperatures have risen and continue to rise slowly.

Recirculation Pumps ‘A’ and ‘B’ motor bearing temperatures are in alarm on H13-P614.

Which one of the following describes the foremost actions to be taken for these conditions?
Loss of Component Cooling Water ONEP is provided.

A. Immediately scram the reactor and trip both Recirculation Pumps.

B. Start the standby CCW pump. Trip the RWCU pumps then close CCW to the Non-Regenerative Heat Exchangers, P42-F103. Reduce core flow to 60% only.

C. Trip the RWCU pumps then close CCW to the Non-Regenerative Heat Exchangers, P42-F103. Isolate CCW to Fuel Pool Heat Exchangers by closing P42-F105 and F205 only.

D. Start the standby CCW pump. Trip the RWCU pumps then close CCW to the Non-Regenerative Heat Exchangers, P42-F103. Isolate CCW to Fuel Pool Heat Exchangers by closing P42-F105 and F205. Reduce core flow to 60% only.

QUESTION 63 **NRC RECORD # WRI 314**
ANSWER: A. **SYSTEM # P42; ONEPs** **K/A 295018 AK3.03: 3.1/3.3**
LP# GG-1-LP-OP-P4200.02
OBJ. 15;16 SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2
REFERENCE: 05-1-02-V-1 ***<u>NEW</u>***
Section 3.2.2 Note for 2.1 MODIFIED BANK
DIFF 1; M
RO SRO ***<u>BOTH</u>*** **CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED: 05-1-02-V-1 w/o Imm. Actions

QUESTION 64

The plant is operating at 100 % power.

A rupture in the Instrument Air header supplying the Radwaste and Offgas Building has been isolated. The remainder of the Instrument Air header is pressurized.

Which one of the following describes the implications of the loss of Instrument Air to the Offgas and Radwaste Buildings?

A. Offgas system valves will fail closed and isolate the Offgas System.

B. Offgas system purge is lost resulting in a possible explosion and gaseous radiation hazards in the Offgas System.

C. Offgas system valves lose stem seal air resulting in possible high airborne radiation levels in the Offgas Building.

D. Offgas preheaters will lose the purge air required to establish the proper temperatures entering the Offgas Catalytic Recombiners.

QUESTION 64 **NRC RECORD # WRI 315**
ANSWER: C. **SYSTEM # P53; N64** **K/A 295019 AK2.06: 2.8/2.9**
LP# GG-1-LP-OP-N6465.01
OBJ. 13b **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 05-1-02-V-9 ***NEW***
Section 3.12 & 5.8 MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.4/41.13/**
REFERENCE MATERIAL REQUIRED: None **43.4/43.5**

QUESTION 65

Reactor Water Cleanup Phase Separator Decay Tank A has developed a leak in the side of the tank. **(SEE ATTACHED FIGURE FOR LEAK LOCATION.)**

The tank contains 5000 gallons of water and resin.

Health Physics has been contacted and the area evacuated.

Which one of the following describes actions to be taken to resolve this problem?
P&IDs M-0039 K – Y are provided.

A. Pump the water from the tank to the Equipment Drain Collector Tank.

B. Allow the tank to empty into the Floor Drain Sump. Pump the sump to the Floor Drain Sample Tank.

C. Pump the entire contents of the tank to the Condensate Phase Separator Tank.

D. Pump the entire contents of the tank to the Floor Drain Collector Tank.

QUESTION 65 **NRC RECORD # WRI 347**
ANSWER: A. **SYSTEM # G17; P45** **K/A 268000** **A2.01: 2.9/3.5**
2.1.24: 2.8/3.1
2.4.1: 4.3/4.6
LP# GG-1-LP-OP-G1718.00 **2.4.11: 3.4/3.6**
OBJ. 3h2, 4h2, 9, 18 **SRO TIER 2 GROUP 3 / RO TIER 2 GROUP 3**
REFERENCE: 05-1-02-II-11 sect 2.0 & 3.0 ***NEW***
M-0039K & U MODIFIED BANK
DIFF 3; CA
RO SRO ***BOTH*** **CFR 41.10/41.13**
REFERENCE MATERIAL REQUIRED: **M-0039K – Y** **43.4/43.5**
&
Attached figure markup

QUESTION 66

A Radwaste contractor was attempting to load a High Intensity Cask (HIC) with spent Reactor Water Cleanup resin when an equipment malfunction caused the filling equipment to spray approximately 2 cubic yards of spent resin out of the Radwaste Building railroad door.

The wind has dispersed the resin and its contaminants into the air.

The Shift Manager has declared a General Emergency due to EAL 5.4.1b.

Field monitoring teams and Chemistry have reported a 1400 mRem TEDE dose commitment at the Claiborne County Emergency Operations Center/ Emergency News Media Center.

Which one of the following Protective Action Recommendations should be issued to the state?
(EPZ Map and 10-S-01-1 Activation of the Emergency Plan are in reference material.)

A. Evacuate 2 mile radius of the plant; evacuate the 5 mile down wind sectors and shelter the remainder of the 10 mile Emergency Planning Zone.

B. Evacuate 2 mile radius of the plant; evacuate the 10 mile down wind sectors and shelter the remainder of the 10 mile Emergency Planning Zone.

C. Evacuate 2 mile radius and the 5 mile radius of the plant; evacuate the 10 mile down wind sectors and shelter the remainder of the 10 mile Emergency Planning Zone.

D. Evacuate 2 mile radius, 5 mile radius, and 10 mile radius of the plant, and shelter the 50 mile down wind sectors of the Emergency Planning Zone.

QUESTION 66 **NRC RECORD # WRI 112**
ANSWER: B. **SYSTEM #** **K/A 295017 AK2.06: 3.4/4.6**
EPP PARs
LP# GG-1-LP-RO-EPTS6.00
OBJ 2 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**
REFERENCE: **10-S-01-1 sect. 6.1.4** NEW
EAL 5.4.1b MODIFIED ***BANK***
DIFF 3; CA **5 mile EPZ Map**
RO SRO ***BOTH*** **CFR 41.10/41.12**
REFERENCE MATERIAL REQUIRED: **10-S-01-1 &** **43.4/43.5**
5 mile EPZ Map

QUESTION 67

Relief devices have been installed in the piping for various chilled water and cooling water systems in the Containment.

Which one of the following is the reason for installing these devices?

A. These devices will prevent the pumps from overpressurizing the Containment penetrations if the systems automatically isolate.

B. These devices prevent pipe overpressurization and rupture, following an automatic isolation, during a postulated accident condition.

C. These devices prevent the pumps from overpressurizing and rupturing piping inside Containment if the systems automatically isolate.

D. These devices prevent pipe overpressurization and rupture during normal operations if an inadvertent isolation occurs.

QUESTION 67 **NRC RECORD # WRI 330**
ANSWER: B. **SYSTEM # P71; M41** **K/A 223001 K5.01: 3.1/3.3; 2.1.28: 3.2/3.3**
LP#
OBJ. **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: ER 1997-0022-00; M-1109B ***NEW*** MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.5/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 68

The plant experienced a LOCA and Drywell pressure is 2.0 psig.

The Auxiliary Building Floor Drain Transfer Tank has a High-High level.

The Auxiliary Building operator reports water is overflowing from the North Floor Drain Sump.

All other P45 tank(s) in the Auxiliary Building are at their low levels.

Which one of the following is a procedurally allowed means to lower level in the Auxiliary Building North Floor Drain Sump?

A. Open the cross tie to the Auxiliary Building Chemical Drain Sump.

B. Open the cross tie to the Auxiliary Building Equipment Drain Transfer Tank.

C. Open the Auxiliary Building to Suppression Pool drain valves and transfer the sump to the Suppression Pool.

D. Open the Auxiliary Building Floor Drain transfer line to Radwaste after placing the Auxiliary Building Isolation Manual Bypass switches to BYPASS.

QUESTION 68 **NRC RECORD # WRI 320**
ANSWER: B. **SYSTEM # P45** **K/A 295036** **EA1.01: 3.2/3.3**
LP# GG-1-LP-OP-P4500.00 **EK2.01: 3.1/3.2**
OBJ. 9, 13, 14f, j, p, q **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 3**
REFERENCE: **04-1-01-P45-2 sect 5.1** ***NEW***
M-1094A & C MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.7/41.13/43.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 69

The status of the Fuel Handling Area Pressure Control System is as follows:

FHA Pressure Controller	AUTO, set @ 25
Pressure Control Select Sw	AUTO
Channel A indicates	–0.23 in wc
Channel B indicates	–0.28 in wc

Channel B fails to 0 in wc and the following alarms are received:

FUEL HANDLING AREA PRESSURE SIGNALS DIFFERENCE HIGH
FUEL HANDLING AREA PRESSURE LOW

Which one of the following describes the response of the Fuel Handling Area Pressure Control System?

A. The pressure control system remains in the present configuration operating in response to the –0.23 in wc signal from channel A.

B. The difference between the two differential pressure signals shifts the controller to MANUAL.

C. The Fuel Handling Area Supply fan inlet damper T42-F021will open to admit more air to the Auxiliary Building.

D. The Fuel Handling Area Supply fan inlet damper T42-F021will close to admit less air to the Auxiliary Building.

QUESTION 69 **NRC RECORD # WRI 348**
ANSWER: D. **SYSTEM # T42** **K/A 288000 K5.02: 3.2/3.4**
LP# GG-1-LP-RO-T4200.00
OBJ. 3a, 9a, 19 **SRO TIER 2 GROUP 3 / RO TIER 2 GROUP 3**
REFERENCE: 04-1-01-T42-1 sect 4.1.2 NEW
04-1-02-1H13-P842 MODIFIED ***BANK***
DIFF 2; CA 1A-E3, E4 **LOT 6/2001 vent**
J-1234-002 RO SRO ***BOTH*** **CFR 41.4/41.5/41.7**
M-1104A
REFERENCE MATERIAL REQUIRED: None

QUESTION 70

The following conditions exist:

Reactor power	0%
Reactor level	+ 30 inches and stable
Reactor pressure	800 psig and slowly lowering
Drywell pressure	5.0 psig

Which one of the following best describes the heat removal mechanism in the Auxiliary Building?

A. Standby Gas Treatment only

B. Area Fan Coil Units and ESF Room Coolers only

C. ESF Room Coolers and ECCS Pump Room Coolers only

D. Area Fan Coil Units, ESF Room Coolers and ECCS Pump Room Coolers only

QUESTION 70 **NRC RECORD # WRI 317**
ANSWER: C. **SYSTEM # T41; T42; T51; T48** **K/A 295032** **EK2.02: 3.6/3.7** **EK2.01: 3.5/3.6**
LP# GG-1-LP-RO-T4100.00
OBJ. 10d
LP# GG-1-LP-RO-T4801.01
OBJ. 10 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 3**
REFERENCE: **04-1-01-T48-1 sect 3.2** ***NEW***
04-1-02-1H13-P870-2A-A3 MODIFIED BANK
DIFF 1; M **04-1-02-1H13-P601-16A-B4**
RO SRO ***BOTH*** **CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 71

SGTS A and B automatically initiated due to a LOCA signal.

HPCS and RCIC automatically started and recovered reactor water level.

After conditions have stabilized, the Control Room Supervisor gives the order to place the 'B' train in STANDBY.

The 'B' SGTS train is placed in STANDBY and secured.

The 'A' SGTS train remains running.

Which one of the following will cause the SGTS 'B' train to automatically start with the SGTS DIV 2 MODE SEL switch in STANDBY?

A. Reactor water level drops to -45"

B. Running Enclosure Building Recirc fan flow drops to 9200 scfm

C. Enclosure Building pressure rises to -0.125" wc

D. Running filter train flow drops to 1350 scfm

QUESTION 71		**NRC RECORD # WRI 340**		
ANSWER: C.	**SYSTEM # T48**	**K/A 261000**	**A4.07: 3.1/3.2**	
			A3.02: 3.2/3.1	
LP# GG-1-LP-RO-T4801.01			**A2.01: 2.9/3.1**	
OBJ. 8f, g, h; 16	**SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**			
REFERENCE:	**04-1-02-1H13-P870**	NEW		
	8A-D2, E3, F2, F3	***MODIFIED***	BANK	
DIFF 1; M	**04-1-01-T48-1 sect 5.2.2.c**	**LOT 6/01 ESF**		
		RO SRO ***BOTH***	**CFR 41.7/41.11**	
REFERENCE MATERIAL REQUIRED:	None			

QUESTION 72

The plant is operating at rated conditions.

Control Room HVAC 'A' is operating with 'B' in Standby.

The Control Room receives annunciator "CONT RM HVAC FREON HI" on H13-P855.

Which one of the following describes the alignment/operation of the Control Room HVAC System?

A. Control Room Air Conditioner 'A' will trip.
Control Room HVAC will isolate.
Control Room Standby Fresh Air Units will initiate.

B. Control Room Air Conditioner 'A' will trip.
Control Room Air Conditioner 'B' will start on low flow.
Control Building Purge System will initiate.

C. Control Room Air Conditioner 'A' will trip.
Control Room Air Conditioner 'B' will start on low flow
Control Room Standby Fresh Air Units will initiate.

D. Control Room Air Conditioner 'B' will auto start.
Control Room Standby Fresh Air Units will initiate.
Control Building Purge System will initiate.

QUESTION 72 **NRC RECORD # WRI 267**
ANSWER: B. **SYSTEM # Z51** **K/A 290003 A4.01: 3.2/3.2**
LP# GG-1-LP-RO-Z5100.01 **A3.01: 3.3/3.5**
OBJ. 6, 7, 8, 9, 10, 15 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
REFERENCE: 04-S-01-Z51-1 sect 3.2 NEW
04-S-02-H13-P855 MODIFIED ***BANK***
DIFF 1, M **1A-B4; 1A-A5; 1A-C3**
RO SRO ***BOTH*** **CFR 41.4/41.5/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 73

The plant is operating at rated conditions.

Reactor Core Isolation Cooling was operating for a surveillance when the RCIC STM SPLY TO RCIC TURB, E51-F045 developed a packing leak.

The RCIC Room Radiation monitor is reading 2.5 mRem/hr.

Which one of the following will provide monitoring of the radioactive release levels to the environment?

A. The release is unmonitored.

B. Fuel Handling Area Exhaust Radiation Monitors

C. Fuel Pool Sweep Exhaust Radiation Monitors

D. Standby Gas Treatment Radiation Monitors

QUESTION 73 **NRC RECORD # WRI 319**
ANSWER: B. **SYSTEM # D17; T42; T48** **K/A 295034 EK1.02: 4.1/4.4**
LP# GG-1-LP-RO-T4200.00
OBJ. 7a, b
LP# GG-1-LP-RO-T4801.01
OBJ. 3, 8f,9f, 10a
LP# GG-1-LP-RO-D1721.01
OBJ. 18a **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: **04-1-02-1H13-P601-19A-C9** ***<u>NEW</u>***
19A-C10
TR3.3.6.2-1 MODIFIED BANK
DIFF 1; M **04-1-02-1H13-P870-2A-A3**
M-1104A & B RO SRO ***<u>BOTH</u>*** **CFR 41.4/41.11/ 41.12/41.13/43.4**
REFERENCE MATERIAL REQUIRED: None

QUESTION 74

The plant is performing the Reactor Vessel In-Service Leak Test (03-1-01-6) following refueling operations. A miscommunication results in a significant reactor pressure rise. Pressure as read on the Control Room Wide Range Pressure indication on P680 is pegged upscale.

The Post Accident Pressure recorders indicate pressure has reached 1350 psig.

Which one of the following is a correct statement with regard to the GGNS Safety Limit for Reactor Pressure?

A. Reactor Pressure is above the Safety Limit of 1250 psig, because Tech Specs specifically references the P680 Reactor Wide Range Instrument.

B. Reactor Pressure is above the Safety Limit of 1325 psig, because the Post Accident indication is sensed from the Reactor Water Level instruments reference leg tubing.

C. Reactor Pressure is below the Safety Limit of 1375 psig, because the Post Accident indication is sensed from the Reactor Bottom Head instrument tap.

D. Reactor Pressure is below the Safety Limit of 1550 psig.

QUESTION 74		**NRC RECORD #**	**WRI 30**
ANSWER: B.	**SYSTEM #**	**K/A 295025**	**EK1.05: 4.4/4.7**
	Tech Specs		**EK1.02: 4.1/4.2**
LP# GG-1-LP-LO-TS001.00		**Generic**	**2.2.22: 3.4/4.1**
			2.2.25: 2.5/3.7
OBJ 23; 27			
LP# GG-1-LP-OP-B2102.00			
OBJ 3	**SRO TIER 1 GROUP 1 /**	**RO TIER 1 GROUP 1**	
REFERENCE:	**Tech Specs 2.1.2**	NEW	
	Bases B2.1.2	MODIFIED	***BANK***
DIFF 1; M			
		RO SRO ***BOTH***	**CFR 41.3/43.2**
REFERENCE MATERIAL REQUIRED:	None		

QUESTION 75

A transient has occurred in the plant.

The Reactor Engineer reports the following parameters:

Average Planar Exposure	30 GWd/MTU
Reactor power stabilizes at	98 % power.
Total Core Flow	105 Mlbm/hr
Fraction of Core Boiling Boundary	2.07
MAPLHGR	9.0 KW/ft
MCPR	1.28
LHGR	13.0 KW/ft

Power has NOT been changed since the transient.

Which one of the following identifies the thermal limit that has been violated?
Thermal Limits Tech Specs are provided.

A. FCBB

B. MCPR

C. LHGR

D. APLHGR

QUESTION 75 **NRC RECORD # WRI 305**
ANSWER: C. **SYSTEM # J11; Tech Specs** **K/A 295014 AA2.04: 4.1/4.4**
AK1.05: 3.7/4.2
AK2.02: 3.7/4.2
AA2.05: 4.2/4.6
LP# GG-1-LP-LO-TS001.00
OBJ 33 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: **Tech Specs 3.2.1; 3.2.2; 3.2.3; 3.2.4**
NEW ***MODIFIED*** BANK
WRI106 NRC 3/98
DIFF 2; CA
RO SRO ***BOTH*** **CFR 41.6/41.14/43.6**
REFERENCE MATERIAL REQUIRED: **TECH SPECS 3.2.1; 3.2.2; 3.2.3; 3.2.4**

QUESTION 76

Which one of the following describes how the Secondary Containment Ventilation Systems prevent the release of radioactive contaminants AND what is done if this is NOT accomplished?

A. The Auxiliary Building Ventilation and Fuel Handling Area/Pool Sweep Ventilation Systems work together to maintain the Auxiliary Building at a negative pressure and monitor the exhaust to the atmosphere. If radiation levels are excessive, signals are sent to isolate the building ventilation systems and initiate an atmospheric treatment system.

B. The Auxiliary Building Ventilation and Fuel Handling Area/Pool Sweep Ventilation Systems work together to maintain the Auxiliary Building at a negative pressure and treat the exhaust to prevent any release of radioactive materials. If building pressure is excessive, primary containment ventilation isolation is required.

C. The Auxiliary Building Ventilation and Fuel Handling Area/Pool Sweep Ventilation Systems work together to maintain the Auxiliary Building at a positive pressure and monitor the exhaust to the atmosphere. If radiation levels are excessive, signals are sent to isolate the building. If building pressure is excessive, primary containment isolation ventilation is required.

D. The Auxiliary Building Ventilation and Fuel Handling Area/Pool Sweep Ventilation Systems work together to maintain the Auxiliary Building at a positive pressure and monitor the exhaust to the atmosphere. If building pressure is excessive, signals are sent to isolate the building ventilation systems and initiate an atmospheric treatment system.

QUESTION SRO 76 **NRC RECORD # WRI 57**
ANSWER: A. **SYSTEM # T42; T41; T48** **K/A 295038** **EK2.03: 3.8**
LP# GG-1-LP-RO-T4801.01 **EA1.06: 3.6**
OBJ 2; 8f **2.4.1: 4.6**
LP# GG-1-LP-RO-T4200.00
OBJ 2; 3a,b; 7b; 10
LP# GG-1-LP-RO-T4100.00
OBJ 3b,c **SRO TIER 1 GROUP 1 / RO TIER GROUP**
REFERENCE: **04-1-01-T48-1 sect. 3.2** NEW
04-1-01-T42-1 sect. 3.1 MODIFIED ***BANK***
DIFF 2; CA **05-1-02-III-5 AB Vent**
ARI 04-1-02-H13-P870 2A-A3; 8A-A3 RO ***SRO*** BOTH **CFR 41.13/43.4**
04-1-02-1H13-P601 19A-B9, B10, C9, C10
05-S-01-EP-4 entry cond.
REFERENCE MATERIAL REQUIRED: None

QUESTION 77

The Electrical line up is normal.

A switching error causes degraded 500 KV voltage.

The voltage to ALL ESF busses DROPS to 2990 volts for 1 second.

Which one of the following statements is the condition of the ESF busses 30 seconds after this voltage transient?

A. 15AA is being supplied from ESF 11
16AB is being supplied from ESF 21
17AC is being supplied from ESF 21

B. 15AA is being supplied from Div I D/G
16AB is being supplied from Div II D/G
17AC is being supplied from Div III D/G

C. 15AA is being supplied from ESF 11
16AB is being supplied from ESF 21
17AC is being supplied from Div III D/G

D. 15AA is being supplied from Div I D/G
16AB is being supplied from Div II D/G
17AC is being supplied from ESF 21

QUESTION **SRO 77** **NRC RECORD # WRI 401**
ANSWER: C. **SYSTEM # R21** **K/A 295003** **AK3.01: 3.5**
AK3.03: 3.6
AK1.03: 3.2
LP# GG-1-LP-OP-R2100.03 **AK1.04: 3.2**
OBJ 12, 13, 20, 34 **SRO TIER 1 GROUP 1 / RO TIER GROUP**
REFERENCE: **E-1188-16, 17, 21, 22** NEW
Tech Spec TR3.3.8.1-1 ***MODIFIED*** BANK
DIFF 2; CA **WRI 11 NRC 3/98**
RO ***SRO*** BOTH **CFR 41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 78

The plant is in STARTUP with the Startup Level Control valve in service.

Operators are making preparations to transfer to RUN when the Startup Level Control valve fails full open

WITHOUT ANY OPERATOR ACTION, which one of the following will result?

A. The in-service RFPT speed controller will compensate and Reactor water level will return to normal.

B. The in-service RFPT will continue to operate. The Reactor will scram on high water level.

C. The in-service RFPT will trip on high reactor level. The Reactor may scram on high water level.

D. The in-service RFPT will trip on high reactor level. The Reactor may scram on high neutron flux.

QUESTION **SRO 78** **NRC RECORD # WRI 404**
ANSWER: D. **SYSTEM # N21; C71; C34** **K/A 295014 AA1.07: 4.1**
LP# OP-LO-ONEP-LP-001-00
OBJ. 30 **SRO TIER 1 GROUP 1** **RO TIER** **GROUP**
REFERENCE: **05-1-02-V-6 Sect 1.2** ***NEW***
MODIFIED BANK
DIFF 2, CA
RO ***SRO*** BOTH **CFR41.1/41.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 79

The plant was operating at 100% power when a switching error at Baxter Wilson resulted in a loss of the Baxter Wilson 500 KV transmission line that had 800 MWe of power consumption.

Which one of the following describes the effects on the plant of this change in generator load?

The reactor will:

A. scram on APRM high neutron flux when the voids collapse.

B. scram on Main Turbine Control Valve Fast Closure.

C. continue to operate at approximately 96% power with the Main Turbine and Bypass valves controlling reactor pressure.

D. continue to operate at approximately 100% power with the Main Turbine sending power through the Franklin transmission line.

QUESTION **SRO 79** **NRC RECORD # WRI 406**
ANSWER: B. **SYSTEM # N32-2; C71** **K/A 295007** **AK1.03: 3.9**
LP# GG-1-LP-OP-C7100.00
OBJ. 21 **SRO TIER 1 GROUP 1** **RO TIER** **GROUP**
REFERENCE: **Tech Spec Bases 3.3.1.1 Function 2b, 3, 9 & 10 GGNS Scram 9/00** ***NEW*** MODIFIED BANK
DIFF 2; CA
RO ***SRO*** BOTH **CFR41.5/43.2**
REFERENCE MATERIAL REQUIRED: None

QUESTION 80

Following a Reactor scram, which one of the following describes the correct method to determine a control rod is stuck at an odd reed switch position?

Using RC&IS indications and pushbuttons:

A. View the full core display while in "RAW DATA" and the stuck control rod will indicate "- -". Depress "ALL RODS" and the stuck control rod will indicate the last good reed switch position.

B. View the full core display while NOT in "RAW DATA" and the stuck control rod will indicate "- -". Depress ALL RODS, and the last good even reed switch position will be indicated.

C. Depress "ALL RODS" while in "RAW DATA" and the stuck control rod will indicate "- -". Deselect "RAW DATA", depress "ALL RODS" again and the last good even reed switch position will be indicated.

D. Depress "ALL RODS" while NOT in "RAW DATA" and the stuck control rod will indicate "- -". Deselect "RAW DATA", depress "ALL RODS" again and the last good even reed switch position will be indicated.

QUESTION SRO 80 **NRC RECORD # WRI 407**
ANSWER: C. **SYSTEM # C11-1** **K/A 295015** **AA2.02: 4.2**
LP# GG-1-LP-RO-C1102.02
OBJ. 10, 11, 22 **SRO TIER 1 GROUP 1** **RO TIER** **GROUP**
REFERENCE: 04-1-01-C11-2 ***NEW***
sect 4.7.2.p; 4.8.2.i MODIFIED BANK
DIFF 2; CA
RO ***SRO*** BOTH **CFR41.2/41.6**
REFERENCE MATERIAL REQUIRED: None

QUESTION 81

The plant is in a Refueling Outage with the Reactor head removed.

Which of the following choices best fits the definition of Core Alteration?

A. Performing scram time testing after final core verification.

B. Withdrawing a control rod from a de-fueled core cell.

C. Removing an LPRM string from the core.

D. Removing a double blade guide from the core.

QUESTION **SRO 81** **NRC RECORD # WRI 108**
ANSWER: A. **SYSTEM #** **K/A Generic 2.2.31: 2.9**
Tech Specs **2.2.34: 3.3**
LP# GG-1-LP-LO-TS001.00
OBJ 4e **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: **Tech Specs 1.1** NEW
MODIFIED ***BANK***
DIFF 1; M
RO ***SRO*** BOTH **CFR 43.6/43.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 82

Core Alterations are in progress with the Upper Containment Pools at the High Water Level Condition.

Spent fuel is being transferred to the Spent Fuel Pool.

Which one of the following describes the expected indications if a 20 gpm leak develops on the Reactor Bottom Head Drain line?

(ASSUME NO OPERATOR ACTIONS.)

	Fuel Pool Drain Tank Water Level	Spent Fuel Pool Level	Ctmt 208 Ft Area Radiation Levels
A.	Remain the same	Remain the same	Rising
B.	Remain the same	Lowering	Remain the same
C.	Lowering	Remain the same	Remain the same
D.	Lowering	Lowering	Rising

QUESTION SRO 82 **NRC RECORD # WRI 408**
ANSWER: D. **SYSTEM # G41; M41-1** **K/A 295023 AA2.02: 3.7**
LP# GG-1-LP-OP-M4101.01
OBJ. 22 **SRO TIER 1 GROUP 1 / RO TIER GROUP**
LP# GG-1-LP-OP-G4146.02
OBJ. 22
REFERENCE: **M-1088 C, D, E** ***NEW***
04-1-02-1H13-P680-4A2-A6 MODIFIED BANK
DIFF 2, CA **05-1-02-II-8 Sect 3.5**
Tech Spec Bases 3.9.6 RO SRO ***BOTH*** **CFR 41.10/41.12/43.4/43.5/43.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 83

The plant is in MODE 5.

Vessel re-assembly is in progress.

There are 31 spent fuel bundles remaining in the Containment Temporary Fuel Storage area.

Hydrogen Recombiner 'A' (1855 lbs) must be moved to the 166 ft Containment Equipment hatch for removal.

Which one of the following is an allowed path for the polar crane to make this lift? **(Containment 208 ft drawing attached.)**

Movement of the H2 Recombiner:

A. may take place around the periphery of Containment.

B. may take place in any direction through the Containment.

C. must be suspended until all spent fuel is removed from Containment.

D. must be suspended until vessel re-assembly is complete.

QUESTION **SRO 83** **NRC RECORD # WRI 411**
ANSWER: A. **SYSTEM # Equipment Control-Refueling** **K/A Generic 2.2.28: 3.5**
LP# GG-1-LP-RF-F1105.06
OBJ. 15a, b **SRO TIER 3 GROUP** **RO TIER GROUP**
REFERENCE: **03-1-01-5 sect 2.8** ***NEW***
Drawing of 208 ft Ctmt MODIFIED BANK
DIFF 2; CA **FSAR sect 9.1.4.2.2.2 & 9.1.4.3** RO ***SRO*** BOTH **CFR41.9/41.10/43.2/43.4/43.6/43.7**
REFERENCE MATERIAL REQUIRED: **Drawing of 208 ft Ctmt**

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QUESTION 84

The plant is at 10 % power during a reactor startup.

All control rod withdrawals have been completed to place the Reactor Mode Switch in RUN.

Reactor Coolant pH has been sampled at 6.9.

Feedwater iron content has been analyzed at 4.5 ppb.

Which one of the following describes the chemistry allowances for continuing power ascension?
Attached is the Chemistry Report submitted in preparation for entering power operations.
Chemistry procedures and requirements are provided.

A. Transfer to Run is NOT allowed. Subsequent power ascension is prohibited by Tech Specs (TRM) requirements.

B. Transfer to Run is allowed. The Duty Manager's concurrence is required to raise reactor power. Reactor chemistry must be within specifications prior to exceeding 15% power.

C. Transfer to Run is allowed. There are NO restrictions on power ascension provided actions are taken to return Chemistry to within specifications.

D. Transfer to Run is NOT allowed. Power ascension is prohibited by the EPRI Water Chemistry Guidelines and Off Normal Event Procedure requirements.

QUESTION	**SRO 84**	**NRC RECORD # WRI 197**	
ANSWER: B.	**SYSTEM # Conduct of Ops – Chemistry**	**K/A Generics 2.1.34: 2.9**	
LP#			
OBJ.	**SRO TIER 3 GROUP / RO TIER GROUP**		
REFERENCE:	**01-S-08-29 Att I**	NEW	
	05-1-02-V-12 Tbl Mode 1	MODIFIED	***<u>BANK</u>***
DIFF 3, CA	**TRM 6.4.1**		
	03-1-01-1		
	sect 6.2.15a(5) & 6.2.15j	RO ***<u>SRO</u>*** BOTH	**CFR 41.10/43.2/43.5**

REFERENCE MATERIAL REQUIRED: **01-S-08-29 & <u>completed Att VI</u>;**
05-1-02-V-12; TRM 6.4.1; Tech Spec 3.0
03-1-01-1 sect 6.2.15

QUESTION 85

A standing order is to be issued that involves a change to the intent of an existing procedure.

Which one of the following describes the requirements that must be met prior to issuing the Standing Order?

A. The Standing Order can be issued with an approved 50.59 Safety Evaluation Review.

B. The Standing Order can be issued with approval from the Vice President, Operations – GGNS.

C. The Standing Order cannot be issued to change the intent of an existing procedure.

D. The Standing Order cannot be issued until the NRC approves the procedure changes.

QUESTION SRO 85 **NRC RECORD # WRI 196**
ANSWER: A. **SYSTEM #** **Conduct of Ops - Procedures** **K/A Generics 2.1.2: 4.0**
2.1.20: 4.2
2.1.21: 3.2
LP# GG-1-LP-OP-PROC.00 **2.1.23: 4.0**
OBJ. 48d **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: 02-S-01-12 sect 6.2.1d NEW
MODIFIED ***BANK***
DIFF 1, M
RO ***SRO*** BOTH **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 86

Which one of the following describes actions that would require the completion of a Component Position Control Form (CPCF)?

A. Drain valves inside the tagging boundary on CCW Heat Exchanger 'A' are to be manipulated for mechanics.

B. Electrical Maintenance has requested MCC breaker 52-112133, for N19-F008, opened to troubleshoot the motor windings per a MAI with configuration control signoffs.

C. System Engineering is altering a valve lineup on the out of service Instrument Air Dryer, per an approved TSTI Change Notice.

D. An operator is opening a service air valve to allow mechanical maintenance to use air operated tools to support work, per a MAI with configuration control signoffs.

QUESTION SRO 86 **NRC RECORD # WRI 402**
ANSWER: D. **SYSTEM # Equipment Control – Configuration Control** **K/A Generic 2.2.11: 3.4**
LP# GG-1-LP-OP-PROC.00
OBJ. 42f & h **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: 02-1-01-2 sect 6.10 6.10.3, 5, 7, 8 ***NEW*** MODIFIED BANK
DIFF 3; CA
RO ***SRO*** BOTH **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 87

Which one of the following would require performing a COMPLETE system lineup?

A. The electrical lineup on the Meteorological system is 4 years old.

B. SPMU, following a 19 day refueling outage, no work activities were performed on the system.

C. The Div. 1 Diesel Generator, following a scheduled maintenance outage to replace the starting air dryers.

D. The plant has been in a 4 day forced outage to perform welding repairs on the Condensate Booster Pump suction header. The system was partially tagged and drained.

QUESTION	**SRO 87**	**NRC RECORD # WRI 403**	
ANSWER: B.	**SYSTEM # Conduct of Operations – System Lineups**	**K/A Generic 2.1.29: 3.3**	
LP# GG-1-LP-OP-PROC.00			
OBJ. 42h	**SRO TIER 3 GROUP**	**RO TIER GROUP**	
REFERENCE:	**03-1-01-1 Sect 3.2.2d & 3.3.4m**	***NEW*** MODIFIED	BANK
DIFF 2, CA	**01-S-06-29 Sect 6.1.7**		
		RO ***SRO*** BOTH	**CFR 41.10/43.2/43.5**
REFERENCE MATERIAL EQUIRED:		None	

QUESTION 88

Which one of the following describes the requirements prior to declaring equipment operable, following maintenance?

A. Once the Maintenance retests are completed satisfactorily, Operations can return the component to operable status and clear the associated LCO, provided all Operations retests are completed satisfactorily within the next 6 hours.

B. All Maintenance and Operations retests must be completed satisfactorily prior to Operations declaring the equipment operable and clearing the associated LCO. Satisfactory completion of all retests will be documented on the retest control form.

C. In special situations, the LCO can be cleared on components prior to the completion of Maintenance and/or Operations retests. Only minor operations assistance is allowed in this situation and must be documented within the Compensatory Action book.

D. Engineering will determine all required tasks that are necessary to declare the component and system Operable. Engineering will consider system configuration, retest requirements, and retest performance. An Engineering signoff on the retest control form will allow Operations to clear any associated LCO(s).

QUESTION 88 **NRC RECORD # WRI 405**
ANSWER:. B. **SYSTEM # Admin** **K/A 2.2.24 3.8**
LP# GG-1-LP-OP-PROC.00
OBJ. 25 **SRO TIER 3 GROUP / RO TIER GROUP**
LP# GG-1-LP-LO-TS001.00
OBJ. 4k
REFERENCE: **01-S-07-2 sect 6.7** ***NEW***
T.S. sect 1.1 definitions MODIFIED BANK
DIFF 2, CA
RO ***SRO*** BOTH **CFR 43.3/43.2**
REFERENCE MATERIAL REQUIRED: None

QUESTION 89

Under which one of the following conditions can the Shift Manager waive Independent Verification?

A. manual valve lineup on Fire Protection Deluge Isolation valve for BOP Transformer 13 with the river at high water.

B. a Red Tag to be hung on a HP Main Steam Stop Valve drain valve at 100 % Power.

C. a Temporary Alteration on the Division III Diesel Generator Air Start Header during a severe thunderstorm.

D. a procedure step for lineup restoration following the Load Shedding and Sequencing monthly surveillance.

QUESTION **SRO 89** **NRC RECORD # WRI 127**
ANSWER: B. **SYSTEM # ADMIN** **K/A Generic 2.3.2: 2.9**
Rad Con **2.2.13: 3.8**
LP# GG-1-LP-OP-PROC.00
OBJ. 9s; 21b(1),g **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: 01-S-06-1 sect. 6.1.13 NEW
01-S-06-29 sect. 6.4.1 MODIFIED ***BANK***
DIFF 1; M
RO ***SRO*** BOTH **CFR 41.12/43.4**
REFERENCE MATERIAL REQUIRED: None

QUESTION 90

The plant is at rated operating conditions.

Standby Liquid Control parameters are as follows:

SLC Tank Temperature	74 °F
SLC Tank Concentration	15.5 %
SLC Tank Level (Volume)	4300 gallons

Which one of the following is the LCO action to be taken for these conditions?
Tech Specs are provided.

A. Restore concentration of boron in solution to Normal Operation region within 72 hours AND perform SR 3.1.7.2 every 4 hours.

B. Restore concentration of boron in solution to Normal Operation region within 72 hours AND perform SR 3.1.7.2 every 4 hours OR restore at least one SLC subsystem to Operable within 8 hours OR be in Mode 3 within the following 12 hours.

C. Restore one SLC subsystem to Operable status within 8 hours OR be in Mode 3 within the following 12 hours.

D. Be in Mode 3 within 12 hours AND notify NRC within 1 hour.

QUESTION SRO 90 **NRC RECORD # WRI 185**
ANSWER: C. **SYSTEM #** **K/A Generics 2.1.12: 4.0**
Conduct of Ops **2.1.10: 3.9**
LP# GG-1-LP-RO-C4100.01
OBJ. 17, 18 **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: Tech Specs 3.1.7 NEW
Figures 3.1.7-1 & 3.1.7-2 MODIFIED ***BANK***
DIFF 2, CA **Conditions C & D**
RO ***SRO*** BOTH **CFR 43.2**
REFERENCE MATERIAL REQUIRED: Tech Spec 3.1.7

QUESTION 91

An operations shift is working with the minimum shift composition.

With four hours remaining in a twelve-hour shift, one of the Fire Brigade members becomes ill and has to leave the site.

Which one of the following best describes the actions to take for this situation?

A. Place the Fire Brigade Leader qualified STA on the Fire Brigade for the rest of the shift.

B. Because only four hours remain in the shift, it is acceptable to exceed the minimum Fire Brigade composition until the next shift arrives on site.

C. Fire Brigade composition may be less than the minimum requirements for two hours, provided immediate action is taken to fill the position.

D. Fire Brigade composition may be less than the minimum requirements for three hours, provided immediate action is taken to fill the position.

QUESTION SRO 91 **NRC RECORD # WRI 410**
ANSWER: C. **SYSTEM # ADMIN Emergency Procedures/Plan-Shift Manning/Fire Brigade** **K/A Generic 2.4.26 3.3; 2.1.4 3.4; 2.1.5 3.4**
LP# GG-1-LP-OP-PROC.00
OBJ. 10x **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: 01-S-06-2 6.5.1d; 01-S-10-1 Att II; 10-S-03-2 Att I
NEW MODIFIED BANK
DIFF 1, M
RO ***SRO*** BOTH **CFR41.10/43.1/43.2/43.5**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 92

A truck driver with Pacific Nuclear has called the Control Room to report that a High Intensity Container of RWCU resin has been involved in an accident in south Vicksburg.

The Vicksburg Fire Department has requested that Entergy send personnel to inspect and monitor the container.

The Health Physics Lab has a supervisor and three (3) Health Physics Technicians.

Who is responsible to provide any Health Physics assistance to the accident scene?
Radioactive Material/Non-Radioactive Hazardous Material Transportation Accident Plan is provided.

A. Shift Manager

B. Assistant Operations Manager - Shift

C. On-Call Radiation Protection Manager

D. General Manager, Plant Operations

QUESTION SRO 92 **NRC RECORD # WRI 200**
ANSWER: C. **SYSTEM # Rad Con – Rad Material Transport** **K/A Generics 2.3.3: 2.9**
LP#
OBJ. **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: 10-S-01-32 sect 2.3 NEW
MODIFIED ***BANK***
DIFF 2: CA
RO ***SRO*** BOTH **CFR 41.10/43.4**
REFERENCE MATERIAL REQUIRED: 10-S-01-32

QUESTION 93

With GGNS operating at 100% power, Security notifies the Control Room that four armed adversaries have breached the security fence and entered the Protected Area. Security officers have taken a defensive position to prevent entry into any power block buildings.

Which one of the following best describes the actions to be taken in this situation?

A. Manually scram the reactor. Send at least one RO and one SRO to the Remote Shutdown Panels. Send at least one NOB to the Auxiliary Building.

B. No immediate action is required. If notified by security that the adversaries have entered the power block, send at least one RO and one SRO to the Remote Shutdown Panels. Send at least one NOB to the Auxiliary Building.

C. Manually scram the reactor. Send at least one RO and one SRO to the Remote Shutdown Panels. Send at least one NOB to the Auxiliary Building. Isolate control of Division 1 Safe Shutdown equipment from the main Control Room. Stabilize and cooldown the plant using available Division 2 equipment.

D. Send at least one RO and one SRO to the Remote Shutdown Panels. Send at least one NOB to the Auxiliary Building.

QUESTION **SRO 93** **NRC RECORD # WRI 416**
ANSWER: D. **SYSTEM # ADMIN Emergency Procedures/Plan-Security Threat** **K/A Generic 2.4.4 4.3; 2.4.49 4.0; 2.1.2 4.0; 2.1.6 4.3**

LP#
OBJ. **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: 05-1-02-VI-4 sect 2.1 ***NEW*** MODIFIED BANK
DIFF 1; M
RO ***SRO*** BOTH **CFR41.10/43.5**
REFERENCE MATERIAL REQUIRED: none

QUESTION 94

A LOCA and Station Blackout has occurred.

ESF bus 16AB has been restored and RHR B & C are injecting.

All building isolations are complete.

The following conditions currently exist:

Reactor water level	-180 inches fuel zone rising
Reactor pressure	0 psig stable
Drywell pressure	2.4 psig stable
Drywell temperature	219°F stable
Drywell radiation	357 R/hr
Drywell H_2 concentration	0.8% rising
Containment pressure	0.9 psig stable
Containment temperature	178°F rising
Containment radiation	45 R/hr
Containment H_2 concentration	0.25% rising
Suppression pool level	19.1 feet stable
Suppression pool temperature	128°F rising
Reactor coolant sample	219 μCi/ml dose equivalent Iodine-131

Which one of the following Emergency Action Levels is correct for this event?

A. Unusual Event

B. Alert

C. Site Area Emergency

D. General Emergency

QUESTION SRO 94 **NRC RECORD # WRI 414**
ANSWER: C. **SYSTEM # ADMIN Emergency Procedures/Plan-EAL** **K/A Generic 2.4.41 4.1**
LP# GG-1-LP-EP-EPT06
OBJ. 1 **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: 10-S-01-1 Att 1 ***NEW***
MODIFIED BANK
DIFF 3; CA
RO ***SRO*** BOTH **CFR41.10/43.5**
REFERENCE MATERIAL REQUIRED: 10-S-01-1

QUESTION 95

Twenty-two minutes ago a feedwater line break in the drywell caused a plant scram.

The following indications currently exist:

Reactor pressure	98 psig
Containment temperature at 139'	141°F
Drywell temperature at 166'	204°F
Wide range level	-144 inches
Upset range level	+75 inches
Shutdown range level	+51 inches
Fuel Zone range level	-171 inches

Which one of the following level instruments can be used to determine reactor water level?

A. Wide range level indication only

B. Fuel Zone and Wide range level indications only

C. Fuel Zone and Upset range level indications only

D. Wide and Shutdown range level indications only

QUESTION SRO 95 **NRC RECORD # WRI 415**
ANSWER: B. **SYSTEM # ADMIN Emergency Procedures/Plan-EOPs** **K/A Generic 2.4.20 4.0**
2.4.18 3.6
2.4.22 4.0
2.4.23 3.8

LP# GG-1-LP-RO-EP02.01
OBJ. 4 **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: 05-S-01-EP-2 Caution 1 NEW
GGNS PSTG App B ***MODIFIED*** BANK
DIFF 2; CA **EPG/SAG step (Caution 1)** **LOT 3/98 Cert EP/ONEP**
RO ***SRO*** BOTH **CFR41.10/43.5**
REFERENCE MATERIAL REQUIRED: 05-S-01-EP-2

QUESTION 96

Which one of the following correctly describes the bases for venting the Containment prior to exceeding 22.4 psig?

A. Exceeding 22.4 psig may challenge the Containment vent valve's ability to function properly and allow an uncontrolled radioactive release from a Containment breach.

B. At greater than 24 psig, the Containment is inaccessible to personnel and the manual vent valves could not be opened.

C. Venting the Containment prior to exceeding 22.4 psig is postulated to not exceed the SITE AREA EMERGENCY radioactive release rate limits.

D. Venting the Containment prior to exceeding 22.4 psig ensures that the low pressure ECCS suction piping design limit is not exceeded in the event of a subsequent hydrogen ignition.

QUESTION	**SRO 96**	**NRC RECORD # WRI 412**		
ANSWER: A.	**SYSTEM # ADMIN Emergency Procedures/Plan- EOP Bases**	**K/A Generic**	**2.4.18 3.6** **295024 EK3.03 4.1**	
LP# GG-1-LP-RO-EP03.00				
OBJ. 6	**SRO TIER 3 GROUP**	**/ RO TIER**	**GROUP**	
REFERENCE:	**GGNS PSTG Appendix B PC/P-3**	NEW		
		MODIFIED		BANK
DIFF 1, M		**NRC 3/98 WRI#9**		
		RO ***SRO*** BOTH		**CFR41.9/41.10/43.4/43.5**
REFERENCE MATERIAL REQUIRED:	**none**			

QUESTION 97

The plant was operating at 100% power when an SRV opened and remained stuck open.

Which one of the following identifies the correct bases for the required action?
Suppression Pool Temperature Tech Specs are provided.

A. At 90°F in the suppression pool, all testing that adds heat to the suppression pool is terminated and EP-3 is entered. Guidance and direction is provided to ensure suppression pool temperature does not exceed 185°F, if an accident occurs.

B. At 95°F in the suppression pool, either RHR 'A' or 'B' is recommended for heat removal. It is desired to use only one loop at this point to preclude inadequate core cooling, in the event of an accident.

C. At 100°F in the suppression pool, additional monitoring of pool temperature is required. Heat addition to the pool for testing is allowed to continue, provided suppression pool temperature does not exceed 110°F.

D. At 110°F in the suppression pool, a plant shutdown is required. A plant shutdown prevents challenging the containment design limits from steam released to the Suppression Pool with the plant at power.

QUESTION	**SRO 97**	**NRC RECORD # WRI 409**	
ANSWER: D.	**SYSTEM # E30; M41-1**	**K/A 295026**	**EK3.05: 4.1** **2.1.11: 3.8** **2.2.25: 3.7**
LP# GG-1-LP-RO-M4101.01			
OBJ. 9, 10	**SRO TIER 1 GROUP 1 / RO TIER GROUP**		
REFERENCE:	**Tech Spec 3.6.2.1**	***NEW***	
	Tech Spec Bases 3.6.2.1	MODIFIED	BANK
DIFF 2, CA	**05-S-01-EP-3 steps 13, 14**		
	GGNS PSTG App B SP/T-2	RO SRO ***BOTH***	**CFR 41.10/43.2/43.5**

REFERENCE MATERIAL REQUIRED: **Tech Spec 3.6.2.1**

QUESTION 98

What is the significance of a SAP step that is highlighted in YELLOW and whose concurrence is required before the step may be performed?

Yellow highlighted steps must be evaluated for:

A. Consequences to Containment integrity therefore, concurrence must be received from the Shift Technical Advisor.

B. Radiological consequences therefore, concurrence must be received from the Radiation Protection Manager.

C. Consequences to Containment integrity therefore, concurrence must be received from the Offsite Emergency Coordinator.

D. Radiological consequences therefore, concurrence must be received from the Emergency Director

QUESTION	**SRO 98**	**NRC RECORD # WRI 413**	
ANSWER: D.	**SYSTEM # ADMIN Emergency Procedures/Plan-SAPs**	**K/A Generic**	**2.4.37 3.5** **2.4.16 4.0**
LP#			
OBJ.	**SRO TIER 3 GROUP / RO TIER GROUP**		
REFERENCE:	**05-S-01-SAP-1 General Notes**	NEW	
		MODIFIED	BANK
DIFF 1, M		**LOR SAP Exam 1**	
		RO ***SRO*** BOTH	**CFR41.10/43.5**
REFERENCE MATERIAL REQUIRED:	**SAPs w/o notes**		

QUESTION 99

During an emergency, the shift determines that plant conditions are such that there is no appropriate action to be taken which would be in compliance with the station operating license.

Whose permission at a MINIMUM, is required to take the necessary actions to maintain the plant in a safe condition and when must the NRC be notified?
Incident Reports and Reportable Events procedure is provided.

A. The NRC Resident Inspector; notify the NRC within one (1) hour.

B. General Manager-Operations; notify the NRC within thirty (30) days in a written report.

C. Operations Control Room Supervisor; notify the NRC within one (1) hour.

D. Licensed Reactor Operator; notify the NRC within thirty (30) days in a written report.

QUESTION	**SRO 99**		**NRC RECORD # WRI 135**	
ANSWER:	**C.**	**SYSTEM # ADMIN**	**K/A Generic**	**2.1.1: 3.8**
		Conduct of Ops		**2.1.2: 4.0**

LP# GG-1-LP-RO-PROC.00
OBJ. 10a & 13h SRO TIER 3 GROUP / RO TIER GROUP

REFERENCE:	**01-S-06-5 Att. III, I.4**	NEW	
	01-S-06-2 sect. 6.2.1e(4)	MODIFIED	***BANK***
DIFF 1; M	**10 CFR 50.54x & y**		
		RO ***SRO*** BOTH	**CFR41.10/43.3/43.5**

REFERENCE MATERIAL REQUIRED: 01-S-06-5

QUESTION 100

A fire has occurred at the Hydrogen Injection Skid on the Unit II side of the GGNS Site.

The Site Fire Brigade extinguished the fire in 8 minutes.

WLBT News was at GGNS and covered the event.

Which one of the following describes the reportability requirements to the NRC?
Incident Reports and Reportable Events procedure is provided.

A. This is not a reportable event since it did not occur inside the protected area.

B. Notification is required within one (1) hour.

C. Notification is required within four (4) hours.

D. Notification is required within twenty-four (24) hours.

QUESTION SRO100 **NRC RECORD # WRI 150**
ANSWER: C. **SYSTEM # Incident Reports** **K/A 600000 AK3.04: 3.4**
LP# GG-1-LP-RO-PROC.00
OBJ 13i **SRO TIER 1 GROUP 2 / RO TIER GROUP**
REFERENCE: 01-S-06-5 Att III sect III.7 NEW MODIFIED ***BANK***
DIFF 3; CA
RO ***SRO*** BOTH **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED: 01-S-06-5