U.S. NUCLEAR REGULATORY COMMISSION
WRITTEN EXAMINATION AUGUST 2002
SENIOR REACTOR OPERATOR

QUESTION 1

The plant is operating at 20 % power following RF11.

A ground fault on the Entergy Grid resulted in the Main Generator output circuit breakers J5228 and J5232 automatically opening on a Generator Lockout.

Which one of the following describes the reaction of the plant to this trip?
ASSUME NO OPERATOR ACTIONS.

A. Main Steam Bypass Valves will automatically open maintaining reactor pressure. The reactor will scram following the closure of the Main Turbine Stop and Control Valves.

B. Main Steam Bypass Valves will automatically open maintaining reactor pressure. The reactor will remain at power with the Main Turbine remaining in operation.

C. Main Steam Bypass Valves will automatically open maintaining reactor pressure. The reactor will remain at power with the Main Turbine Stop and Control Valves closing.

D. The reactor will scram due to the Main Turbine Control Valve fast closure that will result in a subsequent normal closure of the Main Turbine Control Valves to maintain reactor pressure.

QUESTION 1		**NRC RECORD # WRI 553**		
ANSWER: C	**SYSTEM # N41; N32-2; C71**	**K/A 295005**	**AA2.05: 3.8/3.9**	
			AA2.04: 3.7/3.8	
LP# GLP-OPS-C7100			**AA2.03: 3.1/3.1**	
OBJ. 9, 10				
LP# GG-1-LP-OP-N3202				
OBJ. 2				
LP# GG-1-LP-OP-N4151				
OBJ. 11	**SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 1**			
REFERENCE:	**Tech. Spec 3.3.1.1**	NEW		
	05-1-02-I-2 sect 5.1 – 5.4	MODIFIED		***BANK***
DIFF 2; CA				**NRC 6/2001**
		RO SRO ***BOTH***		**CFR 41.5/41.6**
REFERENCE MATERIAL REQUIRED:	NONE			

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DIFF 2; CA				**NRC 6/2001**
		RO SRO ***BOTH***		**CFR 41.5/41.6**
REFERENCE MATERIAL REQUIRED:		NONE		

QUESTION 2

A reactor scram has occurred.

Which one of the following is a correct method of verifying the position of the control rods? (The scram has NOT been reset.)

A. Using the full core display on H13-P680, depress ALL RODS with RCIS in Raw Data and observe a blank display with only green LEDs for all control rods.

B. Using the full core display on H13-P680, depress ALL RODS with RCIS in Raw Data and observe all control rods indicate 00 with a green LED for all control rods.

C. Using the full core display on H13-P680, depress ALL RODS with RCIS out of Raw Data and observe a blank display with only red LEDs for all control rods.

D. Using the full core display on H13-P680, depress ALL RODS with RCIS out of Raw Data and observe all control rods indicate 00 with a red LED for all control rods.

QUESTION 2		**NRC RECORD # WRI 10**	
ANSWER: A.	**SYSTEM # C11-2; C11-1B**	**K/A 295006**	**AA2.02: 4.3/4.4**
		201005	**A3.02: 3.5/3.5**
LP# GG-1-LP-OP-C111B			**A4.02: 3.7/3.7**
OBJ. 3c, 3f		**201003**	**K4.05: 3.2/3.3**
			A3.01: 3.7/3.6
LP# GG-1-LP-OP-C1102			**A4.02: 3.5/3.5**
OBJ. 12	**SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**		
REFERENCE:	**04-1-01-C11-2**	NEW	
	sect. 4.7.2p & 4.8.2i	MODIFIED	***BANK***
DIFF: 2; CA	**05-1-02-I-1**		**NRC 6/2001**
	sect. 2.1; 3.7; & 3.7.4	RO SRO ***BOTH***	**CFR 41.6/41.10/43.5**
REFERENCE MATERIAL REQUIRED:	None		

QUESTION 3

Plant conditions are as follows:

MODE:	Mode 1
Rx power:	28 %
T-G Load:	365 MWE
Load Demand	390 MWE
Bypass position:	0 %

All other parameters are per plant design.

The operator withdraws a control rod that raises Reactor power to 29 %.

How will the Turbine EHC Control System respond?

A. Bypass Control Valves will throttle open as required to maintain Rx pressure.

B. HP Turbine Control Valves will throttle open as required to maintain Rx pressure.

C. LP Turbine Control Valves will throttle open as required to maintain Rx pressure.

D. HP Turbine Control and Bypass Control Valves will throttle open as required to maintain Rx pressure.

QUESTION 3 **NRC RECORD # WRI 69**
ANSWER: B. **SYSTEM # N32-2** **K/A 295007 AK2.01: 3.5/3.7**
241000 A2.02: 3.7/3.7
LP# GG-1-LP-OP-N3202 **K4.01: 3.8/3.8**
OBJ 4b, 6b, 7b **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: 03-1-01-2 sect. 5.2 NEW
MODIFIED ***BANK***
DIFF: 2; CA **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 4

The plant was operating at 20 % power when a Feedwater rupture in the Turbine Building caused Reactor water level to drop.

The Control Room Operator manually initiated HPCS and RCIC.

Level in the Reactor dropped to ? 32 inches before HPCS and RCIC turned level, and level is now rising.

Which one of the following best describes the status of the Recirculation System?

A. Recirc Pumps are in Slow Speed with the Flow Control Valves Locked up (motion inhibit).

B. Recirc Pumps are tripped with the Flow Control Valves Locked up (motion inhibit).

C. Recirc Pumps are in Slow Speed with the Flow Control Valves in their pre-transient positions.

D. Recirc Pumps are tripped with the Flow Control Valves in their pre-transient positions.

QUESTION 4 **NRC RECORD # WRI 121**
ANSWER: C. **SYSTEM # B33** **K/A 295009** **AK1.02: 3.0/3.1**
AK2.03: 3.1/3.2
LP# GLP-OPS-B3300 **AA1.03: 3.0/3.1**
OBJ. 23, 24, 25, 47 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: **ARI 04-1-02-H13-P680** NEW
3A-D4; 3A-D10 MODIFIED ***BANK***
DIFF 1; M **NRC 3/1998**
RO SRO ***BOTH*** **CFR 41.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 5

Given the following plant conditions:

Reactor Power	100%
Reactor Level	+36 inches
Reactor Pressure	1025 psig
Containment Temperature	85 °F steady
Containment Pressure	0.03 psig steady
Suppression Pool Temperature	81 °F steady
Drywell Pressure	1.1 psig rising slowly
Drywell Temperature	110 °F steady

Drywell Area Sumps show no unusual changes in level, flow, or temperature.
Drywell Atmosphere radiation monitor show no changes.

The Roving NOA has noted that Drywell Pressure is rising slowly.

Drywell atmosphere radiation levels are steady.

Which one of the following describes a possible cause of the conditions as noted above?

A. Small leak on the Main Steam Line Flow Elbows Instrument Line.

B. Small leak on the RWCU suction from the Reactor Bottom Head.

C. Small leak on the Instrument Air header inside the Drywell.

D. Small leak on Recirc Pump Seals.

QUESTION 5 **NRC RECORD # WRI 286**
ANSWER:. C. **SYSTEM # M41; P53** **K/A 295010** **AK3.04: 3.5/3.8**
AK3.05: 3.5/3.4
LP# GLP-OPS-P5300 **2.4.21: 3.7/4.3**
OBJ. 26.1 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: **GGNS 1998 event** NEW
CR 1998-0952 MODIFIED ***BANK***
DIFF 3, CA **NRC 4/2000**
RO SRO ***BOTH*** **CFR 41.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 6

The plant is performing a reactor startup from cold shutdown.

The reactor was at the point of adding heat.

The Control Room Supervisor instructed the operators to stop the startup for a short duration to perform a surveillance.

During this time, the reactor went subcritical and power dropped to range 3 of the IRMs.

The At-The-Controls Operator, noting that reactor power had dropped selected the next control rod and withdrew the control rod from 20 to 48 with continuous motion as allowed by the Control Rod Movement Sequence Sheet.

This resulted in a sustained 20 second period.

The following are the plant parameters at present:

Reactor Pressure	80 psig
Reactor Level	+ 40 inches

Which one of the following describes the next action the At-The-Controls operator should take?

A. Immediately range all IRMs to range 10 and monitor overlap data between IRMs and APRMs.

B. Perform the coupling checks for the Control Rod, and inform the Reactor Engineer of the power rise.

C. Withdraw the next in sequence Control Rod to maintain the power rise to reach the point of adding heat.

D. Insert the Control Rod to a position which causes reactor period to be > 50 seconds.

QUESTION 6 **NRC RECORD # WRI 204**
ANSWER: D. **SYSTEM # C11-2; C51** **K/A 295014** **AK3.01: 4.1/4.1**
LP# GG-1-LP-OP-IOI01
OBJ. 3c & d **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: **03-1-01-1 sect. 2.1.4; 2.1.16** NEW
Susquehanna reactivity MODIFIED ***BANK***
DIFF 1; M **Event 7/98** **NRC 6/2001**
04-1-01-C51-1 sect 4.3.2 NOTE RO SRO ***BOTH*** **CFR 41.1/41.2/ 41.6/43.6**
REFERENCE MATERIAL REQUIRED: None

QUESTION 7

Scram conditions exist. All control rods did NOT fully insert.

Reactor water level is being maintained at –60 inches wide range.

Reactor pressure is being maintained at 910 psig.

Reactor power is 20 %.

The following initial indications exist:
RPS white lights on H13-P680 are extinguished.
Scram Air Header Pressure low annunciator is illuminated.
RX SCRAM TRIP annunciator is illuminated.

The following actions have been taken:
Defeat the RPS scram signal and reset RPS
Unisolate the Instrument Air header
Defeat Alternate Rod Insertion
A CRD pump is confirmed operating and the CRD FCV is open to achieve 250 psid Drive pressure.

Which one of the following contains the minimum actions required to drive the control rods to position 00 using Rod Control and Information System?

A. Bypass Control Rod Drive withdrawal blocks, select control rods and insert.

B. Bypass Control Rod Drive withdrawal blocks, select control rods in sequence and insert.

C. Bypass Control Rod Drive insert and withdrawal blocks, select control rods and insert.

D. Select control rods in sequence and insert.

QUESTION 7 **NRC RECORD # WRI 203**
ANSWER: C. SYSTEM # C11-2; C71; C11-1A **K/A 295015 AK3.01: 3.4/3.7**
LP# GG-1-LP-RO-EP02A
OBJ. 5 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: EP 05-S-01-EP-2A NEW
Step 48 Att. 18, 19 & 20 MODIFIED ***BANK***
DIFF 3; CA **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.6/43.6**
REFERENCE MATERIAL REQUIRED: 05-S-01-EP-2 EP-2A

QUESTION 8

A loss of coolant accident has occurred.

Determine which one of the following describes conditions that would direct / allow manual initiation of Containment Spray per the Emergency Procedures?

	Supp Pool Lvl	CTMT Temp	CTMT Press	Drywell Temp	Drywell Press
A.	18 FT	186ºF	1 psig	200ºF	3 psig
B.	17 FT	120ºF	7 psig	215ºF	15 psig
C.	18 FT	120ºF	6.5 psig	200ºF	15 psig
D.	25 FT	140ºF	4 psig	215ºF	7 psig

QUESTION 8 **NRC RECORD # WRI 601**
ANSWER: B. SYSTEM # M41-1; E12 **K/A 295024 AK2.14: 3.9/3.9**
LP# GG-1-LP-RO-EP03
OBJ. 3 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: EP 05-S-01-EP-3 ***NEW***
CTMT Temp & Press Legs MODIFIED BANK
DIFF 2; CA **Figures 3 & 4**
RO SRO ***BOTH*** **CFR 41.9/41.10/43.5**
REFERENCE MATERIAL REQUIRED: 05-S-01-EP-3 & Figures 3 & 4

QUESTION 9

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 adequate core cooling?

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 9 **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
OBJ. 15, 16
LP# GG-1-LP-RO-EP01
OBJ. 4a
LP# GG-1-LP-OP- PROC
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 – 74 MODIFIED ***BANK***
DIFF 3, CA **PSTG App. B EPG Cont 3** **NRC 12/2000**
Steam Cooling RO SRO ***BOTH*** **CFR 41.2/41.3/41.10/**
REFERENCE MATERIAL REQUIRED: **05-S-01-EP-2** **43.5**

QUESTION 10

An ATWS has occurred. Actions of EP-2A are being taken.

Which one of the following describes an allowance to terminate injection of Standby Liquid Control?

A. Control rods have been inserted to the equivalent of the first banked position with RPV temperature at < 200°F making the reactor subcritical.

B. All control rods are inserted to the Maximum Subcritical Banked Withdrawal Position, which assures the reactor will remain subcritical under all conditions.

C. RPV temperature has been reduced to < 200 °F and indicated reactor power on all IRMs is downscale on range 1, which indicates a subcritical reactor.

D. Standby Liquid Control has been injected such that Hot Shutdown Boron Weight (HSBW) has been injected and confirmed by chemical analysis.

QUESTION 10		**NRC RECORD # WRI 216**		
ANSWER:. B.	**SYSTEM # C41; C11; C71**	**K/A 295037**	**EA1.04: 3.4/4.5** **EK1.04: 3.4/3.6** **EK1.05: 3.4/3.6**	
LP# GG-1-LP-RO-EP02A			**EA2.03: 4.3/4.4**	
OBJ. 2, 3, 5	**SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**			
REFERENCE:	**05-S-01-EP-2A step 2 & 4**	NEW MODIFIED		***<u>BANK</u>***
DIFF 3, CA	**GGNS PSTG App B RC/Q-1**			**NRC 4/2000**
		RO SRO ***<u>BOTH</u>***		**CFR 41.1/41.2/ 41.6/43.6**
REFERENCE MATERIAL REQUIRED:		**05-S-01-EP-2A**		

QUESTION 11

A LOCA has occurred. The Plant Supervisor has ordered the Hydrogen Recombiners started for Hydrogen removal in Containment.

Determine the final Hydrogen Recombiner Power Setting and the time to final Recombiner power.

Pre-LOCA Containment Temperature was 85 °F.
Post LOCA Containment Pressure +1.0 psig.

A. 47.73 kw after 20 minutes

B. 47.73 kw after 25 minutes

C. 49.02 kw after 20 minutes

D. 49.02 kw after 25 minutes

QUESTION 11		**NRC RECORD # WRI 219**	
ANSWER: B.	**SYSTEM # E61**	**K/A 500000**	**EA1.03: 3.4/3.2**
			2.1.20: 4.3/4.2
LP# GQC-RO-CRO01			**2.1.25: 2.8/3.1**
OBJ. E61 task 5	**SRO TIER 1 GROUP 1 /**	**RO TIER 1 GROUP 1**	
REFERENCE:	**04-1-01-E61-1 sec. 5.4.2**	NEW	
	Figure 1	MODIFIED	***BANK***
DIFF 2, CA			**NRC 4/2000**
		RO SRO ***BOTH***	**CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED:	**04-1-01-E61-1 & Calculator**		

QUESTION: 12

Concerning the Fast Opening of One Recirculation Flow Control Valve transient, which one of the following CONDITIONS would result in the more severe transient on the reactor?

A. Reactor Power is at 30 % with Recirc in Slow Speed with Maximum Valve position.

B. Reactor Power is at 36 % with Recirc in Fast Speed with Minimum Valve position.

C. Reactor Power is at 60 % with Recirc in Fast Speed with Minimum Valve position.

D. Reactor Power is at 100 % with Recirc in Fast Speed with 68% Valve position.

QUESTION 13

The plant was operating at power.

A transient caused the Recirculation Pump 'B' trip to OFF.

The following parameters are indicated:

Reactor power	65 %
Core Flow	54 Mlbm/hr
Recirc A Flow	39,000 gpm
Recirc B Flow	0 gpm

Reactor Engineering is calculating FCBB.

Which one of the following describes the actions to be taken for present plant conditions?

A. Immediately Scram the Reactor.

B. Monitor Neutron Monitoring for thermal hydraulic instability. Immediately reduce core thermal power by only inserting control rods to exit the region.

C. Monitor Neutron Monitoring for thermal hydraulic instability. Immediately exit the region by reducing core thermal power by inserting control rods, or raising core flow by opening Recirc FCV A.

D. Monitor Neutron Monitoring for thermal hydraulic instability and scram the reactor if any is noted, close B33-F067B and re-open after five minutes, restart the Recirc Pump as soon as possible.

QUESTION 13 **NRC RECORD # WRI 602**
ANSWER: C. **SYSTEM # B33** **K/A 295001 AA2.01: 3.5/3.8**
2.4.1: 4.3/4.6
LP# GLP- OPS-B3300 **2.4.11: 3.4/3.6**
OBJ. 41.2; 42; 43 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 05-1-02-III-3 sect Figure 1 NEW ***MODIFIED*** BANK
DIFF: 2; CA **03-1-01-2 sect 2.24** **NRC 4/2000**
RO SRO ***BOTH*** **CFR 41.10/41.5/43.5**
REFERENCE MATERIAL REQUIRED: 05-1-02-III-3 w/o Immediate actions

QUESTION 14

The plant is in a normal electrical line-up with all busses fed from their preferred power source. If a lockout of BOP Transformer 12B were to occur,

Which of the following indicates the correct status of BOP busses?

A. 11HD ENERGIZED
12HE DE-ENERGIZED
13AD DE-ENERGIZED
14AE ENERGIZED
18AG ENERGIZED
28AG DE-ENERGIZED

B. 11HD DE-ENERGIZED
12HE ENERGIZED
13AD ENERGIZED
14AE DE-ENERGIZED
18AG ENERGIZED
28AG ENERGIZED

C. 11HD ENERGIZED
12HE DE-ENERGIZED
13AD DE-ENERGIZED
14AE ENERGIZED
18AG DE-ENERGIZED
28AG DE-ENERGIZED

D. 11HD DE-ENERGIZED
12HE ENERGIZED
13AD ENERGIZED
14AE DE-ENERGIZED
18AG DE-ENERGIZED
28AG ENERGIZED

QUESTION 14 **NRC RECORD # WRI 507**
ANSWER: B **SYSTEM # R21** **K/A 295003** **A1.01: 3.7/3.8**
LP# GLP-OPS-R2700
OBJ. 8 &15.1. **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**
REFERENCE: **04-1-01-R21-11 sect 3.2** NEW
04-1-01-R21-12 sect 3.2 MODIFIED ***BANK***
DIFF 1; M **04-1-01-R21-13 sect 3.2** **NRC 6/2001**
04-1-01-R21-14 sect 3.2 RO SRO ***BOTH*** **CFR 41.7**
04-1-01-R21-18 sect 3.2
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 15

Which one of the following describes the reason for isolating the Main Steam Isolation Valves on a Low Main Condenser Vacuum?

A. Prevent erosion damage to the Main Steam Isolation Valve and Main Steam Bypass Valve seats due to steam condensation in the Main Steam Lines that would prevent their complete isolation in an emergency.

B. Prevent erosion damage to turbine blading in the Low Pressure Turbine due to steam condensation in the Main Steam Lines.

C. Prevent over-pressurization of low pressure piping on the suction of the Condensate pumps that could result in a rupture introducing steam outside Secondary Containment.

D. Prevent rupture of the turbine rupture diaphragms or damage to the turbine exhaust hood that could lead to leakage of radiation to the environment.

QUESTION 15		**NRC RECORD # WRI 220**		
ANSWER: D.	**SYSTEM # B21; N11; N62**	**K/A 295002**	**AK3.05: 3.4/3.4**	
			AA1.04: 3.3/3.4	
LP# GG-1-LP-OP-M7101				
OBJ. 6	**SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**			
REFERENCE:	**GGNS Tech Spec Bases 3.3.6.1-1d**	NEW		
		MODIFIED		***BANK***
DIFF 1; M				**NRC 4/2000**
		RO SRO ***BOTH***		**CFR 41.4/43.4**
REFERENCE MATERIAL REQUIRED:		**NONE**		

QUESTION 16

The plant was operating at 80 % power.

Reactor Narrow Range Water Level transmitter C34-N004B has failed downscale and brought in annunciator “RX WTR LVL SIG FAIL HI/LO”.

The Operator at the Controls notices the Reactor Narrow Range Level indicator C34-LI-R606A indicates offscale HIGH and annunciator “RFPT/MN TURB LVL 9 TRIP” is in.

Reactor Narrow Range Water Level indicator R606C is reading + 36 inches.

Reactor Upset Range Water Level indicator is reading + 38 inches.

Reactor Wide Range Water Level indicator on P680 is reading + 40 inches.

Reactor Wide Range Water Level indicators A & B on P601 are reading + 40 inches.

Which one of the following describes the actions to be taken?
(NO OTHER ALARMS ARE PRESENT.)

A. Immediately initiate a Reactor Scram and trip the Main Turbine and the Reactor Feed Pump Turbines because they failed to trip.

B. Manually select Reactor Water Level Control to Single Element control and verify Reactor level returns to normal.

C. Select the Master Level Controller to MANUAL to lock the level signals at the present setting to prevent any level perturbations and establish stable level control.

D. Continue monitoring Reactor Water Level on P680 and compare with other indications on P601 and the PDS computer and contact I&C.

QUESTION 16 **NRC RECORD # WRI 275**
ANSWER: D. **SYSTEM # C34; N21; N30** **K/A 295008 AK1.01: 3.0/3.2**
245000 A3.01: 3.6/3.6
LP# GG-1-LP-OP-C3401 **259001 K6.07: 3.8/3.8**
OBJ. 3f; 3g2; 3i; 22; 23 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 04-1-02-H13-P680 4A2-A2 & D1 NEW MODIFIED ***BANK*** **NRC 6/2001**
DIFF 2; CA RO SRO ***BOTH*** **CFR 41.4/41.5**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 17

The Control Room has been abandoned and control has been established at the Remote Shutdown Panels.

Reactor pressure	600 psig
Indicated Reactor level at the Remote Shutdown Panel	66 inches

With present plant conditions, which one of the following describes Narrow Range Level, Actual Level and the availability of RCIC for level control?

05-1-02-II-1 Attachments I and II are provided.

	NARROW RANGE LEVEL	ACTUAL LEVEL	RCIC
A.	55 inches	52 inches	Not available
B.	45 inches	43 inches	Available
C.	48 inches	43 inches	Available
D.	60 inches	60 inches	Not available

QUESTION 17 **NRC RECORD # WRI 603**
ANSWER: A. **SYSTEM # C61; B21** **K/A 295016** **AA2.02: 4.2/4.3**
2.1.25: 2.8/3.1
LP# GLP-OPS-C6100 **2.4.11: 3.4/3.6**
OBJ 19 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**
REFERENCE: 05-1-02-I-1 Att I & II NEW
MODIFIED BANK
DIFF 2; CA **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.5/41.10/43.5**
REFERENCE MATERIAL REQUIRED: 05-1-02-II-1 Att. I & II

QUESTION 18

The plant is operating at 100 % power.

RCIC is to be operated for surveillance testing to return the system to operable.

Standby Service Water 'A' is operating.

Which one of the following describes the limitations and monitoring of the Suppression Pool Temperature?

A. Suppression Pool Temperature is limited to 95ºF and must be monitored every five minutes while RCIC is operating. If Suppression Pool Temperature exceeds 100ºF Suppression Pool Cooling must be placed in service.

B. Suppression Pool Temperature is limited to 95ºF and must be monitored every five minutes while RCIC is operating. If Suppression Pool Temperature exceeds 95ºF Suppression Pool Cooling must be placed in service and RCIC secured.

C. Suppression Pool Temperature is limited to 100ºF and must be monitored every five minutes while RCIC is operating. If Suppression Pool Temperature exceeds 95ºF Suppression Pool Cooling must be placed in service. RCIC must be secured if Suppression Pool Temperature exceeds 100ºF.

D. Suppression Pool Temperature is limited to 105ºF and must be monitored every sixty minutes while RCIC is operating and Suppression Pool Temperature exceeds 90ºF. If Suppression Pool Temperature exceeds 105ºF Suppression Pool Cooling must be placed in service and RCIC secured.

QUESTION 18 | **NRC RECORD # WRI 605**
ANSWER: C. | **SYSTEM # E51; M24** | **K/A 295013** | **AA2.01: 3.8/4.0**
AA1.02: 3.9/3.9
2.1.33: 3.4/4.0
2.4.4: 4.0/4.3
LP# GG-1-LP-OP-E5100-
OBJ. 12a; 22
LP# GG-1-LP-OP-M7101
OBJ. 23
LP# GG-1-LP-RO-EP03
OBJ. 3; 5
LP# GG-1-LP-OP-M4101
OBJ. 11 | **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**
REFERENCE: **Tech Spec 3.6.2.1** | ***NEW***
Tech Spec SR3.6.2.1.1 | MODIFIED | BANK
DIFF 2; CA | **04-1-01-E51-1 sect 5.2.1e**
05-S-01-EP-3 step 10 – 12 | RO SRO ***BOTH*** | **CFR**
06-OP-1M24-V-0001 sect 5.1.2a | **41.5/41.10/43.3/43.5**
REFERENCE MATERIAL REQUIRED: **Tech Spec 3.6.2.1 & 06-OP-1M24-V-0001**

QUESTION 19

A LOCA has occurred.

The reactor is depressurized.

The Drywell remains inaccessible due to pressure of 2.5 psig and temperatures of 200ºF.

MSIV Leakage Control Outboard System has been initiated.

Which one of the following identifies the method to monitor radiation released outside Secondary Containment at this time with MSIV Leakage Control in operation?

A. The operating Standby Gas Treatment Train Radiation Monitors will give the indication of radiation release.

B. Auxiliary Building Fuel Handling Area Exhaust Radiation Monitors will give indication of radiation release.

C. Auxiliary Building Fuel Handling Area Exhaust and Fuel Pool Sweep Exhaust Radiation Monitors will give indication of radiation release.

D. Auxiliary Building Fuel Handling Area Exhaust and Standby Gas Treatment Radiation Monitors will give indication of radiation release.

QUESTION 19 **NRC RECORD # WRI 606**
ANSWER: A. **SYSTEM # T48; E32; D17** **K/A 295017 AA1.08: 3.1/3.4**
AA1.09: 3.6/3.8
LP# GG-1-LP-OP-E3200 **239003 K1.02: 2.9/3.0**
OBJ. 12c; 13
LP# GG-1-LP-OP-D1721
OBJ. 2
LP# GG-1-LP-OP-T4801
OBJ. 9f **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 04-1-01-E32-1 sect 3.2 ***NEW***
sect 3.2; 5.1.1c; 5.2.1c MODIFIED BANK
DIFF 2; CA
RO SRO ***BOTH*** **CFR 41.11/41.13**
REFERENCE MATERIAL REQUIRED: NONE **43.4**

QUESTION 20

The plant is operating at 100 % power.

The Component Cooling Water temperature control valve closes to 25% in response to a temperature controller malfunction and the valve is unable to be reopened.

CCW temperatures have risen and continue to rise slowly.

Recirculation Pumps 'A' and 'B' pump 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 manually 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 20 | **NRC RECORD # WRI 314**
ANSWER: A. | **SYSTEM # P42; ONEPs** | **K/A 295018 AK3.03: 3.1/3.3**
LP# GLP-OPS-ONEP
OBJ. 1; 2; 34 | **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: **05-1-02-V-1 sect 3.1** | NEW
Section 3.2.2 Note for 2.1 | MODIFIED | ***BANK***
DIFF 1; M | **NRC 12/2000**
RO SRO ***BOTH*** | **CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED: **05-1-02-V-1 w/o Imm. Actions**

QUESTION 21

The plant is operating at rated conditions.

Plant Air Dryer ‘A’ is in service and Dryer ‘B’ is tagged out for maintenance.

Plant Air Dryer ‘A’ has undergone an “Executed Stop”.

Annunciator “PLANT AIR DRYR TROUBLE” on H13-P870 is in alarm.

Instrument Air Header pressure is 110 psig and stable.

Which one of the following identifies actions to be taken?

A. Immediately scram the reactor in preparation for a complete loss of Instrument Air.

B. Immediately dispatch an operator to isolate Plant Air Dryer ‘A’ by closing isolation valves P51-F207A and P51-F208A.

C. Dispatch an operator to manually crosstie Service Air via SP52-F010 or SP52-F300 and monitor Instrument Air header pressure.

D. Monitor Instrument Air header pressure and determine the cause of the “Executed Stop” using the PDS computer and a local operator’s observations.

QUESTION 21		**NRC RECORD # WRI 607**		
ANSWER: D.	**SYSTEM # P51; P53**	**K/A 295019**	**AK2.14: 3.2/3.2**	
			2.4.31: 3.3/3.4	
LP# GLP-OP-P5101		**300000**	**A2.01: 2.9/2.8**	
OBJ. 2d			**2.1.32: 3.4/3.8**	
LP# GLP-OPS-P5300				
OBJ. 20.1; 21	**SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**			
REFERENCE:	**04-1-02-H13-P870 7A-E3**	***NEW***		
	04-1-01-P51-1	MODIFIED		BANK
DIFF 1; M	**sect 3.5.4 & 3.7**			
	05-1-02V-9 sect 3.4	RO SRO ***BOTH***		**CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED:	**04-1-02-H13-P870-7A-E3**			

QUESTION 22

The plant is operating at rated conditions.

A rupture in the Instrument Air header has resulted in Instrument Air header pressure dropping to 40 psig.

Which one of the following describes the response of the Containment Cooling System and Containment temperature?

A. Containment Coolers will operate recirculating the Containment atmosphere maintaining temperature stable.

B. Containment Coolers will operate isolated without cooling water allowing Containment temperatures to rise.

C. Containment Coolers will trip due to a loss of cooling water resulting in Containment temperatures rising.

D. Containment Coolers will trip due to the isolation of the inlet and outlet dampers resulting in Containment temperatures rising.

QUESTION 22		**NRC RECORD # WRI 608**		
ANSWER: B.	**SYSTEM # P71; P53; M41**	**K/A 295020**	**AK2.03: 3.1/3.3**	
			AK3.03: 3.2/3.2	
LP# GG-1-LP-OP-M4100		**300000**	**K1.03: 2.8/2.9**	
OBJ. 10a; 13a				
LP# GLP-OPS-P7100				
OBJ. 16.2	**SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**			
REFERENCE:	**E-1213-009 & 012**	***NEW***		
	M-1100B	MODIFIED		BANK
DIFF 1; M	**M-1109D**			
	05-1-02V-9 sect 5.5	RO SRO ***BOTH***		**CFR 41.4/41.7/41.9**
REFERENCE MATERIAL REQUIRED:	**NONE**			

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QUESTION 23

The plant is in a startup following a 32 day outage.

MSIVs are closed.

Recirc loop temperatures are at 180 ?F.

Control rods are being withdrawn to achieve criticality. (Minimal decay heat)

Feedwater is operating in long cycle cleanup.

The operating CRD Pump tripped.

What will be the response of the plant?
(ASSUME NO FURTHER OPERATOR ACTIONS)

A. The reactor water level will remain stable at its present level.

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

C. The 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 23		**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** **AA1.04: 2.5/2.6**
LP# GLP-OPS-G3336			
OBJ 3.3, 8.6, 21			
LP# GG-1-LP-OP-C111A			
OBJ 23	**SRO TIER 1 GROUP 2 /**	**RO TIER 1 GROUP 2**	
REFERENCE:	**03-1-01-1**	NEW	
	sect. 2.2.5; 3.3.1d; 3.3.3a	MODIFIED	***BANK***
DIFF 2; CA			**NRC 6/2001**
		RO SRO ***BOTH***	**CFR 41.5**
REFERENCE MATERIAL REQUIRED:	None		

QUESTION 24

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 -192 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 24 **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, 14, & 15 NEW MODIFIED ***BANK***
DIFF 2, CA 05-S-01-EP3 Step 15 and HCTL RO SRO ***BOTH*** **NRC 12/2000**
CFR 41.7/41.9/ 41.10/41.14/43.5
REFERENCE MATERIAL REQUIRED: 05-S-01-EP-2A and EP-3

QUESTION 25

The plant was operating at 100 % Power.

A steam leak has developed in the Containment steam tunnel.

Containment temperature has gone up to 85°F and still rising.

A power reduction has commenced but Containment temperature continues to rise.

Tech. Specs states if Containment temperature exceeds 95°F to restore to < 95°F within 8 hours.

If Containment temperature is unable to be restored to < 95°F within 8 hours; then be in MODE 3 in 12 hours and be in MODE 4 in 36 hours.

Which of the following is the reason for this action?
Tech Specs 3.0 & 3.6.1.5 are provided.

A. Shut down of the Reactor is done to prevent having to initiate Containment Spray to maintain Containment temperature below 185°F.

B. Shut down of the Reactor is done to place the plant in a MODE that the LCO does NOT apply.

C. Shut down of the Reactor is done to prevent having to Emergency Depressurize to maintain Containment temperature below 185°F.

D. Shut down of the Reactor is done to prevent damaging operating equipment inside Containment due to current high temperature.

QUESTION 25 **NRC RECORD # WRI 512**
ANSWER: B. **SYSTEM # M41-1** **K/A 295027** **K3.03: 3.7/3.7**
LP# GG-1-LP-OP-TS001
OBJ. 13
LP# GG-1-LP-OP-M4101
OBJ. 11, 12 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**

REFERENCE:	**TECH. SPEC. 3.6.1.5**	NEW	
	TECH. SPEC. BASES	MODIFIED	***BANK***
DIFF 1; M	**3.6.1.5**		**NRC 6/2001**
	TECH SPEC 3.0.2 **	RO SRO ***BOTH***	**CFR 41.9/41.10/43.2**

REFERENCE MATERIAL REQUIRED: **Tech Spec 3.6.1.5 & 3.0.2**

QUESTION 26

The plant is operating at rated conditions.

Temperatures in the lower CRD Cavity are rising.

Which one of the following describes the expected response of the Drywell Cooling System?

A. At 145ºF, M51-F009 and M51-F016 open and M51-F006 and M51-F014 close to divert Drywell Cooling flow from the lower Drywell area to the CRD Cavity.

B. At 145ºF, the Standby fans on M51-B001 and B002 will auto start and M51-F009 and M51-F016 open raising the flow of air to the CRD Cavity.

C. At 145ºF, M51-F009 and M51-F016 open raising the flow of air to the CRD Cavity and at 155ºF M51-F006 and M51-F014 close to divert more air flow.

D. At 155ºF, the Standby fans on M51-B001 and B002 will auto start and M51-F009 and M51-F016 open raising the flow of air to the CRD Cavity.

QUESTION 26		**NRC RECORD # WRI 609**	
ANSWER: A.	**SYSTEM # M51**	**K/A 295028**	**EA1.03: 3.9/3.9**
			EK2.04: 3.6/3.6
LP# GG-1-LP-OP-M5100			**EK3.04: 3.6/3.8**
OBJ. 6a	**SRO TIER 1 GROUP 2 /**	**RO TIER 1 GROUP 2**	
REFERENCE:	**04-1-02-H13-P870**	***NEW***	
	4A-H2; 10A-H2	MODIFIED	BANK
DIFF 2; CA	**M-1101**		
	E-1214-001; 004; 009	RO SRO ***BOTH***	**CFR 41.4/41.7**
REFERENCE MATERIAL REQUIRED:		**Drywell Cooling System Drawing**	

QUESTION 27

Which of the following is the basis for Emergency Reactor Pressure Vessel (RPV) Depressurization when Suppression Pool Level CANNOT be maintained below 24.4 feet?

A. 24.4 feet is the highest Suppression Pool level at which the pressure suppression capability of Containment can be maintained.

B. 24.4 feet is the highest Suppression Pool level at which the Suppression Pool will NOT overflow the weir wall resulting in flooding the Drywell.

C. 24.4 feet is the highest Suppression Pool level at which Suppression Pool level instrumentation taps will become covered resulting in loss of ability to monitor Suppression Pool level.

D. 24.4 feet is the highest Suppression Pool level at which opening Safety Relief Valves (SRVs) will NOT result in exceeding the design blowdown rate for the SRV discharge piping.

QUESTION 27 **NRC RECORD # WRI 513**
ANSWER: A. **SYSTEM # M41-1** **K/A 295029** **K1.01: 3.4/3.7**
LP# GG-1-LP-OP-EP03
OBJ. 6 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: **GGNS PSTG APP B SP/L-3** NEW
GGNS PSTG APP A SP/L-3 MODIFIED ***BANK***
DIFF 1; M **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.9/41.10**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 28

The plant is in a LOCA with ECCS systems injecting to the reactor.

Suppression Pool level has lowered to 13.5 feet.

Which one of the following is a condition that exists due to this level?

A. The SRV tailpipe exhaust spiders have been uncovered.

B. The RCIC Turbine Exhaust pipe has been uncovered.

C. Suppression Pool temperature is unable to be determined.

D. Containment Pressure is unable to be determined

QUESTION 28		**NRC RECORD # WRI 8**	
ANSWER: C.	**SYSTEM # E30**	**K/A 295030**	**EA2.02: 3.9**
LP# GG-1-LP-OP-EP01			
OBJ. 5			
LP# GG-1-LP-RO-EP03			
OBJ. 6	**SRO TIER 1 GROUP**	**1 / RO TIER 1 GROUP 2**	
REFERENCE:	**05-S-01-EP-3 Caution 2**	NEW	
	GGNS EOP PSTG App B	MODIFIED	***BANK***
DIFF 1; M	**Caution 2**		**NRC 6/2001**
		RO SRO ***BOTH***	**CFR 41.9/41.10/43.5**
REFERENCE MATERIAL REQUIRED:	None		

QUESTION 29

Preparations are being made to startup following a Refueling Outage.

During the Refueling outage several Control Rod Drive Mechanisms were replaced and the old mechanisms taken to the CRD Maintenance Room for rebuilding.

The Auxiliary Building Operator has reported elevated radiation levels indicated on his dositec in Area 9 185 ft. of 150 mr/hr.

Which one of the following is the possible cause of the elevated radiation levels?

A. This is normal radiation levels for general area Auxiliary Building.

B. Used CRD Drive Mechanisms in the Auxiliary Building

C. Waterborne contamination in the Fuel Pool Cooling System

D. Normal radiation levels from the Fuel Pool Filter Demineralizers.

QUESTION 29 **NRC RECORD # WRI 610**
ANSWER: C. **SYSTEM # G41/46** **K/A 295033** **EA2.03: 3.7/3.7**
LP# GLP-OPS-G4146
OBJ. 2; 4.8; 5.4; **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
5.5; 5.6; 15.1
REFERENCE: M-1051A; M-1016 ***NEW***
UFSAR 9.1.3.1.2; MODIFIED BANK
DIFF 1; M 12.2.1.3.3 & Table 12.2.-12
FPCCU System Figure 4 RO SRO ***BOTH*** **CFR 41.12/43.4**
REFERENCE MATERIAL REQUIRED: None

QUESTION 30

A GENERAL EMERGENCY has been declared due to a DBA LOCA.

Plant conditions as follows:

- Reactor water level –195"
- Approximately 15% fuel damage
- Large fission product inventory in Containment
- All Containment parameters are within design limits
- Radiation levels at the site boundary are at 15 mRem/hr TEDE

What protective actions, if any, should be recommended?

10-S-01-1 Activation of the Emergency Plan is provided.

A. No evacuation of surrounding areas is required.

B. Evacuate a 2-mile radius and shelter five miles downwind.

C. Evacuate a 2-mile radius and five miles downwind. Shelter the rest of the 10-mile EPZ.

D. Evacuate a 2-mile radius and 10 miles downwind. Shelter the rest of the 10-mile EPZ.

QUESTION 30 **NRC RECORD # WRI 611**
ANSWER: C. **SYSTEM # EPP PARs** **K/A 295038** **EK1.02: 4.2/4.4**

LP# GG-1-LP-EP-EPTS6
OBJ 2 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**
REFERENCE: 10-S-01-1 sect. 6.1.4.j(1) NEW
MODIFIED ***BANK***
DIFF 2; CA **EPTS 6 EXAM 2**
RO SRO ***BOTH*** **CFR 41.10/41.12**
REFERENCE MATERIAL REQUIRED: 10-S-01-1 **43.4/43.5**

QUESTION 31

A fire has been reported by security at the Hydrogen Bulk Storage Facility.

The Outside Operator has identified the leak as coming from the vent stack on the discharge of the cryogenic compressors.

Which one of the following describes the actions to be taken by operators at the scene?

A. Establish a perimeter of at least 160 feet, and allow the fire to burn itself out.

B. Establish a perimeter of at least 160 feet, and establish a monitor nozzle spraying water on the point where the fire is originating.

C. Evacuate a 2 mile radius of the fire, and establish a monitor nozzle spraying water on the point where the fire is originating.

D. Evacuate a 2 mile radius of the fire, and establish a fire team to enter the area with a fire hose cooling the team and isolate the source of the fire.

QUESTION 31 **NRC RECORD # WRI 612**
ANSWER: A. **SYSTEM # P73** **K/A 600000** **AK3.04: 2.8/3.4**
2.1.32: 3.4/3.8
LP# GG-1-LP-OP-P7300 **2.4.25: 2.9/3.4**
OBJ 12; 14 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 04-1-01-P73-1 ***NEW***
sect 3.1; 3.2; 3.3; 3.7 MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED: NONE

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QUESTION 32

The plant is in a Refueling Outage with the reactor disassembled five (5) days after the plant was shutdown in Refueling Outage 11.

Reactor Coolant Temperature is 140 ?F

The Fuel shuffle has just begun.

The in-service shutdown cooling pump has just tripped off.

Assume no further operator action.

Determine for this condition:

1. The time to reach 200?F for the Reactor Vessel.

2. The time for level to reach the Top of Active Fuel.

05-1-02-III-1 Attachment I is provided.

A. 1) 0.75 hours
   2) 15 hours

B. 1) 1.2 hours
   2) 18 hours

C. 1) 2.5 hours
   2) 60 hours

D. 1) 4.5 hours
   2) 75 hours

QUESTION 32 **NRC RECORD # WRI 604**
ANSWER: C. **SYSTEM # G41/46; ONEP** **K/A 295021** **AK1.01: 3.6/3.8**
LP# GLP-OPS-ONEP **AA2.01: 3.5/3.6**
OBJ 18; 19 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 3**
REFERENCE: **05-1-02-III-1 Att. I** NEW
Figures 2 & 5 ***MODIFIED*** BANK
DIFF 2; CA **Pre-shuffle 150ºF** **NRC 3/1998 WRI37**
RO SRO ***BOTH*** **CFR 41.5/41.10/43.5**
REFERENCE MATERIAL REQUIRED: **05-1-02-III-1 Att I**

QUESTION 33

RHR 'A' Pump Room temperature rises to 170 ?F.

Which one of the following identifies the systems or components in addition to RHR 'A' that will be affected by this temperature?

A. HPCS

B. MSIVs and RCIC

C. RCIC

D. RWCU

QUESTION 33		**NRC RECORD # WRI 048**		
ANSWER: C.	**SYSTEM # E12; E51; E31**	**K/A 219000**	**A1.08: 3.7/3.6**	
			A2.14: 4.1/4.3	
			A3.01: 3.3/3.3	
LP# GLP-OPS-E3100			**A4.06: 3.9/3.7**	
OBJ 7.4		**295032**	**EK3.03: 3.8/3.9**	
			EK3.07: 3.6/3.8	
	SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 3			
REFERENCE:	**ARI 04-1-02-H13-P601 20A-B1**	NEW		
		MODIFIED		***BANK***
DIFF 1; M	**05-1-02-III-5 Group 2, 3, 4**			**NRC 3/1998**
		RO SRO ***BOTH***		**CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED:	**NONE**			

QUESTION 34

Following a Recirc line rupture, reactor level has dropped to - 80 inches.

Both trains of the Standby Gas Treatment System have initiated.

Which of the following best describes the operation of the Standby Gas Treatment System flow control dampers?

A. When –0.2 inches water column is obtained in the Enclosure Building, the steam tunnel cooler dampers throttle to their intermediate position. 90 seconds later the remaining flow control dampers throttle to their intermediate position.

B. When –0.25 inches water column is obtained in the Enclosure Building, the steam tunnel cooler dampers throttle to their intermediate position. 120 seconds later the remaining flow control dampers throttle to their intermediate position.

C. After 90 seconds, the flow control dampers will go to their intermediate positions to maintain ? 0.75 inches water column in the Auxiliary Building and –0.25 inches water column in the Enclosure Building.

D. After 90 seconds the flow control dampers throttle to maintain –0.25 inches water column in the Auxiliary Building. If the Enclosure Building pressure reaches –0.75 inches water column, the flow control dampers go to their intermediate positions.

QUESTION 34		**NRC RECORD # WRI 007**	
ANSWER: A.	**SYSTEM # T48**	**K/A 295035**	**EA1.02: 3.8/3.8**
LP# GG-1-LP-OP-T4801		**261000**	**A1.04: 3.0/3.3**
OBJ. 8e	**SRO TIER 1 GROUP 2 /**	**RO TIER 1**	**GROUP 3**
REFERENCE:	**E- 1257- 08, 11, 23**	NEW	
		MODIFIED	***BANK***
DIFF 2; CA			**NRC 3/1998**
		RO SRO ***BOTH***	**CFR 41.4/41.7/41.13**
REFERENCE MATERIAL REQUIRED:			

QUESTION 35

The plant is operating normally at 100 % power.

The Suppression Pool Hi/Lo Level and a LPCS Room Sump Level Hi-Hi annunciators have been received on the H13-P870 panel.

The Control Room Operator has noted that Suppression Pool Level is at 18.4 feet. An operator dispatched to the room reports that water is spraying from the LPCS Suction piping, but he was unable to tell the exact location.

Which one of the following are the appropriate actions for this event?

A. Immediately scram the reactor, initiate Suppression Pool Makeup, and emergency depressurize the plant, and isolate the LPCS Suction from the Suppression Pool.

B. Ensure the LPCS Room sump pumps are operating, isolate LPCS Suction from the Suppression Pool and observe the status of the leak and makeup to the Suppression Pool via normal means, if required open the LPCS Room Door.

C. Monitor and control LPCS Room sump levels, rack out the LPCS Pump Breaker and isolate LPCS Suction from the Suppression Pool, scram the reactor since the Max Safe Level has been reached.

D. Verify the LPCS Room sump pumps are operating, isolate LPCS Suction from the Suppression Pool and rack out the LPCS Pump Breaker, and observe the status of the leak and makeup to the Suppression Pool via normal means.

QUESTION 35		**NRC RECORD # WRI 058**		
ANSWER: D.	**SYSTEM # P45; E12;**	**K/A 295036**	**EA2.03: 3.4/3.8**	
	EOP- 4		**EK3.03: 3.5/3.6**	
LP# GG-1-LP-RO-EP03			**EA2.02: 3.1/3.1**	
OBJ 3				
LP# GG-1-LP-RO-EP04				
OBJ 4	**SRO TIER 1 GROUP 2 /**	**RO TIER 1 GROUP 3**		
REFERENCE:	**05-S-01-EP-3 step 41**	NEW		
	05-S-01-EP-4 step 9 - 13	MODIFIED		***BANK***
DIFF 2; CA	**ARI 04-1-02-H13-P680 8A1-A4**			**NRC 3/1998**
	ARI 04-1-02-H13-P870 4A-A3; 2A-F1; 4A-C3	RO SRO ***BOTH***		**CFR 41.4/41.10/43.5**

REFERENCE MATERIAL REQUIRED: 05-S-01-EP-3 & 4

QUESTION 36

A reactor scram has occurred.

All control rods have fully inserted.

Reactor level is stable at + 4 inches narrow range with reactor pressure at rated conditions.

Which one of the following describes the flows observed with present conditions for the Control Rod Hydraulic System?

	CRD Pump Min Flow	Charging Water Header	Cooling Water Header	Recirc Pump Seal Purge
A.	20 gpm	0 gpm	60 gpm	2 gpm / pump
B.	20 gpm	165 gpm	5 gpm	2 gpm / pump
C.	20 gpm	165 gpm	5 gpm	0 gpm
D.	0 gpm	165 gpm	60 gpm	0 gpm

QUESTION 36 **NRC RECORD # WRI 613**
ANSWER: B. **SYSTEM # C11-1A** **K/A 295036** **K5.02: 2.6/2.6**
LP# GG-1-LP-OP-C111A
OBJ 4 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 1**
REFERENCE: **SFD-1081** ***<u>NEW</u>***
04-1-01-B33-1 MODIFIED BANK
DIFF 2; CA **sect 4.1.2b(2)(e)**
04-1-01-C11-1 sect 4.1.2v(2) RO SRO ***<u>BOTH</u>*** **CFR 41.5/41.6**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 37

The plant is operating at 45% power while returning to full power conditions.

A fatigue failure of the High Pressure Turbine First Stage Pressure connection resulted in a loss of all inputs of pressure to Rod Control and Information System.

Which one of the following describes the ability to move control rods with present plant conditions?

Assume the only actions to move control rods are from H13-P680.

A. Control rod movement is restricted to the Rod Pattern Controller.

B. Control rod movements are unrestricted for both withdrawals and insertions.

C. Control rod movement is restricted to 2 notch withdrawals and unlimited insertions.

D. Control rod movement is restricted to 4 notch withdrawals and unlimited insertions.

QUESTION 37 **NRC RECORD # WRI 614**
ANSWER: A. **SYSTEM # C11-2; N11** **K/A 201005 K6.01: 3.2/3.2**
LP# GG-1-LP-OP-C1102
OBJ 5, 6, 7, 13b, 23, 26 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H13-P680-4A2-D5 ***NEW***
03-1-01-2 MODIFIED BANK
DIFF 2; CA **sect 2.15; 5.3; 5.7; 6.4**
Tech Spec 3.3.2.1 & bases RO SRO ***BOTH*** **CFR 41.6/43.6**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 38

The plant is operating at 45% power raising power to full power conditions.

A disturbance on the Entergy Grid resulted in a trip of Circuit Breakers J5228 and J5232 in the GGNS Switchyard.

Reactor water level control responded to control reactor water level above –20 inches wide range.

Reactor pressure control responded to an actuation of B21-F051D momentarily with subsequent pressure control using Main Steam Bypass Valves.

All other systems functioned as designed.

Which one of the following identifies the current configuration of the Recirculation Pump circuit breakers?

	CB-1	CB-2	CB-3	CB-4	CB-5
A.	CLOSED	CLOSED	CLOSED	CLOSED	OPEN
B.	OPEN	OPEN	CLOSED	OPEN	OPEN
C.	CLOSED	CLOSED	OPEN	OPEN	OPEN
D.	OPEN	OPEN	OPEN	OPEN	OPEN

QUESTION 38 **NRC RECORD # WRI 615**
ANSWER: C. **SYSTEM # B33; N32** **K/A 202002 A2.01: 3.4/3.4**
LP# GLP-OPS-B3300 **202001 A2.15: 3.7/3.9**
OBJ 27; 50 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H13-P680 ***NEW***
3A-D4 & D10 MODIFIED BANK
DIFF 2; CA **Tech Spec 3.3.4.1 & bases**
Tech Spec 3.3.1.1; 3.3.6.5; 3.3.4.2 RO SRO ***BOTH*** **CFR 41.6**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 39

Which one of the following is the reason the LPCI Injection Valves, E12-F042A, B, and C, are designed to remain closed at normal reactor vessel pressure following a LOCA initiation signal?

A. This allows the pump time to pressurize the header, thus minimizing the differential pressure across the injection valve.

B. This ensures reactor pressure has dropped sufficiently to prevent the possibility of over pressurizing low pressure piping.

C. This allows the pump to develop enough discharge head to overcome reactor pressure for injection preventing back flow of hot reactor water into LPCI piping.

D. This ensures reactor pressure has equalized with LPCI pressure to prevent the injection check valves E12-F041A, B, C from slamming the injection piping causing damage.

QUESTION 39 **NRC RECORD # WRI 060**
ANSWER: B. **SYSTEM # E12** **K/A 203000** **K1.17: 4.0/4.0**
K4.01: 4.2/4.2
K4.02: 3.3/3.4
A3.01: 3.8/3.7
A3.08: 4.1/4.1
LP# GLP-OPS-E1200 **A4.08: 4.3/4.3**
OBJ 8.9; 14.2 **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 **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.8**
REFERENCE MATERIAL REQUIRED: None

QUESTION 40

A LOCA has occurred.

Power to bus 15AA has been lost.

All other systems are functioning as required.

Reactor water level is – 170 inches.

Reactor pressure is 840 psig.

Drywell pressure is 8.3 psig.

Which one of the following identifies the response of the Automatic Depressurization System?

A. ADS valves are unable to open due to a loss of air needed to open the valves.

B. ADS valves are unable to automatically open due to a loss of power needed to actuate.

C. ADS valves will automatically open using both solenoids associated with the air actuator.

D. ADS valves will automatically open when the appropriate time delays have been met.

QUESTION 40 **NRC RECORD # WRI 616**
ANSWER: D. **SYSTEM # E21; E12; E22-2; R21** **K/A 209001 K3.02: 3.8/3.9**
218000 K6.01: 3.9/4.1
LP# GG-1-LP-OP-E2202 **K6.02: 4.1/4.1**
OBJ 5c,f; 9a,b; 12b,c; 15; 17; 25 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H13-P601 18A-B3 & E2 19A-B3 & E2 04-1-01-B21-1 sect 5.1.1
NEW MODIFIED BANK
DIFF 2; CA
RO SRO ***BOTH*** **CFR 41.7**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 41

The plant is starting up and is currently operating at 80% power.

All systems are operating properly.

There is a spurious High Pressure Core Spray (HPCS) initiation.

All other systems respond properly.

NO operator action is taken.

Which of the following identifies the effect on Reactor Water Level the spurious HPCS initiation will have?

A. Reactor Water Level will RISE, Feedwater Level Control will respond, and Reactor Water level will stabilize at a HIGHER than normal condition.

B. Reactor Water level will RISE, Feedwater Level Control will respond, and Reactor Water level will be returned to NORMAL level.

C. Reactor Water level will RISE, Feedwater Level Control will respond, and Reactor Water level will stabilize at a LOWER than normal condition.

D. Reactor Water level will not be affected due to Feedwater Level Control will respond and maintain Reactor Water level at NORMAL level.

QUESTION 41 **NRC RECORD # WRI 519**
ANSWER: A. **SYSTEM # C34; E22** **K/A 209002** **K3.01: 3.9/3.9**
LP# GG-1-LP-OP-MCD7b **259002** **A2.08: 4.5/4.5**
OBJ. 2 A **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: **UFSAR 15.5.1.2.1** NEW
UFSAR FIG. 15.5-1 MODIFIED ***BANK***
DIFF 2; CA **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.7/41.8**
REFERENCE MATERIAL REQUIRED: **NONE**

QUESTION 42

An ATWS has occurred.

Standby Liquid Control has just been initiated for injection into the reactor vessel.

Reactor power is 10 %.

Reactor pressure is 850 psig.

Reactor water level – 110 inches Fuel Zone.

Which one of the following identifies indications of Standby Liquid Control injection into the Reactor?

	SLC Tank Level	SLC Pump Pressure	Reactor Power	Squib Valve Ready lights	SLC OOSVC Alarms	SQUIB LOSCONT OR PWR LOSS lights
A.	4400 gal	1050 psig	9%	OFF	ON	ON
B.	4600 gal	860 psig	10%	ON	OFF	OFF
C.	4600 gal	1050 psig	9%	ON	OFF	OFF
D.	4400 gal	860 psig	10%	OFF	OFF	ON

QUESTION 42 **NRC RECORD # WRI 617**
ANSWER: A. **SYSTEM # C41** **K/A 211000** **A4.04: 4.5/4.6**
A4.01: 3.9/3.9
A4.03: 4.1/4.1
LP# GLP-OPS-C4100 **A4.07: 3.6/3.6**
OBJ 12 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-01-C41-1 sect 5.3.2b ***NEW***
MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.1/41.6/41.7**
REFERENCE MATERIAL REQUIRED: NONE **43.6**

QUESTION 43

The plant was operating at 60% power when Division I UPS Power Panel 1Y89 trips its incoming circuit breaker.

Which one of the following is the response of the Reactor Protection System?

A. RPS A system tripped resulting in a half scram due to a loss of power to the RPS A logic relays.

B. RPS A system logic energized causing a half scram due to a loss of power to the RPS A Scram Pilot Valve solenoids.

C. RPS A system tripped with no half scram because the RPS A solenoids still have power available.

D. RPS A system logic energized causing alarms indicating the loss of power with no half scram due to RPS Bus A still being energized.

QUESTION 43		**NRC RECORD # WRI 102**		
ANSWER: A.	**SYSTEM # C71; L62**	**K/A 212000**	**K6.01: 3.6**	
			K1.04: 3.4	
LP# GLP-OPS-C7100				
OBJ. 11.10; 23				
LP# GG-1-LP-OP-L6200				
OBJ. 6b	**SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**			
REFERENCE:	**E- 1026**	NEW		
	E- 1173 - 14, 15, & 19	MODIFIED	***<u>BANK</u>***	
DIFF 1; M			**NRC 3/1998**	
		RO SRO ***<u>BOTH</u>***	**CFR 41.2/41.6**	
REFERENCE MATERIAL REQUIRED:		NONE		

QUESTION 44

Which one of the following identifies the power sources to the Intermediate Range Neutron Monitors (IRMs) and the impact on the monitors upon a loss of power?

A. IRMs are powered from Division I and II DC buses and fail upscale on a loss of power.

B. IRMs are powered from Division I and II RPS buses and fail upscale on a loss of power.

C. IRMs are powered from Division I and II UPS buses and fail downscale on a loss of power.

D. IRMs are powered from the BOP UPS buses and fail downscale on a loss of power.

QUESTION 44 **NRC RECORD # WRI 618**
ANSWER: C. **SYSTEM # C51-2** **K/A 215003** **K2.01: 2.5/2.7**
LP# GG-1-LP-OP-C5102
OBJ 6b,c; 11a; 18 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 1**
REFERENCE: **04-1-01-C51-1 Att III** ***NEW***
04-1-01-L62-1 Att I MODIFIED BANK
DIFF 1; M **04-1-02-1H13-P680**
5A-A8, B8; 7A-A8, B8, B9 RO SRO ***BOTH*** **CFR 41.6**
REFERENCE MATERIAL REQUIRED: **NONE**

QUESTION 45

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

APRM H has four (4) LPRMs currently bypassed.

What would APRM H indicate when the Meter Function switch is taken to COUNT after a fifth (5^{th}) LPRM is taken to BYPASS?

A. 75

B. 80

C. 85

D. 90

QUESTION 45 **NRC RECORD # WRI 326**
ANSWER:. C. **SYSTEM # C51** **K/A 215005 K6.03: 3.1/3.3**
LP# GG-1-LP-OP-C5104
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 **NRC 12/2000**
RO SRO ***BOTH*** **CFR 41.6/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 46

Which one of the following describes conditions that would prohibit withdrawing Source Range Neutron (SRM) detectors from the core?

A. IRMs are on Range 1 reading between 10 and 25 and all SRMs are reading between 6000 and 9000 cps.

B. Source Range 'A' detector has lost power and has been declared INOP and is bypassed at H13-P680.

C. Under vessel work has been performed during the ongoing refueling outage and work is still in progress.

D. Drywell entry has been made to inspect and identify leaks at rated pressure during a reactor startup.

QUESTION 46 **NRC RECORD # WRI 619**
ANSWER: C. **SYSTEM # C51-1** **K/A 215004** **2.1.32: 3.4/3.8**
LP# GG-1-LP-OP-C5101 **A4.04: 3.2/3.2**
OBJ 7a; 11a **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: **04-1-01-C51-1 sect 3.5** ***NEW***
04-1-02-1H13-P680-7A-C11 MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.5/41.6**
REFERENCE MATERIAL REQUIRED: **NONE**

QUESTION 47

Which one of the following conditions will allow a start of a Recirculation Pump "A"?

A.

Steam Dome Pressure	950 psig
Recirc Loop A Temperature	485 ?F
Recirc Loop B Temperature	529 ?F
Bottom Head Temperature	500 ?F
Reactor Power	30 %

B.

Steam Dome Pressure	1014 psig
Recirc Loop A Temperature	495 ?F
Recirc Loop B Temperature	529 ?F
Bottom Head Temperature	495 ?F
Reactor Power	90 %

C.

Steam Dome Pressure	981 psig
Recirc Loop A Temperature	499 ?F
Recirc Loop B Temperature	529 ?F
Bottom Head Temperature	500 ?F
Reactor Power	60 %

D.

Steam Dome Pressure	960 psig
Recirc Loop A Temperature	481 ?F
Recirc Loop B Temperature	525 ?F
Bottom Head Temperature	495 ?F
Reactor Power	60 %

QUESTION 47 **NRC RECORD # WRI 122**
ANSWER: C. **SYSTEM # B33; B21** **K/A 216000 K1.23: 3.3/3.4**
202001 A4.01: 3.7/3.7
LP# GLP-OPS-B3300
OBJ. 26.3 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 06-OP-1B33-V-0005 NEW
Data Sheet IV sect. 5.4 MODIFIED ***BANK***
DIFF 2; CA **04-1-01-B33-1 sect 3.3** **NRC 3/1998**
RO SRO ***BOTH*** **CFR 41.5**
REFERENCE MATERIAL REQUIRED: STEAM TABLES

QUESTION 48

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 48 **NRC RECORD # WRI 328**
ANSWER:. B. **SYSTEM # E51** **K/A 217000 A1.01: 3.7/3.7**
LP# GG-1-LP-OP-E5100
OBJ. 8c, i, k, 19 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: E-1185-02, 06, 15, 34, 35 NEW
MODIFIED ***BANK***
DIFF 1; M **NRC 12/2000**
RO SRO ***BOTH*** **CFR 41.5/41.7/41.10**
REFERENCE MATERIAL REQUIRED: None

QUESTION 49

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 – 155 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	**49**	**NRC RECORD # WRI 620**		
ANSWER: C.	**SYSTEM # E22-2**	**K/A 218000**	**K4.03: 3.8/4.0**	
LP# GG-1-LP-OP-E2202			**K5.01: 3.8/3.8**	
OBJ. 15	**SRO TIER 2 GROUP 1 /**	**RO TIER 2 GROUP 1**		
REFERENCE:	**04--1-02-1H13-P601**	NEW		
	18A-B3, B4, C2	MODIFIED		***BANK***
DIFF 1, M	**19A-B3, B4, C2**			**NRC 12/00**
		RO SRO ***BOTH***		**CFR 41.7**
REFERENCE MATERIAL REQUIRED:		None		

QUESTION 50

The plant is operating at 100% power steady state.

All power from offsite is lost.

All systems respond and function properly.

All plant parameters remain in their normal band.

Division 1 and 2 Load Shedding and Sequencing (LSS) functions properly.

Which of the following components is without power at this time?

A. Drywell Chillers A.

B. Division 1 Drywell Cooler Fans.

C. Drywell Chillers B.

D. Division 2 Drywell Cooler Fans.

QUESTION 50		**NRC RECORD # WRI 528**	
ANSWER: A.	**SYSTEM # M51**	**K/A 223001**	**K2.09: 2.7/2.9**
			K2.10: 2.7/2.9
LP# GG-1-LP-OP-M5100			**K2.08: 2.7/3.0**
OBJ. 7a&c; 9a	**SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**		
REFERENCE:	**04-1-01-R21-1 Table 1**	NEW	
	04-1-01-M51-1 Att III	MODIFIED	***BANK***
DIFF 2; CA	**04-1-01-P72-1 Att II**		**NRC 6/2001**
		RO SRO ***BOTH***	**CFR 41.7/41.8**
REFERENCE MATERIAL REQUIRED:	NONE		

QUESTION 51

An LOCA has occurred.

Reactor scram immediate actions are complete.

The following conditions exist:

Reactor water level	+ 20 inches after dropping to – 32 inches
Reactor pressure	40 psig
Drywell pressure	1.5 psig

Which one of the following should be isolated?

A. Reactor Water Cleanup system

B. Reactor Sample Isolation valves

C. Reactor Core Isolation Cooling Vacuum Breaker valves

D. Main Steam Line Drain Isolation valves B21-F016 & F019

QUESTION 51 **NRC RECORD # WRI 385**
ANSWER: C. **SYSTEM # E51** **K/A 223002 A2.09: 3.6/3.7**
2.4.4: 4.0/4.3
LP# GG-1-LP-OP-E5100 **2.4.21: 3.7/4.3**
OBJ. 8o **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 05-1-02-III-5 Group 9 NEW
MODIFIED ***BANK***
DIFF 1; M **NRC 12/2000**
RO SRO ***BOTH*** **CFR 41.7/41.9**
REFERENCE MATERIAL REQUIRED: None

QUESTION 52

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.

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 52 **NRC RECORD # WRI 337**
ANSWER: D. **SYSTEM # E22-2** **K/A 239002** **K1.05: 3.1/3.3**
LP# GG-1-LP-OP E2202
OBJ. 7; 11; 13; 19d; 28 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**

REFERENCE:	**05-1-02-V-9 sect 3.15**	NEW	
	04-1-01-B21-1	MODIFIED	***BANK***
DIFF 2; CA	**Sect 4.2.2**		**NRC 12/2000**
	M-1077C & E	RO SRO ***BOTH***	**CFR 41.3**

REFERENCE MATERIAL REQUIRED: None

QUESTION 53

The plant is operating at 45% power.

An incident at the Front Standard of the Main Turbine resulted in a local manual trip of the Main Turbine.

Which one of the following describes the response of the plant?

A. The reactor will scram on Turbine Valve fluid pressure and the Turbine Bypass Valves will open.

B. The reactor will scram on high reactor flux and the Turbine Bypass Valves will open.

C. The reactor will scram on Turbine Valve fluid pressure, the Turbine Bypass Valves will open, and 9 Safety Relief Valves will open.

D. The reactor will scram on high reactor flux, the Turbine Bypass Valves will open, and Safety Relief Valves will open.

QUESTION 53		**NRC RECORD # WRI 244**		
ANSWER: A.	**SYSTEM # N32; C71**	**K/A 241000**	**K6.11: 3.4/3.4**	
			A1.01: 3.9/3.8	
			A1.02: 4.1/3.9	
LP# GLP-OP-C7100			**A1.07: 3.8/3.7**	
OBJ. 9, 10; 23	**SRO TIER 2 GROUP 1 /**	**RO TIER 2 GROUP 1**		
REFERENCE:	**FSAR Table 15.2-4**	NEW		
	Tech Spec 3.3.1.1 & bases	MODIFIED		***BANK***
DIFF 2; CA	**FSAR Table 15.2-2**			**NRC 4/2000**
		RO SRO ***BOTH***		**CFR 41.5**
REFERENCE MATERIAL REQUIRED:		None		

QUESTION 54

Which one of the following signals will cause a SBGT system 'A' initiation?

A. Fuel handling area exhaust rad monitor 'A' indicating 4.2 mRem/hr.
Fuel handling area exhaust rad monitor 'D' mode switch NOT in operate.

B. Fuel pool sweep exhaust rad monitor 'A' indicating 32 mRem/hr.
Fuel pool sweep exhaust rad monitor 'C' indicating 34 mRem/hr.

C. Fuel handling area exhaust rad monitor 'B' indicating 5.3 mRem/hr.
Fuel handling area exhaust rad monitor 'C' inop trip.

D. Fuel pool sweep exhaust rad monitor 'A' indicating 31 mRem/hr.
Fuel pool sweep exhaust rad monitor 'C' inop trip.

QUESTION 54 **NRC RECORD # WRI 621**
ANSWER: A. **SYSTEM # T48; D17; T42** **K/A 261000 K4.01: 3.7/3.8**
LP# GG-1-LP-OP-T4801
OBJ. 8f **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H13-P870 2A-A3 NEW
04-1-02-1H13-P601 ***MODIFIED*** BANK
DIFF 1, M **19A-B9** **LOT 9/99 ESF**
TRM table 3.3.6.2-1 RO SRO ***BOTH*** **CFR 41.7/41.11**
REFERENCE MATERIAL REQUIRED: None

QUESTION 55

A plant startup is in progress.

The Operator at the Controls has just shifted the ‘A’ Recirculation Pump to fast speed. The ‘B’ Recirculation pump is running in slow speed with its flow control valve at 100% open.

Immediately after the pump up-shift, the following indications were received in the Main Control Room:

Reactor Power 34 % and stable.
Reactor level dropped to + 32 inches.
Annunciator RECIRC FCV A PARTIAL CLOSE/ RFP TRIP (P680-3A-D1) is illuminated.

Which one of the following would be the expected response of the Recirculation System? (No other alarms or indicating lights have been received.)

A. The ‘A’ Recirc Flow Control Valve will remain at present position and will require resetting via the RECIRC PUMP A CAV INTLK RESET pushbutton.

B. The ‘A’ Recirc Flow Control Valve Hydraulic Power Unit will require resetting from the Control Room Back Panels and then the valve opened to 15 – 20 % valve position.

C. The ‘A’ Recirc Flow Control Valve runback to 0 % valve position and ‘B’ Recirc Flow Control valve will runback to 15 – 20 % valve position and then both valves will be reset via the RECIRC PUMP A CAV INTLK RESET pushbutton.

D. The ‘A’ Recirc Flow Control Valve will remain at present position and ‘B’ Recirc Flow Control Valve will runback to 15 – 20 % valve position and then both valves will be reset via the RECIRC PUMP A CAV INTLK RESET pushbutton

QUESTION 55		**NRC RECORD # WRI 235**	
ANSWER: A.	**SYSTEM # B33**	**K/A 202002**	**A3.01: 3.6/3.4**
LP# GLP-OPS-B3300			
OBJ. 20, 24, 50	**SRO TIER 2 GROUP 1 /**	**RO TIER 2 GROUP 1**	
REFERENCE:	**04-1-02-H13-P680**	NEW	
	3A-D1	MODIFIED	***BANK***
DIFF 1; M	**04-1-01-B33-1 section 6.6**		**NRC 4/2000**
		RO SRO ***BOTH***	**CFR 41.6**
REFERENCE MATERIAL REQUIRED:		None	

QUESTION 56

The plant was operating at full power when a leak on the RFPT 'A' lube oil reservoir resulted in a trip of both AC RFPT Lube Oil Pumps.

The ACRO noted bearing oil pressure at 2 psig.

Which one of the following describes the response of the Feedwater System and the ability to inject water to the Reactor?

A. RFPT 'A' will continue to operate using the Emergency RFPT Lube Oil Pump. Reactor water level will continue to be maintained by Feedwater.

B. RFPT 'A' will trip and isolate the RFPT and power will be reduced with Recirc to within the capabilities of RFPT 'B' allowing reactor level to be recovered to close to normal levels.

C. RFPT 'A' will trip and isolate feedwater to the reactor vessel resulting in a lowering reactor water level and eventual reactor scram. Water level must be recovered using ECCS and RCIC.

D. RFPT 'A' will trip and power will be reduced with Recirc to within the capabilities of RFPT 'B' with level being maintained at 18 inches until the Digital Feedwater Control System can be restored to three element control.

QUESTION 56 **NRC RECORD # WRI 622**
ANSWER: B. **SYSTEM # N21; B33** **K/A 259001** **A2.01: 3.7/3.7**
K1.11: 2.7/2.7
K4.06: 2.5/2.6
LP# GG-1-LP-OP-N2100 **K6.09: 2.8/2.9**
OBJ. 12; 14; 16; 37
LP# GLP-OPS-B3300
OBJ. 24.1; 24.2; 47 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H13-P680 ***NEW***
2A-A2, B1, B2; 3A-A3 MODIFIED BANK
DIFF 2; CA **04-1-01-N21-1 sect 3.7**
RO SRO ***BOTH*** **CFR 41.4**
REFERENCE MATERIAL REQUIRED: None

QUESTION 57

The plant was operating at full power.

The variable leg of the transmitters off of D004C Condensing pot has broken and drained the water from the associated level transmitters.

The Digital Feed Control System was aligned for normal operations.

Which one of the following describes the response of the Digital Feed Control System (DFCS) and actual Reactor Water Level?

A. Reactor water level will drop initially then is restored when DFCS automatically transfers from Three Element Control to Single Element Control.

B. Reactor water level will drop initially then is restored when the DFCS automatically deselects C Narrow Range and is replaced with Upset Range for level control.

C. Reactor water level will rise initially then is restored when the DFCS automatically deselects C Narrow Range and is replaced with Upset Range for level control.

D. Reactor water level will remain stable and the DFCS automatically deselects C Narrow Range and is replaced with Upset Range for level control.

QUESTION 57 **NRC RECORD # WRI 623**
ANSWER: D. **SYSTEM # N21; C34; B21** **K/A 259002 K1.03: 3.8/3.9**
LP# GG-1-LP-OP-C3401
OBJ. 3f; 22; 25
LP# GLP-OPS-B2101
OBJ. 8.1; 8.4; 20 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H13-P680 2A-C9 ***NEW*** MODIFIED BANK
DIFF 2; CA
RO SRO ***BOTH*** **CFR 41.4/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 58

The Electrical line up is normal.

A LOCA condition has caused Drywell Pressure to rise to 1.6 psig.

A switching error causes 500 kV voltage to drop.

The voltage to ALL ESF busses drops to 3290 volts.

The voltage transient duration is 10 seconds and then voltage returns to normal.

Which one of the following statements is the condition of the ESF busses 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 58 **NRC RECORD # WRI 11**
ANSWER: B. **SYSTEM # R21** **K/A 264000** **2.4.4: 4.0/4.3**
LP# GG-1-LP-OP-R2100 **K4.05: 3.2/3.2**
A3.05: 3.4/3.4
OBJ. 12; 20; 22; 37 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: **04-1-01-R21-1 sect 5.1.1a** NEW
04-1-01-P81-1 sect 3.22 MODIFIED ***BANK***
DIFF 2; CA **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.8**
REFERENCE MATERIAL REQUIRED: **NONE**

QUESTION 59

Select the statement that describes the MOST probable cause of the following plant conditions:

Annunciator "**RECIRC PMP B SEAL STG FLO HI/LO**" alarms.

Annunciator "**RECIRC PMP B OUTR SEAL LEAK HI**" alarms.

Recirc pump 'B' # 1 seal cavity pressure: 1020 psig.

Recirc pump 'B' # 2 seal cavity pressure: 100 psig

A. Failure of the # 1 seal.

B. Failure of the # 2 seal.

C. Failure of the CRD seal purge regulator.

D. Plugging of the orifice between # 1 and # 2 seals.

QUESTION 59		**NRC RECORD # WRI 540**		
ANSWER: B.	**SYSTEM # B33**	**K/A 202001**	**A2.10: 3.5/3.9**	
LP# GLP-OPS-B3300			**A1.09: 3.3/3.3**	
			A1.10: 2.6/2.7	
OBJ. 29.4	**SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**			
REFERENCE:	**04-1-02-1H13-P680**	NEW		
	3A-A12 & 3A-B11	MODIFIED		***BANK***
DIFF 2; CA				**NRC 6/2001**
		RO SRO ***BOTH***		**CFR 41.3/41.5**
REFERENCE MATERIAL REQUIRED:	NONE			

QUESTION 60

The plant is in a refuel outage.

Reactor Water Clean-Up (RWCU) is operating.

Residual Heat Removal (RHR) B is in Shutdown Cooling.

E12-F048B RHR B Heat Exchanger Bypass valve is FULL OPEN.

E12-F003B RHR B Heat Exchanger Outlet valve is FULL CLOSED.

Which of the following would be a valid indication of Reactor Coolant Temperature under present plant conditions?
P & IDs M-1079 and M-1085A are provided.

A. RHR B heat exchanger B001B inlet temperature E12 TE-N004B

B. RHR B heat exchanger B002B inlet temperature E12 TE-N002B.

C. RHR B heat exchanger discharge temperature E12 TE-N027B.

D. RWCU Non-Regen heat exchanger inlet temperature G33 TE-N006.

QUESTION 60		**NRC RECORD # WRI 541**	
ANSWER: C.	**SYSTEM # E12**	**K/A 205000**	**K1.03: 3.4/3.5**
LP# GLP-OPS-E1200			
OBJ. 14	**SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**		
REFERENCE:	**04-1-01-E12-1**	NEW	
	sect 4.2.2.e.13 Caution	MODIFIED	***BANK***
DIFF 2; CA	**P&ID M1085A**		**NRC 6/2001**
	M-1079	RO SRO ***BOTH***	**CFR 41.2/41.3/41.4**
REFERENCE MATERIAL REQUIRED:		**M-1079 & M-1085A**	**41.5**

QUESTION 61

Suppression Pool Cooling is in service to support a RCIC surveillance.

Which of the following statements accurately depicts the required operation of E12-F003A(B), RHR Heat Exchanger Outlet Valve, and E12-F048A(B), RHR Heat Exchanger Bypass Valve, while in Suppression Pool cooling?

A. Maintain flow greater than 4000 gpm. If the F048A(B) is not full OPEN, avoid using F003A(B) to throttle flow for extended periods (30 minutes) in the 0% to 15% open range.

B. Maintain flow greater than 4000 gpm. If the F048A(B) is not full CLOSED, avoid using F003A(B) to throttle flow for extended periods (60 minutes) in the 0% to 15% open range.

C. Maintain heat exchanger flow less than 8600 gpm. If the F048A(B) is not full OPEN, avoid using F003A(B) to throttle flow for extended periods (30 minutes) in the 0% to 15% open range.

D. Maintain heat exchanger flow less than 8600 gpm. If the F048A(B) is not full CLOSED, avoid using F003A(B) to throttle flow for extended periods (60 minutes) in the 0% to 15% open range.

QUESTION 61		**NRC RECORD # WRI 624**	
ANSWER: A.	**SYSTEM # E12**	**K/A 219000**	**K5.04: 2.9/2.9**
LP# GLP-OPS-E1200			**2.1.32: 3.4/3.8**
OBJ. 14.1	**SRO TIER 2 GROUP 2 /**	**RO TIER 2 GROUP 2**	
REFERENCE:	**04-1-01-E12-1**	NEW	
	sect 3.2.3; 3.6.3b;	MODIFIED	***BANK***
DIFF 1; M	**5.2.2a(5) Caution**		**NRC 12/00 id 282**
		RO SRO ***BOTH***	**CFR 41.7**
REFERENCE MATERIAL REQUIRED:	**None**		

QUESTION 62

In which one of the following situations would containment spray be in service?

A. 5 minutes since LOCA signal received
Reactor water level - 192 inches
RHR A and B pumps operating on minimum flow
Drywell pressure 2 psig
CTMT pressure 9 psig

B. 12 minutes since LOCA signal received
Reactor water level - 192 inches
RHR A and B pumps operating on minimum flow
Drywell pressure 0.7 psig
CTMT pressure 8 psig

C. 13 minutes since LOCA signal received
Reactor water level - 92 inches
RHR A and B pumps were overridden off 2 min. after LOCA
Drywell pressure 5 psig
CTMT pressure 4 psig

D. 15 minutes since LOCA signal received
Reactor water level - 92 inches
RHR A and B pumps were overridden off 2 min. after LOCA
Drywell pressure 3 psig
CTMT pressure 8 psig

QUESTION 62 **NRC RECORD # WRI 625**
ANSWER: D. **SYSTEM # E12** **K/A 226001 A3.07: 3.5/3.5**
LP# GLP-OPS-E1200 **A3.01: 3.0/3.0**
OBJ. 10.1; 11.2 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 2**
REFERENCE: 04-1-01-E12-1 sect 3.3 NEW
04-1-02-1H13-P601 ***MODIFIED*** BANK
DIFF 1; M **17A-F3; 20A-B6** **LOT 7/95**
RO SRO ***BOTH*** **CFR 41.7/41.8**
REFERENCE MATERIAL REQUIRED: None

QUESTION 63

GGNS Main Generator has a limit to carry no more than ? 250 MVARs.

What is the basis for this limitation?

A. This is the Maximum reactive load allowed by the manufacturer due to the heat build up in the stator windings at full power.

B. GGNS is a base load station such that Entergy dispatchers are required to minimize the reactive load carried on the Main Generator.

C. GGNS Main Generator reverse power relays will not recognize a reverse power condition at high reactive load and will not provide the required trip.

D. The Generator V-Curves supplied by the manufacturer limit the power factor on the generator to reduce hysteresis losses.

QUESTION 63		**NRC RECORD # WRI 44**		
ANSWER: C.	**SYSTEM # N41**	**K/A 245000**	**A4.14: 2.5/2.5**	
			A3.10: 2.5/2.6	
LP# GG-1-LP-OP-N4151			**K4.06: 2.7/2.8**	
OBJ 7; 13	**SRO TIER 2 GROUP 2 /**	**RO TIER 2 GROUP 2**		
REFERENCE:	**04-1-01-N40-1 sect. 3.8**	NEW		
		MODIFIED		***BANK***
DIFF 1; M				**NRC 3/1998**
		RO SRO ***BOTH***		**CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED:		**NONE**		

QUESTION 64

The plant is operating normally at full power rated conditions.

A rupture of tubes in the 3A Low Pressure Feedwater Heater resulted in an automatic isolation of the Feedwater Heater String.

Which one of the following describes the limitations on plant operations?

A. Power is limited to a maximum of 50% rated thermal power utilizing Condensate and Heater Drain pumps to a limit of 250 psid differential pressure across the LP Feedwater Heaters due to 1/3 Condensate System capacity.

B. Power is limited to a maximum of 75% rated thermal power without restrictions on the use of Condensate and Heater Drain pumps.

C. Power is limited to a maximum of 100% rated thermal power without restrictions on the use of Condensate and Heater Drain pumps opening the LP Feedwater Heater Bypass valve as necessary to reduce differential pressure.

D. Power is limited as necessary to maintain the turbine parameters within limits without restrictions on the operation of the Condensate and Heater Drain Pumps.

QUESTION 64 **NRC RECORD # WRI 294**
ANSWER: D. **SYSTEM # N23; N19** **K/A 256000** **A3.07: 2.9/2.9**
A3.04: 3.0/3.0
A3.01: 2.7/2.7
LP# GLP-OPS-N2335 **A2.08: 3.1/3.1**
OBJ. 15 **SRO TIER 2 GROUP 3 / RO TIER 2 GROUP 2**
REFERENCE: **04-1-01-N23-1 sect 3.10** NEW
03-1-01-2 sect 2.10.2 MODIFIED ***BANK***
DIFF 1; M **NRC 4/2000**
RO SRO ***BOTH*** **CFR 41.4**
REFERENCE MATERIAL REQUIRED: None

QUESTION 65

Bus 16AB has experienced an undervoltage condition.

Diesel Generator 12 failed to start.

Power to bus 16AB has been restored by the Control Room Operator from transformer ESF 11.

Reactor water level and pressure are stable.

Which one of the following is the type of load sequencing that will take place?

A. Bus Undervoltage Sequence

B. Loss of Offsite Power Sequence

C. Loss of Coolant Accident Sequence

D. Bus Undervoltage Sequence following automatic source selection

QUESTION 65 **NRC RECORD # WRI 626**
ANSWER: A. **SYSTEM # R21** **K/A 262001 A3.04: 3.4/3.6**
LP# GG-1-LP-OP-R2100
OBJ. 15; 16; 17; 18 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 2**
REFERENCE: E-1039 NEW
MODIFIED BANK
DIFF 1; M **LOT 8/02**
RO SRO ***BOTH*** **CFR 41.4/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 66

Static inverter 1Y95 has automatically transferred to its alternate power source because of a fault on its normal power source.

Two hours later, the electricians have repaired the fault and the normal power source for 1Y95 is re-energized.

Which one of the following statements describes the restoration of the inverter to its NORMAL source?

A. The inverter static switch can be manually transferred back to the normal power source, only if the power sources are IN SYNC.

B. The inverter static switch will automatically transfer back to the normal power source, only if the power sources are IN SYNC.

C. The inverter static switch will automatically transfer back to the normal power source, regardless of whether the power sources are IN SYNC.

D. The inverter static switch can be manually transferred back to the normal power source, regardless of whether the power sources are IN SYNC.

QUESTION 66 **NRC RECORD # WRI 544**
ANSWER: A. **SYSTEM # L62** **K/A 262002 A3.01: 2.8/3.1**
LP# GG-1-LP-OP-L6200
OBJ. 4b; 10a **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
REFERENCE: 04-1-01-L62-1 NEW
sect 3.2 & 3.5 MODIFIED ***BANK***
DIFF 1; M **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.7/41.10/43.5**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 67

The plant was operating at 100 % power when Control Room Operators rapidly reduced power due to changes in feedwater heating.

Annunciator “MSL RAD HI” was received.

No other radiation alarms were received and indications on the Main Steam Line Radiation Monitors are elevated.

All other radiation levels have dropped from previous readings.

Which one of the following is the most likely cause of these conditions?

A. Fuel cladding failure

B. Resin intrusion into the reactor

C. Hydrogen water chemistry is in service

D. Release of crud containing Co-60 into the reactor

QUESTION 67 **NRC RECORD # WRI 627**
ANSWER: C. **SYSTEM # P73; D17** **K/A 272000** **A1.01: 3.2/3.2**
LP# GG-1-LP-OP-P7300
OBJ. 8 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
REFERENCE: 04-1-02-1H13-P601 ***NEW***
19A-D4; 18A-D4 MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.10/41.11**
REFERENCE MATERIAL REQUIRED: None **43.4/43.5**

QUESTION 68

The Plant is operating at 100 % power.

The Motor Driven Fire pump is out of service.

A fire in Transformer ESF 12 has initiated the Deluge system for the transformer.

The A Diesel Driven Fire Pump received a signal to start.

Which one of the following describes the starting limitations of the Diesel Driven Fire Pump?

A. The diesel engine will attempt to start for 15 minutes. If the diesel does not start it alarms in the Control Room, and it must be reset from the Control Room before it will attempt to start again.

B. The diesel engine will attempt to start for 15 seconds, then wait for 15 seconds. It will attempt this start sequence for 6 attempts. After that, it must manually be reset before any further start attempts occur.

C. The diesel engine will attempt to start for 15 seconds then wait for 15 minutes to allow the battery to recharge, then it will attempt this cycle again. After that it must manually be reset before any further start attempts occur.

D. The diesel engine will attempt to start as long as air pressure is > 60 psig. After that, the air bank must recharge before additional start attempts can occur.

QUESTION 68 **NRC RECORD # WRI 3**
ANSWER: B. **SYSTEM # P64** **K/A 286000** **A2.08: 3.2/3.3**
K5.05: 3.0/3.1
K4.07: 3.3/3.3
A3.01: 3.4/3.4
LP# GG-1-LP-OP-P6400 **A4.06: 3.4/3.4**
OBJ. 6d **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
REFERENCE: **ARI 04-S-02-SH13-P862** NEW
1A-B3; 1A-B5 MODIFIED ***<u>BANK</u>***
DIFF 1; M **sect. 1.2; 2.1; & 4.5** **NRC 3/1998**
RO SRO ***<u>BOTH</u>*** **CFR 41.4**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 69

A station blackout has occurred.

A fire has broken out in the Division II ESF Switchgear Room on 119 ft elevation area 10.

Which one of the following describes the ability to combat the fire?

A. Fire fighting will be limited to the use of portable fire extinguishers.

B. The CO2 fire suppression system can be overridden open and the Auxiliary Building Isolation Valves opened using the AUX BLDG ISO BYPASS Switch.

C. The Fire Water System Auxiliary Building Isolation Valves can be opened using the AUX BLDG ISO BYPASS Switch to provide fire water to hoses.

D. The Fire Water System Auxiliary Building Isolation Valves can be bypassed by manually opening the motor operated bypass valves.

QUESTION	**69**	**NRC RECORD # WRI 264**		
ANSWER: D.	**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		**286000**	**A2.09: 2.7/2.8**	
OBJ. 8a; 10; 16d,e,f; 20; 29	**SRO TIER 2**	**GROUP 1 / RO TIER 2 GROUP 2**		
REFERENCE:	**05-1-02-V-9**	NEW		
	Sect 3.19 & 5.46	MODIFIED		***BANK***
DIFF 2; CA	**05-1-02-III-5**			**NRC 4/2000**
	sect 3.4.4			
	M-0035E	RO SRO ***BOTH***		**CFR 41.9**
REFERENCE MATERIAL REQUIRED:		None		

QUESTION 70

An accident has occurred and a radiological release is in progress.

RCIC was manually initiated to maintain reactor water level.

The Main Steam failed to completely isolate upon a manual isolation when a steam leak was reported in the Turbine Building.

Annunciator “CONT RM VENT RAD HI” has been received.

There are various Turbine Building radiation alarms.

No other radiation alarms were received.

Which one of the following describes the response of the Control Room HVAC System (Z51)?
(ASSUME NO OPERATOR ACTIONS)

A. Control Room HVAC is operating in a normal configuration.

B. Control Room HVAC has isolated and the Control Room Standby Fresh Air Unit associated with the in service Control Room Air Conditioning Unit will automatically start.

C. Both Control Room Standby Fresh Air Units will automatically start to filter Control Room air with the remaining Control Room HVAC components continuing to operate as normal.

D. Control Room HVAC will isolate and both Control Room Standby Fresh Air Units will initiate to filter Control Room air with the in service Control Room Air Conditioning Unit remaining in operation.

QUESTION	**70**	**NRC RECORD # WRI 628**	
ANSWER: A.	**SYSTEM # Z51; D17**	**K/A 290003**	**A1.05: 3.2/3.3**
LP# GG-1-LP-OP-Z5100			
OBJ. 8; 9; 11	**SRO TIER 2 GROUP 2 /**	**RO TIER 2 GROUP 2**	
REFERENCE:	**04-1-02-1H13-P601**	***NEW***	
	***19A-A9*; A10; A11**	MODIFIED	BANK
DIFF 2; CA	**04-S-02-SH13-P855**		
	1A-A5; 2A-A5	RO SRO ***BOTH***	**CFR 41.7/41.11/43.4**
	TRM Table 6.3.1-1		
REFERENCE MATERIAL REQUIRED:	**None**		

QUESTION 71

The operating Instrument Air Compressor has tripped.

The Standby Instrument Air Compressor fails to start.

Which one of the following describes the response of the Instrument/Plant/Service Air Systems?

A. Instrument Air pressure will continue to drop until an operator manually cross ties Service Air to the Instrument Air header down stream of the Instrument Air Dryers.

B. Instrument Air pressure will continue to drop until an operator manually cross ties Service Air to the Instrument Air header up stream of the Instrument Air Dryers.

C. Instrument Air pressure will continue to drop until the Service to Instrument Air cross tie automatically opens to connect to the Instrument Air header down stream of the Instrument Air Dryers.

D. Instrument Air pressure will continue to drop until the Service to Instrument Air cross tie automatically opens to connect to the Instrument Air header up stream of the Instrument Air Dryers.

QUESTION 71		**NRC RECORD # WRI 629**	
ANSWER: D.	**SYSTEM # P51; P52; P53**	**K/A 300000**	**K4.02: 3.0/3.0**
LP# GG-1-LP-OP-P5200			
OBJ. 3; 4			
LP# GLP-OPS-P5300			
OBJ. 3; 4	**SRO TIER 2 GROUP 2 /**	**RO TIER 2 GROUP 2**	
REFERENCE:	**05-1-02-V-9 sect 3.1.1**	***NEW***	
	M-1067A	MODIFIED	BANK
DIFF 1; M	**M-1068D**		
	M-1126	RO SRO ***BOTH***	**CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED:	**None**		

QUESTION 72

The plant is operating in the normal electrical lineup.

CCW pumps “A” and “C” are operating with “B” selected for STANDBY.

A Loss of Coolant Accident occurs resulting in a shedding of loads.

The “C” CCW pump trips on overcurrent.

Which of the following describes the resulting status of the CCW system?

(Assume NO operator action.)

A. Pump “A” operating; Pump “B” operating; Pump “C” tripped

B. Pump “A” operating; Pump “B” not operating; Pump “C” tripped

C. Pump “A” not operating; Pump “B” operating; Pump “C” tripped

D. Pump “A” not operating; Pump “B” not operating; Pump “C” tripped

QUESTION 72 **NRC RECORD # WRI 105**
ANSWER: B. **SYSTEM # P42** **K/A 400000 K4.01: 3.4/3.9**
LP# GG-1-LP-OP-P4200
OBJ 5; 7a; 11h; 23 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
REFERENCE: 04-1-01-R21-1 Table 1 NEW
MODIFIED ***BANK***
DIFF 1; M **NRC 3/1998**
RO SRO ***BOTH*** **CFR 41.4**
REFERENCE MATERIAL REQUIRED: NONE

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QUESTION 73

Radwaste is discharging the Floor Drain Sample Tank to the River.

Which one of the following would result in an isolation of the G17-F355 Liquid Radwaste Discharge Isolation Valve?

A. The Floor Drain Sample Pump discharge pressure is too low.

B. The blow down flow rate is too low.

C. The discharge flow rate is too low.

D. The effluent radiation monitor high radiation setpoint is reached.

QUESTION 73		**NRC RECORD # WRI 110**	
ANSWER: B.	**SYSTEM # G17**	**K/A 268000**	**A1.02: 2.6/3.6**
LP# GG-1-LP-OP-G1718			
OBJ 6a, 7h, l	**SRO TIER 2 GROUP 3 /**	**RO TIER 2 GROUP 3**	
REFERENCE:	**ARI 04-1-02-H13-P601**	NEW	
	19A-H7; 19A-H8	MODIFIED	***BANK***
DIFF 1; M	**ARI 04-1-02-H13-P870**		**NRC 3/1998**
	6A-F3	RO SRO ***BOTH***	**CFR 41.13/43.4**
REFERENCE MATERIAL REQUIRED:		**NONE**	

QUESTION 74

A rise in Fuel Handling Area Exhaust Radiation levels have resulted in an actuation of Standby Gas Treatment. Standby Gas Treatment ‘A’ and ‘B’ initiated, but Standby Gas Treatment ‘B’ Exhaust and Enclosure Building fans failed to start.

Which of the following identifies the condition of the Auxiliary Building Ventilation System?

A. All fan coil units operating, Div I and Div II Secondary Containment Isolation dampers open.

B. All fan coil units shutdown, the Division I Secondary Containment Isolation dampers closed.

C. All fan coil units shutdown, Div I and Div II Secondary Containment Isolation dampers closed.

D. Div I fan coil units shutdown, the Division I Secondary Containment Isolation dampers closed.

QUESTION	**74**		**NRC RECORD # WRI 630**	
ANSWER: C.	**SYSTEM # T41; D17; T48**		**K/A 288000**	**K1.05: 3.3/3.6** **K1.02: 3.4/3.4**

LP# GG-1-LP-OP-T4100
OBJ. 7; 9; 10; 11 **SRO TIER 2 GROUP 3 / RO TIER 2 GROUP 3**

REFERENCE:	**05-1-02-III-5 Check list**	NEW	
	E-1257-01	***MODIFIED***	BANK
DIFF 2; CA	**E-1253-01, 02, 06, 07, 12**	**LOT 9/99 Vent**	
		RO SRO ***BOTH***	**CFR 41.7/41.11**

REFERENCE MATERIAL REQUIRED: **None**

QUESTION 75

The plant is operating at rated conditions.

The following are the parameters taken from the recent Mon Edit.

MFLCPR	0.94
MAPRAT	1.02
MFLPD	0.96
FDLRX	0.92
FCBB	2.42

Which of the following identifies the consequences of continued operation with thermal limits at the present values?

A. Fuel cladding could exhibit in excess of 1% plastic strain during a LOCA.

B. Possible peak cladding temperatures in excess of 2200ºF during a DBA LOCA.

C. There is a possibility of the onset of transition boiling in greater than 0.1 % of the fuel rods.

D. The core may become unstable during operation in the Restricted Region of the Power to Flow Map.

QUESTION 75 **NRC RECORD # WRI 631**
ANSWER: B. **SYSTEM # B21; Thermal Limits** **K/A 290002 A2.05: 3.7/4.2 K5.01: 3.5/3.9**
LP# General Physics HTFF
Chapter 9 Thermal Limits
OBJ. 9; 10 **SRO TIER 2 GROUP 3 / RO TIER 2 GROUP 3**
REFERENCE: Tech Spec Bases 3.2.1; 3.2.2; 3.2.3; 3.2.4 ***NEW*** MODIFIED BANK
DIFF 2; CA 10CFR50.46(b)(1)
RO SRO ***BOTH*** **CFR 41.3/41.14/43.2**
REFERENCE MATERIAL REQUIRED: None

QUESTION 76

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 76 RO		**NRC RECORD # WRI 30**	
ANSWER: B.	**SYSTEM #**	**K/A 295025**	**EK1.05: 4.4**
	Tech Specs		**EK1.02: 4.1**
LP# GG-1-LP-OP-TS001		**Generic**	**2.2.22: 3.4**
OBJ 24; 28			**2.2.25: 2.5**
LP# GG-1-LP-OP-B2102			
OBJ 3	**SRO TIER GROUP**	**/ RO TIER 1 GROUP 1**	
REFERENCE:	**Tech Specs 2.1.2**	NEW	
	Bases B2.1.2	MODIFIED	***BANK***
DIFF 1; M			**NRC 12/2000**
		RO SRO BOTH	**CFR 41.3/43.2**

REFERENCE MATERIAL REQUIRED: None

QUESTION 77

Concerning the operation of the Reactor Feed Pump (RFP) Turbines governor control in MANUAL and SPEED AUTO, which of the following correctly identifies the limitations imposed in MANUAL **and** SPEED AUTO if the raise pushbutton is depressed and held from 0 to 100%?

A. In MANUAL, the governor will stroke 0-100% in 15 seconds.
In SPEED AUTO, the speed setpoint will change at a rate of 10 rpm/sec for one second and 120 rpm/ second thereafter.

B. In MANUAL, the governor will stroke 0-100% in 10 seconds.
In SPEED AUTO, the speed setpoint will change at a rate of 15 rpm/sec for one second and 120 rpm/ second thereafter.

C. In MANUAL, the governor will stroke 0-100% in 15 seconds.
In SPEED AUTO, the speed setpoint will change at a rate of 10 rpm/sec for one second and 150 rpm/ second thereafter.

D. In MANUAL, the governor will stroke 0-100% in 10 seconds.
In SPEED AUTO, the speed setpoint will change at a rate of 15 rpm/sec for one second and 150 rpm/ second thereafter.

QUESTION 77 RO — **NRC RECORD # WRI 548**
ANSWER: A. — **SYSTEM # N21** — **K/A 259001 K5.03: 2.8**
LP# GG-1-LP-OP-N2100
OBJ. 19; 29 — **SRO TIER GROUP / RO TIER 2 GROUP 1**
REFERENCE: 04-1-01-N21-1 sect 3.14 — NEW
MODIFIED — ***BANK***
DIFF 1; M — **NRC 6/2001**
RO SRO BOTH — **CFR 41.5/41.10/43.5**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 78

The plant is operating at 80 % power.

Feedwater Level Control is selected for “Three Element Control”.

Feedwater Flow ‘A’ indicates 6.8 mlbm/hr
Feedwater Flow ‘B’ indicates 6.5 mlbm/hr

The sensing line for the ‘A’ Feedwater Flow Transmitter has broken loose.

Which one of the following describes the reaction of the Feedwater Level Control System?

A. A “hard” failure would be registered de-selecting “3-element” control.

B. A “soft” failure would be registered de-selecting “3-element” control.

C. A “hard” failure would be registered causing the Feedwater Level Control System to automatically input an Estimated Flow maintaining “3-element” control

D. A “soft” failure would be registered de-selecting “3-element” control and disabling the use of “3-element” control.

QUESTION 78 RO **NRC RECORD # WRI 273**
ANSWER: A. **SYSTEM # C34** **K/A 259002 K4.10: 3.4/3.4**
LP# GG-1-LP-OP-C3401 **K6.04: 3.1/3.1**
OBJ. 6c **SRO TIER GROUP / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-H13-P680-2A-C9 NEW
MODIFIED ***BANK***
DIFF 1; M **NRC 4/2000**
RO SRO BOTH **CFR 41.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 79

Which one of the following would result in an automatic alignment of Standby Service Water 'A' to Division I Diesel Generator?

A. RCIC has been manually started using the controls on H22-P150.

B. RHR 'A' Pump has been manually started using the pump controls on H13-P601.

C. SSW 'A' Pump has been manually started using the pump controls on H13-P870.

D. LPCS/LPCI 'A' has been manually initiated using the pushbuttons on H13-P601.

QUESTION **79 RO** **WRI 677**
ANSWER: D. **SYSTEM # P75; P41** **K/A 264000** **K1.04: 3.2**

LP# GLP-OPS-P4100 **SRO TIER** **GROUP** **/ RO TIER 2 GROUP 1**
OBJ. 6.8; 9.5; 10.1
REFERENCE: **E-1225-001; 008** ***NEW***
DIFF 1; M MODIFIED BANK

RO SRO BOTH **CFR 41.4/41.7**
REFERENCE MATERIAL REQUIRED: **None**

QUESTION 80

RCIC was operating for a surveillance when RCIC tripped on overspeed.

The overspeed trip has NOT been reset.

Which one of the following describes the indications if the operator placed the Trip/Throttle valve handswitch to close and then back to open?

See attached drawing of handswitch and indications.

A. The TRIP/THROTTLE SUPV will indicate full open
The TRIP/THROTTLE VLV will indicate full closed

B. The TRIP/THROTTLE SUPV will indicate full closed
The TRIP/THROTTLE VLV will indicate full open

C. The TRIP/THROTTLE SUPV will indicate full open
The TRIP/THROTTLE VLV will indicate full open

D. The TRIP/THROTTLE SUPV will indicate full closed
The TRIP/THROTTLE VLV will indicate full closed

QUESTION **80 RO** **WRI 676**
ANSWER: D. **SYSTEM # E51** **K/A 217000** **A4.02: 3.9**
A4.03: 3.4
2.1.31: 4.2
LP# GG-1-LP-OP-E5100 **SRO TIER GROUP / RO TIER 2 GROUP 1**
OBJ. 9e
REFERENCE: **E-1185-015; 035; 039** NEW
DIFF 2; CA ***MODIFIED*** BANK
AUDIT 6/2001 Q 59
RO SRO BOTH **CFR 41.7**
REFERENCE MATERIAL REQUIRED: **Drawing of handswitch**

QUESTION 81

Which one of the following describes the function of the Safety Relief Valve Tailpipe Vacuum breakers?

A. Equalize pressure conditions in the SRV tailpipes to prevent Suppression Pool water from drawing into the piping resulting in excessive hydraulic loads.

B. Relieve steam from the SRV tailpipes following SRV actuation to the Drywell to prevent excessive back pressure on the SRV discs.

C. Relieve differential pressures built up in the SRV tailpipes following actuation that would result in lift pressures for SRVs in excess of design.

D. Equalize pressure established in the SRV tailpipes to assure positive actuation of the SRV tailpipe pressure switches to give accurate SRV position indication.

QUESTION 81 RO WRI 678
ANSWER: A. SYSTEM # E22-2 K/A 239002 K5.01: 2.7
2.1.28: 3.2
LP# GG-1-LP-OP-E2202 SRO TIER GROUP / RO TIER 2 GROUP 1
OBJ. 5b
REFERENCE: UFSAR sect 5.2.2.4.1 ***NEW***
DIFF 1; M MODIFIED BANK

RO SRO BOTH **CFR 41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 82

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”

The operator identifies Control Rod 28-05 has a flashing RED led when HCU FAULT pushbutton is depressed.

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	**82**	**NRC RECORD # WRI 341**	
ANSWER: D.	**SYSTEM # C11-1B**	**K/A 201003**	**A2.08: 3.8**
LP# GG-1-LP-OP-C111A			
OBJ. 8d	**SRO TIER GROUP**	**/ RO TIER 2 GROUP 2**	
LP# GG-1-LP-OP-C1102			
OBJ. 12; 26			
REFERENCE:	**04-1-02-1H13-P680**	NEW	
	4A2-D4, E4; 7A-A2	MODIFIED	***BANK***
DIFF 2; CA	**04-1-01-C11-2**		**NRC 12/2000**
	Sect 4.7.2.e,f; 4.8.2.a,d	***RO*** SRO BOTH	**CFR 41.6/41.10**
	05-1-02-III-2 sect 5.2.3		
REFERENCE MATERIAL REQUIRED:		None	**43.5**

QUESTION 83

A plant startup is in progress.

The reactor is at the point of adding heat with reactor temperature at 165ºF.

Reactor water level is at +35 inches.

Which one of the following describes the response of the plant to an isolation of Reactor Water Cleanup?
ASSUME NO OPERATOR ACTION.

A. Reactor water level will rise to the point that a RPS scram signal is received and a Feedwater isolation occurs.

B. Reactor water level will rise to the point that water level has reached the main steam lines.

C. Reactor water level will rise until steam flow offsets the expansion of water in the reactor at which point level will stabilize.

D. Reactor water level will remain stable with steam flow offsetting the expansion of water in the reactor.

QUESTION **83 RO** **WRI 679**
ANSWER: B. **SYSTEM # G33; C11-1A; C71** **K/A 204000** **K3.02: 3.1**
LP# **GLP-OP-C7100**
OBJ. **9; 10**
LP# **GLP-OPS-G3336** **SRO TIER** **GROUP** **/ RO TIER 2** **GROUP 2**
OBJ. **1; 2; 19; 21**
REFERENCE: **03-1-01-1** ***NEW***
DIFF 2; CA **Sect 2.2.5; 3.3.3a** MODIFIED BANK

RO SRO BOTH **CFR 41.4**
REFERENCE MATERIAL REQUIRED: **None**

QUESTION 84

The Main Steam Isolation Valves just isolated with the plant operating at rated conditions.

Plant systems were operating in a normal configuration at the time of the isolation.

Which one of the following describes the response of the Condensate and Feedwater Systems?
ASSUME NO OPERATOR ACTION.

A. Condensate and Condensate Booster Pumps will continue to operate on minimum flow. Feedwater will continue to operate for a period of time until steam from the MSRs is exhausted. Reactor pressure will require reduction to allow feeding with Condensate and Condensate Booster Pumps.

B. Condensate and Condensate Booster Pumps will trip on low hotwell level causing a cascading effect tripping the Feedwater Pumps on low suction pressure. This results in a loss of all feed to the reactor until hotwell level is restored. Once the hotwell is restored reactor pressure will require reduction to allow feeding with Condensate and Condensate Booster Pumps.

C. Condensate and Condensate Booster Pumps will continue to operate supplying flow. Feedwater will trip on low reactor water level, but can be restored using steam from the MSRs until exhausted. Reactor pressure will require reduction to allow feeding with Condensate and Condensate Booster Pumps.

D. Condensate and Condensate Booster Pumps will trip on minimum flow. Feedwater will trip on low suction pressure, but Condensate and Condensate Booster Pumps can be restored at a lower pump combination and return Feedwater to service. Reactor pressure will require reduction following a loss of steam from the MSRs to allow feeding with Condensate and Condensate Booster Pumps.

QUESTION 84 RO **WRI 680**
ANSWER: A. **SYSTEM # N21; N19; N11; B21** **K/A 239001** **K3.03: 3.2** **K1.22: 3.1**
LP# GG-1-LP-OP-MCD7b **SRO TIER GROUP / RO TIER 2 GROUP 2**
OBJ. 2
REFERENCE: UFSAR Figure 15.2-6 ***NEW***
DIFF 2; CA **Simulator performance** MODIFIED BANK

RO SRO BOTH **CFR 41.4/41.14**
REFERENCE MATERIAL REQUIRED: None

QUESTION 85

Which one of the following identifies the start signal and power supply for the TBCW DC Emergency Water Cooling Pump?

A. Seal Oil Pump ‘C’ running will start the DC TBCW pump powered from 11DA.

B. Seal Oil Pump ‘C’ running will start the DC TBCW pump powered from 11DF.

C. Low H2 Side Seal Oil Pressure will start the DC TBCW pump powered from 11DA.

D. Low H2 Side Seal Oil Pressure will start the DC TBCW pump powered from 11DF.

QUESTION 85 RO **WRI 681**
ANSWER: B. **SYSTEM # L11; P43** **K/A 263000 K2.01: 3.1**
LP# GG-1-LP-OP-P4300 **SRO TIER GROUP / RO TIER 2 GROUP 2**
OBJ. 6; 8a
REFERENCE: 04-1-01-P43-1 Att III ***NEW***
DIFF 1; M **E-1227-018** MODIFIED BANK
E-1147-003
RO SRO BOTH **CFR 41.4**
REFERENCE MATERIAL REQUIRED: None

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QUESTION 86

Preparations are being made for a plant startup.

Which one of the following describes the process for startup of Offgas to prevent excessive levels of explosive gas buildup?

A. Preheat the Offgas system using Oxygen from the Hydrogen Water Chemistry System to scavenge any residual Hydrogen and recombining the two in the Hydrogen Recombiners prior to startup of the Steam Jet Air Ejectors.

B. Establish a purge of the Offgas system with Oxygen from the Hydrogen Water Chemistry System to heat up the Hydrogen Recombiner prior to startup of the Steam Jet Air Ejectors, then maintain constant flow through Offgas.

C. Preheat the Offgas system using air from the Instrument Air System to scavenge any residual Hydrogen and recombining the two in the Hydrogen Recombiners prior to startup of the Steam Jet Air Ejectors.

D. Establish a purge of the Offgas system with air from the Instrument Air System to heat up the Hydrogen Recombiner prior to startup of the Steam Jet Air Ejectors, then maintain minimum flow through Offgas.

QUESTION	**86 RO**	**WRI 682**	
ANSWER: D.	**SYSTEM # N64**	**K/A 271000**	**A4.09: 3.3** **2.1.32: 3.4**

LP# **GLP-OPS-N64565**
OBJ. **14.2; 15; 21.2**
LP# **GG-1-LP-OP-N6200** **SRO TIER** **GROUP** **/ RO TIER 2** **GROUP 2**
OBJ. **15**

REFERENCE:	**04-1-01-N64-1**	***NEW***			
DIFF 1; M	**sect 3.7; 3.9; 4.1.2c NOTE**	MODIFIED	BANK		
	04-1-01-N62-1				
	sect 3.8; 3.10; 4.3.2i	***RO***	SRO	BOTH	**CFR 41.7/41.13**
	Caution; 4.4.1a; 4.4.2c				
	03-1-01-1 sect 3.3.8g				
	04-1-01-P73-1				
	sect 3.9; 3.10				

REFERENCE MATERIAL REQUIRED: **None**

QUESTION 87

Which one of the following identifies the maximum allowed Spent Fuel Pool Temperature per the Technical Requirements Manual?

A. 70ºF

B. 125ºF

C. 140ºF

D. 200ºF

QUESTION 87 RO WRI 683
ANSWER: C. SYSTEM # G41 K/A 233000 A2.07: 3.0
LP# GG-1-LP-OP-G4146 SRO TIER GROUP / RO TIER 2 GROUP 3
OBJ. 14a; 19
REFERENCE: 04-1-01-G41-1 sect 3.5 ***NEW***
DIFF 1; M TRM 6.7.4 MODIFIED BANK

RO SRO BOTH **CFR 41.7**
REFERENCE MATERIAL REQUIRED: None

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REACTOR OPERATOR

QUESTION 88

The plant is at 135?F.

All ECCS systems are in standby.

The Reactor Mode Switch is in SHUTDOWN.

Refuel Floor Surveillances are being performed on the Refuel Bridge.

The Reactor Head is installed with the first head closure bolt de-tensioned.

Secondary Containment is in effect.

With the above conditions, which one of the following is the Plant Operational Mode?

A. Mode 2 - Startup

B. Mode 3 - Hot Shutdown

C. Mode 4 - Cold Shutdown

D. Mode 5 - Refueling

QUESTION 88 RO **NRC RECORD # WRI 585**
ANSWER: D. **SYSTEM # ADMIN Conduct of Ops.** **K/A Generic 2.1.22: 2.8**
LP# GG-1-LP-OP-TS001
OBJ. 5 **SRO TIER GROUP / RO TIER 3 GROUP**
REFERENCE: Tech Specs sect. 1.1 table 1.1-1 NEW MODIFIED ***BANK***
DIFF 1; M **NRC 6/2001**
RO SRO BOTH **CFR 41.10/43.1**
REFERENCE MATERIAL REQUIRED: None

QUESTION 89

Which one of the following evolutions would be the manipulation of Controls as defined in Licensed Operator duties?

A. Shifting Control Rod Drive Flow Control Valves in Containment.

B. Lowering Control Rod Drive Pressure by opening C11-F003 on H13-P601.

C. Inserting local manual scrams of individual control rods in Containment at the SRI switches.

D. Controlling Reactor water level during a plant operation at 30% power using Feedwater.

QUESTION **89 RO** **WRI 684**
ANSWER: C. **SYSTEM # Conduct of Operations** **K/A Generics 2.1.1: 3.7**
LP# GG-1-LP-OP-PROC **SRO TIER GROUP / RO TIER 3 GROUP**
OBJ. 11.b.1
REFERENCE: 01-S-06-2 sect 5.1 ***NEW***
DIFF 2; CA **10 CFR 50.2 definitions** MODIFIED BANK

RO SRO BOTH **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED: **None**

QUESTION 90

You are the Operator-at-the-Controls.

Which one of the following Operations personnel is allowed to relieve you of Operator-at-the-Controls duties with a simple verbal exchange of current plant status?

ASSUME ONLY LEGAL AND PROCEDURAL REQUIREMENTS; DISREGARD UNION CONTRACTS.

A. A Tagging Group Reactor Operator

B. Operations Office Shift Manager qualified active Senior Reactor Operator

C. Training shift Nuclear Operator 'A' visiting the Control Room during Training

D. Nuclear Operator 'A' assigned as the Auxiliary Building Roving Operator

QUESTION **90 RO** **WRI 685**
ANSWER: D. **SYSTEM # Conduct of Operations** **K/A Generics 2.1.3: 3.0**
LP# GG-1-LP-OP-PROC **SRO TIER GROUP / RO TIER 3 GROUP**
OBJ. 45d
REFERENCE: 02-S-01-4 sect 2.7; 6.1.6 ***NEW***
DIFF 2; CA MODIFIED BANK

RO SRO BOTH **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 91

The basis for having Hydrogen Water Chemistry is to remove Oxygen from the reactor to reduce the possibility of Intergranular Stress Corrosion Cracking.

Which one of the following is the reason for injecting Oxygen into the Condensate System?

A. Oxygen is used in the reactor to scavenge any excess Hydrogen remaining in the Reactor environment to prevent explosive concentrations from remaining.

B. Oxygen raises concentrations in the Condensate System piping to prevent the flaking off of oxide layers inside the Condensate System components.

C. Oxygen concentrations inside the Reactor are insufficient to support recombination requiring additional Oxygen to allow complete removal.

D. Oxygen raises concentrations in the Reactor to prevent the removal of oxide layers from components in the Reactor during the recombination with Hydrogen.

QUESTION 91 RO **WRI 686**
ANSWER: B. **SYSTEM # P73** **K/A Generics 2.1.28: 3.2**
LP# GG-1-LP-OP-P7300 SRO TIER GROUP / RO TIER 3 GROUP
OBJ. 1
REFERENCE: ER 96/0936 Supp 0 ***NEW***
DIFF 1; M sect 1.2.1 MODIFIED BANK

RO SRO BOTH **CFR 41.4**
REFERENCE MATERIAL REQUIRED: None

QUESTION 92

The Access Control Area Fan Coil Unit Heater, Z17-B003, has malfunctioned resulting in extremely high temperatures in the HP Lab and the heater control panel.

An MAI has been generated to investigate the problem.

Which one of the following describes the most appropriate configuration control method for this equipment?

A. Secure the fan coil unit. Log the handswitch position in the Control Room Operator's Logbook and add the MAI number for reference.

B. Open the heater circuit breaker. Hang an information tag on the circuit breaker stating the problem and reference the MAI number.

C. Secure the fan coil unit. Document the handswitch position on a Component Position Control Form and reference the MAI number.

D. Open the heater circuit breaker. Hang a red tag on the circuit breaker and reference the MAI number on the clearance.

QUESTION 92 RO		**NRC RECORD # WRI 387**	
ANSWER: D.	**SYSTEM # Procedures**	**K/A Generic 2.2.11: 2.5**	
LP# GG-1-LP-OP-PROC			
OBJ. 10b1,2;	**SRO TIER GROUP /**	**RO TIER 3 GROUP**	
REFERENCE:	**02-S-01-2**	NEW	
	Sect 6.12.6b	MODIFIED	***BANK***
DIFF 2; CA	**01-S-06-1 sect 5.4 & 5.9**		**NRC 12/2000**
	04-S-01-Z17-1 Att III	***RO*** SRO BOTH	**CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED:	None		

QUESTION 93

The Component Cooling Water Supply to the Non-Regenerative Heat Exchangers P42-F103 is to be used as a boundary valve for a tagout for Mechanical Maintenance.

Which one of the following describes the items to be tagged to utilize this valve as a boundary valve?

P&IDs M-1063B and M-1067H, and Electrical E-1226-05 are provided as reference.

A. Handswitch tagged in closed position.
Air supply P53-FY087 tagged in closed position.
Air supply to actuator vented and tagged.

B. Handswitch tagged in closed position.
P42-F103 jacked closed with an installed jacking device.
Air supply to actuator vented and tagged.

C. Air supply P53-FY087 tagged in closed position.
P42-F103 jacked closed with an installed jacking device.
Air supply to actuator vented and tagged.

D. Handswitch tagged in closed position.
Air supply P53-FY087 tagged in closed position.
P42-F103 jacked closed with an installed jacking device.

QUESTION 93 RO		**NRC RECORD # WRI 580**	
ANSWER: A.	**SYSTEM # Protective Tagging**	**K/A Generics 2.2.13: 3.6**	
LP# GG-1-LP-OP-PROC			
OBJ. 10j, k, l	**SRO TIER**	**GROUP / RO TIER 3 GROUP**	
REFERENCE:	**01-S-06-1 sect 6.2.1h – i**	NEW	
	M-1067H	MODIFIED	***BANK***
DIFF 2; CA	**M-1063B**		**NRC 6/2001**
	E-1226-05	***RO*** SRO BOTH	**CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED:		**M-1063B , M-1067H, & E-1226-05**	

QUESTION 94

Mechanical Maintenance is preparing to repack a valve in the Radwaste Equipment Drain Filter Demin Room. The job is estimated to take 30 – 45 minutes to complete.

Which one of the following is an acceptable method of reducing the radiation levels the Mechanics will be exposed to?

A. Install fans and HEPA filters to ventilate the room.

B. Plant Services builds a room of lead blankets around the valve.

C. Flush the Equipment Drain Filter and refill with demineralized water.

D. Cut the valve from the system and remove the valve to outside the room.

QUESTION **94 RO** **WRI 687**
ANSWER: C. **SYSTEM # RAD CON** **K/A Generics 2.3.10: 2.9**
LP# ELP-GET-RWT01 **SRO TIER GROUP / RO TIER 3 GROUP**
OBJ. RWT41
REFERENCE: **10CFR 20.1101(b)** ***NEW***
DIFF 2; CA **01-S-08-2 sect 6.1.1** MODIFIED BANK
08-S-01-28 sect 5.9.2; 6.1
RO SRO BOTH **CFR 41.12/43.4**
REFERENCE MATERIAL REQUIRED: **NONE**

QUESTION 95

Residual Heat Removal 'A' is being lined up to operate in Suppression Pool Cooling.

The Plant Supervisor has requested you contact Health Physics.

Which one of the following describes the purpose of this phone notification?

A. Allows Health Physics personnel to evacuate any personnel from the Containment.

B. Allows Health Physics personnel to perform surveys of the RHR rooms and Containment for elevated radiation levels.

C. Informs Health Physics of elevated heat and noise levels in the vicinity of the RHR Rooms such that personnel entering the areas may be informed.

D. Informs Health Physics that the transient High Radiation areas for the RHR loop are now in effect.

QUESTION 95 RO		**NRC RECORD # WRI 287**	
ANSWER: B.	**SYSTEM # Rad Con – ALARA**	**K/A Generic**	**2.3.2: 2.5** **2.1.32: 3.4**
LP# GLP-OPS-E1200			
OBJ. 14	**SRO TIER GROUP**	**/ RO TIER 3 GROUP**	
REFERENCE: 04-1-01-E12-1 sect 3.1		NEW	
		MODIFIED	***BANK***
DIFF 1, M			**NRC 6/2001**
		RO SRO BOTH	**CFR 41.10/41.12/43.4**
REFERENCE MATERIAL REQUIRED:	None		

QUESTION 96

An ATWS has occurred.

The MSIVs have closed.

RPV level is unable to be determined.

The following parameters exist:

Reactor Pressure	70 psig and lowering.
Suppression Pool Level	16.5 feet
Suppression Pool Temperature	150 °F
Drywell Pressure	+ 1.0 psig

8 Safety Relief Valves are OPEN.
LPCI A is injecting through Shutdown Cooling at 5000 GPM.
HPCS, LPCS, and RHR B & C are unavailable for injection.

Which one of the following identifies the actions to be taken?

A. Continue injection as long as water is available from any source to restore pressure above Minimum Alternative RPV Flooding Pressure.

B. Exit the Emergency Procedures and enter Severe Accident Procedure 4.

C. Exit the Emergency Procedures and enter Severe Accident Procedure 5.

D. Exit the Emergency Procedures and enter Severe Accident Procedure 6.

QUESTION RO 96		**NRC RECORD # WRI 298**	
ANSWER:. B.	**SYSTEM # Conduct of Ops – EOP and SAP**	**K/A Generics 2.4.4: 4.0**	
LP# GLP-EP-EPT19			
OBJ. 7	**SRO TIER GROUP**	**/ RO TIER 3 GROUP**	
REFERENCE:	**05-S-01-EP2A**	NEW	
	Steps 94 & 96	MODIFIED	***BANK***
DIFF 2, CA	**SAP – 4 step 4 MDRIR**		**NRC 4/2000**
		RO SRO BOTH	**CFR 41.10/43.5**

REFERENCE MATERIAL REQUIRED: 05-1-01-EP-2A and SAPs

QUESTION 97

An emergency condition has resulted in an Alert being declared.

The Emergency Response Organization is in route for manning.

How many and what are the responsibilities of Non-Licensed Operators dispatched to the Control Room during the initial phase of the emergency?

A. One Non-Licensed Operator is to perform the duties of safe shutdown operator, communications will be handled by the TSC when manned. All other operators report to the OSC.

B. Two Non-Licensed Operators are to perform the duties of communicators. All other operators report to the OSC.

C. Two Non-Licensed Operators are to perform the duties of communicators and one operator as the safe shutdown operator. All other operators report to the OSC.

D. Two Non-Licensed Operators are to perform the duties of communicators and two operators to perform equipment operations required outside the Control Room. All other operators report to the OSC.

QUESTION 97 RO **NRC RECORD # WRI 577**
ANSWER: D. **SYSTEM # E-Plan** **K/A Generics 2.4.35: 3.3**
LP# GG-1-LP-OP-PROC
OBJ. 11d **SRO TIER GROUP / RO TIER 3 GROUP**
REFERENCE: 01-S-10-6 Att II & III NEW
01-S-06-2 sect 6.2.1d MODIFIED ***BANK***
DIFF 1; M **NRC 6/2001**
RO SRO BOTH **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 98

The plant is operating at 100% power.

A short circuit results in N71-F041A, CLG TWR BYP VLV inadvertently opening.

Main Generator load immediately began to drop and is continuing to drop.

Which one of the following describes the Immediate Operator Actions to be taken for plant conditions?

A. Reduce reactor power as necessary to remain above turbine trip setpoint, maintaining within power to flow limitations.

B. Reduce recirculation flow immediately until thermal power decreases by 20% or 60% core flow is reached, and determine core stability actions.

C. Reduce reactor power as necessary to maintain offgas system below isolation setpoint and condenser vacuum above turbine trip setpoint remaining within power to flow limitations.

D. Reduce core flow to 60% (67Mlbm/hr) but not less than 55% (62Mlbm/hr) core flow, followed by control rod insertion, to reduce reactor power to less than 60% of rated thermal power.

QUESTION 98 RO WRI 688
ANSWER: A. SYSTEM # ONEPs K/A Generics 2.4.49: 4.0
LP# GLP-OPS-ONEP1 SRO TIER GROUP / RO TIER 3 GROUP
OBJ. 1
REFERENCE: 05-1-02-V-8 sect 2.0 ** ***NEW***
DIFF 1; M 05-1-02-V-5 sect 2.0 MODIFIED BANK
05-1-02-V-11 sect 2.0
05-1-02-V-13 sect 2.0 ***RO*** SRO BOTH **CFR 41.10/43.5**
04-1-01-N71-1 Att II
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 99

An ALERT has been declared, and notifications to offsite agencies are being made on schedule.

A Followup Notification was made at 0917.

At 0930 another Followup Notification was approved for transmission after a new development in the situation. This notification was *begun* at 0932 and *completed* at 0936.

The Operational Hotline has become inoperable.

When does the next Followup Notification become due and how should the notification be made?

A. Time 1017; using the Standard Telephone System

B. Time 1030; using the Emergency Notification System (ENS)

C. Time 1032; using the Standard Telephone System

D. Time 1036; using the Emergency Notification System (ENS)

QUESTION	**99 RO**	**WRI 689**
ANSWER: C.	**SYSTEM # EPPs**	**K/A Generics 2.4.43: 2.8**
LP# GLP-EP-EPTS6	**SRO TIER**	**GROUP / RO TIER 3 GROUP**
OBJ. 3		
REFERENCE:	**10-S-01-6**	NEW
DIFF 1; M	**sect 6.1.1b(1); 6.3.1; 6.6.3.a(1)**	***MODIFIED*** BANK **EPTS 6 Exm 1**
	Form EPP 06-01	***RO*** SRO BOTH **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED:		**None**

QUESTION 100

A fire has been reported in the Division I Diesel Generator Room.

The Fire Brigade is in route to the fire.

Which one of the following describes responses of the Control Room Operator?

A. Manually start all three fire pumps and the outside air fans for Division II and III Diesel Generator Rooms.

B. Manually start the motor driven fire pump and the outside air fans for Division II and III Diesel Generator Rooms.

C. Manually start all three fire pumps and the outside air fans for all three Diesel Generator Rooms.

D. Manually start the motor driven fire pump and the outside air fans for all three Diesel Generator Rooms.

QUESTION 100 RO		**NRC RECORD # WRI 578**	
ANSWER: B.	**SYSTEM # Fire Protection**	**K/A Generics 2.4.25: 2.9**	
LP# GG-1-LP-OP-PROC			
OBJ. 61c(1)	**SRO TIER GROUP**	**/ RO TIER 3 GROUP**	
REFERENCE: 10-S-03-2		NEW	
	Sect 6.2.2c NOTE & 6.2.2d	MODIFIED	***BANK***
DIFF 1; M			**NRC 6/2001**
		RO SRO BOTH	**CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED:	None		

QUESTION 2

A reactor scram has occurred.

Which one of the following is a correct method of verifying the position of the control rods? (The scram has NOT been reset.)

A. Using the full core display on H13-P680, depress ALL RODS with RCIS in Raw Data and observe a blank display with only green LEDs for all control rods.

B. Using the full core display on H13-P680, depress ALL RODS with RCIS in Raw Data and observe all control rods indicate 00 with a green LED for all control rods.

C. Using the full core display on H13-P680, depress ALL RODS with RCIS out of Raw Data and observe a blank display with only red LEDs for all control rods.

D. Using the full core display on H13-P680, depress ALL RODS with RCIS out of Raw Data and observe all control rods indicate 00 with a red LED for all control rods.

QUESTION 2		**NRC RECORD # WRI 10**		
ANSWER: A.	**SYSTEM # C11-2; C11-1B**	**K/A 295006**	**AA2.02: 4.3/4.4**	
		201005	**A3.02: 3.5/3.5**	
LP# GG-1-LP-OP-C111B			**A4.02: 3.7/3.7**	
OBJ. 3c, 3f		**201003**	**K4.05: 3.2/3.3**	
			A3.01: 3.7/3.6	
LP# GG-1-LP-OP-C1102			**A4.02: 3.5/3.5**	
OBJ. 12	**SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**			
REFERENCE:	**04-1-01-C11-2**	NEW		
	sect. 4.7.2p & 4.8.2i	MODIFIED		***BANK***
DIFF: 2; CA	**05-1-02-I-1**			**NRC 6/2001**
	sect. 2.1; 3.7; & 3.7.4	RO SRO ***BOTH***		**CFR 41.6/41.10/43.5**
REFERENCE MATERIAL REQUIRED:	None			

QUESTION 3

Plant conditions are as follows:

MODE:	Mode 1
Rx power:	28 %
T-G Load:	365 MWE
Load Demand	390 MWE
Bypass position:	0 %

All other parameters are per plant design.

The operator withdraws a control rod that raises Reactor power to 29 %.

How will the Turbine EHC Control System respond?

A. Bypass Control Valves will throttle open as required to maintain Rx pressure.

B. HP Turbine Control Valves will throttle open as required to maintain Rx pressure.

C. LP Turbine Control Valves will throttle open as required to maintain Rx pressure.

D. HP Turbine Control and Bypass Control Valves will throttle open as required to maintain Rx pressure.

QUESTION 3 **NRC RECORD # WRI 69**
ANSWER: B. **SYSTEM # N32-2** **K/A 295007** **AK2.01: 3.5/3.7**
241000 **A2.02: 3.7/3.7**
LP# GG-1-LP-OP-N3202 **K4.01: 3.8/3.8**
OBJ 4b, 6b, 7b **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: 03-1-01-2 sect. 5.2 NEW
MODIFIED ***BANK***
DIFF: 2; CA **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 4

The plant was operating at 20 % power when a Feedwater rupture in the Turbine Building caused Reactor water level to drop.

The Control Room Operator manually initiated HPCS and RCIC.

Level in the Reactor dropped to ? 32 inches before HPCS and RCIC turned level, and level is now rising.

Which one of the following best describes the status of the Recirculation System?

A. Recirc Pumps are in Slow Speed with the Flow Control Valves Locked up (motion inhibit).

B. Recirc Pumps are tripped with the Flow Control Valves Locked up (motion inhibit).

C. Recirc Pumps are in Slow Speed with the Flow Control Valves in their pre-transient positions.

D. Recirc Pumps are tripped with the Flow Control Valves in their pre-transient positions.

QUESTION 4		**NRC RECORD # WRI 121**		
ANSWER: C.	**SYSTEM # B33**	**K/A 295009**	**AK1.02: 3.0/3.1**	
			AK2.03: 3.1/3.2	
LP# GLP-OPS-B3300			**AA1.03: 3.0/3.1**	
OBJ. 23, 24, 25, 47	**SRO TIER 1 GROUP 1 /**	**RO TIER 1 GROUP 1**		
REFERENCE:	**ARI 04-1-02-H13-P680**	NEW		
	3A-D4; 3A-D10	MODIFIED		***<u>BANK</u>***
DIFF 1; M				**NRC 3/1998**
		RO SRO ***<u>BOTH</u>***		**CFR 41.5**
REFERENCE MATERIAL REQUIRED:		None		

QUESTION 5

Given the following plant conditions:

Reactor Power	100%
Reactor Level	+36 inches
Reactor Pressure	1025 psig
Containment Temperature	85 °F steady
Containment Pressure	0.03 psig steady
Suppression Pool Temperature	81 °F steady
Drywell Pressure	1.1 psig rising slowly
Drywell Temperature	110 °F steady

Drywell Area Sumps show no unusual changes in level, flow, or temperature.
Drywell Atmosphere radiation monitor show no changes.

The Roving NOA has noted that Drywell Pressure is rising slowly.

Drywell atmosphere radiation levels are steady.

Which one of the following describes a possible cause of the conditions as noted above?

A. Small leak on the Main Steam Line Flow Elbows Instrument Line.

B. Small leak on the RWCU suction from the Reactor Bottom Head.

C. Small leak on the Instrument Air header inside the Drywell.

D. Small leak on Recirc Pump Seals.

QUESTION 5 **NRC RECORD # WRI 286**
ANSWER:. C. **SYSTEM # M41; P53** **K/A 295010** **AK3.04: 3.5/3.8**
AK3.05: 3.5/3.4
LP# GLP-OPS-P5300 **2.4.21: 3.7/4.3**
OBJ. 26.1 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: **GGNS 1998 event** NEW
CR 1998-0952 MODIFIED ***BANK***
DIFF 3, CA **NRC 4/2000**
RO SRO ***BOTH*** **CFR 41.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 6

The plant is performing a reactor startup from cold shutdown.

The reactor was at the point of adding heat.

The Control Room Supervisor instructed the operators to stop the startup for a short duration to perform a surveillance.

During this time, the reactor went subcritical and power dropped to range 3 of the IRMs.

The At-The-Controls Operator, noting that reactor power had dropped selected the next control rod and withdrew the control rod from 20 to 48 with continuous motion as allowed by the Control Rod Movement Sequence Sheet.

This resulted in a sustained 20 second period.

The following are the plant parameters at present:

Reactor Pressure	80 psig
Reactor Level	+ 40 inches

Which one of the following describes the next action the At-The-Controls operator should take?

A. Immediately range all IRMs to range 10 and monitor overlap data between IRMs and APRMs.

B. Perform the coupling checks for the Control Rod, and inform the Reactor Engineer of the power rise.

C. Withdraw the next in sequence Control Rod to maintain the power rise to reach the point of adding heat.

D. Insert the Control Rod to a position which causes reactor period to be > 50 seconds.

QUESTION 6 **NRC RECORD # WRI 204**
ANSWER: D. **SYSTEM # C11-2; C51** **K/A 295014** **AK3.01: 4.1/4.1**
LP# GG-1-LP-OP-IOI01
OBJ. 3c & d **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: 03-1-01-1 sect. 2.1.4; 2.1.16 NEW
Susquehanna reactivity MODIFIED ***<u>BANK</u>***
DIFF 1; M **Event 7/98** **NRC 6/2001**
04-1-01-C51-1 sect 4.3.2 NOTE RO SRO ***<u>BOTH</u>*** **CFR 41.1/41.2/ 41.6/43.6**
REFERENCE MATERIAL REQUIRED: None

QUESTION 7

Scram conditions exist. All control rods did NOT fully insert.

Reactor water level is being maintained at –60 inches wide range.

Reactor pressure is being maintained at 910 psig.

Reactor power is 20 %.

The following initial indications exist:
RPS white lights on H13-P680 are extinguished.
Scram Air Header Pressure low annunciator is illuminated.
RX SCRAM TRIP annunciator is illuminated.

The following actions have been taken:
Defeat the RPS scram signal and reset RPS
Unisolate the Instrument Air header
Defeat Alternate Rod Insertion
A CRD pump is confirmed operating and the CRD FCV is open to achieve 250 psid Drive pressure.

Which one of the following contains the minimum actions required to drive the control rods to position 00 using Rod Control and Information System?

A. Bypass Control Rod Drive withdrawal blocks, select control rods and insert.

B. Bypass Control Rod Drive withdrawal blocks, select control rods in sequence and insert.

C. Bypass Control Rod Drive insert and withdrawal blocks, select control rods and insert.

D. Select control rods in sequence and insert.

QUESTION 7 **NRC RECORD # WRI 203**
ANSWER: C. **SYSTEM # C11-2; C71; C11-1A** **K/A 295015 AK3.01: 3.4/3.7**
LP# GG-1-LP-RO-EP02A
OBJ. 5 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: **EP 05-S-01-EP-2A** NEW
Step 48 Att. 18, 19 & 20 MODIFIED ***BANK***
DIFF 3; CA **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.6/43.6**
REFERENCE MATERIAL REQUIRED: **05-S-01-EP-2 EP-2A**

QUESTION 8

A loss of coolant accident has occurred.

Determine which one of the following describes conditions that would direct / allow manual initiation of Containment Spray per the Emergency Procedures?

	Supp Pool Lvl	**CTMT Temp**	**CTMT Press**	**Drywell Temp**	**Drywell Press**
A.	18 FT	186ºF	1 psig	200ºF	3 psig
B.	17 FT	120ºF	7 psig	215ºF	15 psig
C.	18 FT	120ºF	6.5 psig	200ºF	15 psig
D.	25 FT	140ºF	4 psig	215ºF	7 psig

QUESTION 8 **NRC RECORD # WRI 601**
ANSWER: B. SYSTEM # M41-1; E12 **K/A 295024 AK2.14: 3.9/3.9**
LP# GG-1-LP-RO-EP03
OBJ. 3 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**
REFERENCE: EP 05-S-01-EP-3 ***NEW***
CTMT Temp & Press Legs MODIFIED BANK
DIFF 2; CA **Figures 3 & 4**
RO SRO ***BOTH*** **CFR 41.9/41.10/43.5**
REFERENCE MATERIAL REQUIRED: 05-S-01-EP-3 & Figures 3 & 4

QUESTION 9

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 adequate core cooling?

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 9 **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
OBJ. 15, 16
LP# GG-1-LP-RO-EP01
OBJ. 4a
LP# GG-1-LP-OP- PROC
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 – 74 MODIFIED ***BANK***
DIFF 3, CA **PSTG App. B EPG Cont 3 Steam Cooling** **NRC 12/2000**
RO SRO ***BOTH*** **CFR 41.2/41.3/41.10/ 43.5**
REFERENCE MATERIAL REQUIRED: **05-S-01-EP-2**

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QUESTION 10

An ATWS has occurred. Actions of EP-2A are being taken.

Which one of the following describes an allowance to terminate injection of Standby Liquid Control?

A. Control rods have been inserted to the equivalent of the first banked position with RPV temperature at < 200°F making the reactor subcritical.

B. All control rods are inserted to the Maximum Subcritical Banked Withdrawal Position, which assures the reactor will remain subcritical under all conditions.

C. RPV temperature has been reduced to < 200 °F and indicated reactor power on all IRMs is downscale on range 1, which indicates a subcritical reactor.

D. Standby Liquid Control has been injected such that Hot Shutdown Boron Weight (HSBW) has been injected and confirmed by chemical analysis.

QUESTION 10		**NRC RECORD # WRI 216**		
ANSWER:. B.	**SYSTEM # C41; C11; C71**	**K/A 295037**	**EA1.04: 3.4/4.5**	
			EK1.04: 3.4/3.6	
			EK1.05: 3.4/3.6	
LP# GG-1-LP-RO-EP02A			**EA2.03: 4.3/4.4**	
OBJ. 2, 3, 5	**SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**			
REFERENCE:	**05-S-01-EP-2A**	NEW		
	step 2 & 4	MODIFIED		***<u>BANK</u>***
DIFF 3, CA	**GGNS PSTG App B**			**NRC 4/2000**
	RC/Q-1			
		RO SRO ***<u>BOTH</u>***		**CFR 41.1/41.2/**
REFERENCE MATERIAL REQUIRED:		**05-S-01-EP-2A**		**41.6/43.6**

QUESTION 11

A LOCA has occurred. The Plant Supervisor has ordered the Hydrogen Recombiners started for Hydrogen removal in Containment.

Determine the final Hydrogen Recombiner Power Setting and the time to final Recombiner power.

Pre-LOCA Containment Temperature was 85 °F.
Post LOCA Containment Pressure +1.0 psig.

A. 47.73 kw after 20 minutes

B. 47.73 kw after 25 minutes

C. 49.02 kw after 20 minutes

D. 49.02 kw after 25 minutes

QUESTION 11		**NRC RECORD # WRI 219**	
ANSWER: B.	**SYSTEM # E61**	**K/A 500000**	**EA1.03: 3.4/3.2**
			2.1.20: 4.3/4.2
LP# GQC-RO-CRO01			**2.1.25: 2.8/3.1**
OBJ. E61 task 5	**SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 1**		
REFERENCE:	**04-1-01-E61-1 sec. 5.4.2**	NEW	
	Figure 1	MODIFIED	***BANK***
DIFF 2, CA			**NRC 4/2000**
		RO SRO ***BOTH***	**CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED:	**04-1-01-E61-1 & Calculator**		

QUESTION: 12

Concerning the Fast Opening of One Recirculation Flow Control Valve transient, which one of the following CONDITIONS would result in the more severe transient on the reactor?

A. Reactor Power is at 30 % with Recirc in Slow Speed with Maximum Valve position.

B. Reactor Power is at 36 % with Recirc in Fast Speed with Minimum Valve position.

C. Reactor Power is at 60 % with Recirc in Fast Speed with Minimum Valve position.

D. Reactor Power is at 100 % with Recirc in Fast Speed with 68% Valve position.

QUESTION 12		**NRC RECORD # WRI 116**	
ANSWER: C.	**SYSTEM # B33;**	**K/A 295014**	**AA1.02: 3.6/3.8**
	FSAR CHPT 15	**202002**	**K1.02: 4.2/4.2**
LP# GG-1-LP-OP-MCD7b			**K3.02: 4.0/4.0**
OBJ 2	**SRO TIER 1 GROUP 1 /**	**RO TIER 1 GROUP 1**	
REFERENCE:	**UFSAR 15.4.5.3.2.1**	NEW	
		MODIFIED	***BANK***
DIFF: 1; M			**NRC 3/1998**
		RO SRO ***BOTH***	**CFR 41.6/43.6**
REFERENCE MATERIAL REQUIRED:	NONE		

QUESTION 13

The plant was operating at power.

A transient caused the Recirculation Pump 'B' trip to OFF.

The following parameters are indicated:

Reactor power	65 %
Core Flow	54 Mlbm/hr
Recirc A Flow	39,000 gpm
Recirc B Flow	0 gpm

Reactor Engineering is calculating FCBB.

Which one of the following describes the actions to be taken for present plant conditions?

A. Immediately Scram the Reactor.

B. Monitor Neutron Monitoring for thermal hydraulic instability. Immediately reduce core thermal power by only inserting control rods to exit the region.

C. Monitor Neutron Monitoring for thermal hydraulic instability. Immediately exit the region by reducing core thermal power by inserting control rods, or raising core flow by opening Recirc FCV A.

D. Monitor Neutron Monitoring for thermal hydraulic instability and scram the reactor if any is noted, close B33-F067B and re-open after five minutes, restart the Recirc Pump as soon as possible.

QUESTION 13 **NRC RECORD # WRI 602**
ANSWER: C. **SYSTEM # B33** **K/A 295001 AA2.01: 3.5/3.8**
2.4.1: 4.3/4.6
LP# GLP- OPS-B3300 **2.4.11: 3.4/3.6**
OBJ. 41.2; 42; 43 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 05-1-02-III-3 sect NEW
Figure 1 ***MODIFIED*** BANK
DIFF: 2; CA **03-1-01-2 sect 2.24** **NRC 4/2000**
RO SRO ***BOTH*** **CFR 41.10/41.5/43.5**
REFERENCE MATERIAL REQUIRED: 05-1-02-III-3 w/o Immediate actions

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QUESTION 14

The plant is in a normal electrical line-up with all busses fed from their preferred power source. If a lockout of BOP Transformer 12B were to occur,

Which of the following indicates the correct status of BOP busses?

A.	11HD	ENERGIZED
	12HE	DE-ENERGIZED
	13AD	DE-ENERGIZED
	14AE	ENERGIZED
	18AG	ENERGIZED
	28AG	DE-ENERGIZED
B.	11HD	DE-ENERGIZED
	12HE	ENERGIZED
	13AD	ENERGIZED
	14AE	DE-ENERGIZED
	18AG	ENERGIZED
	28AG	ENERGIZED
C.	11HD	ENERGIZED
	12HE	DE-ENERGIZED
	13AD	DE-ENERGIZED
	14AE	ENERGIZED
	18AG	DE-ENERGIZED
	28AG	DE-ENERGIZED
D.	11HD	DE-ENERGIZED
	12HE	ENERGIZED
	13AD	ENERGIZED
	14AE	DE-ENERGIZED
	18AG	DE-ENERGIZED
	28AG	ENERGIZED

QUESTION 14 **NRC RECORD # WRI 507**
ANSWER: B **SYSTEM # R21** **K/A 295003** **A1.01: 3.7/3.8**
LP# GLP-OPS-R2700
OBJ. 8 &15.1. **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**
REFERENCE: **04-1-01-R21-11 sect 3.2** NEW
04-1-01-R21-12 sect 3.2 MODIFIED ***BANK***
DIFF 1; M **04-1-01-R21-13 sect 3.2** **NRC 6/2001**
04-1-01-R21-14 sect 3.2 RO SRO ***BOTH*** **CFR 41.7**
04-1-01-R21-18 sect 3.2
REFERENCE MATERIAL REQUIRED: NONE

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QUESTION 15

Which one of the following describes the reason for isolating the Main Steam Isolation Valves on a Low Main Condenser Vacuum?

A. Prevent erosion damage to the Main Steam Isolation Valve and Main Steam Bypass Valve seats due to steam condensation in the Main Steam Lines that would prevent their complete isolation in an emergency.

B. Prevent erosion damage to turbine blading in the Low Pressure Turbine due to steam condensation in the Main Steam Lines.

C. Prevent over-pressurization of low pressure piping on the suction of the Condensate pumps that could result in a rupture introducing steam outside Secondary Containment.

D. Prevent rupture of the turbine rupture diaphragms or damage to the turbine exhaust hood that could lead to leakage of radiation to the environment.

QUESTION 15		**NRC RECORD # WRI 220**	
ANSWER: D.	**SYSTEM # B21; N11; N62**	**K/A 295002**	**AK3.05: 3.4/3.4** **AA1.04: 3.3/3.4**
LP# GG-1-LP-OP-M7101			
OBJ. 6	**SRO TIER 1 GROUP 2 /**	**RO TIER 1 GROUP 2**	
REFERENCE:	**GGNS Tech Spec Bases 3.3.6.1-1d**	NEW MODIFIED	 ***BANK***
DIFF 1; M			**NRC 4/2000**
		RO SRO ***BOTH***	**CFR 41.4/43.4**
REFERENCE MATERIAL REQUIRED:		**NONE**	

QUESTION 16

The plant was operating at 80 % power.

Reactor Narrow Range Water Level transmitter C34-N004B has failed downscale and brought in annunciator "RX WTR LVL SIG FAIL HI/LO".

The Operator at the Controls notices the Reactor Narrow Range Level indicator C34-LI-R606A indicates offscale HIGH and annunciator "RFPT/MN TURB LVL 9 TRIP" is in.

Reactor Narrow Range Water Level indicator R606C is reading + 36 inches.

Reactor Upset Range Water Level indicator is reading + 38 inches.

Reactor Wide Range Water Level indicator on P680 is reading + 40 inches.

Reactor Wide Range Water Level indicators A & B on P601 are reading + 40 inches.

Which one of the following describes the actions to be taken?
(NO OTHER ALARMS ARE PRESENT.)

A. Immediately initiate a Reactor Scram and trip the Main Turbine and the Reactor Feed Pump Turbines because they failed to trip.

B. Manually select Reactor Water Level Control to Single Element control and verify Reactor level returns to normal.

C. Select the Master Level Controller to MANUAL to lock the level signals at the present setting to prevent any level perturbations and establish stable level control.

D. Continue monitoring Reactor Water Level on P680 and compare with other indications on P601 and the PDS computer and contact I&C.

QUESTION 16 **NRC RECORD # WRI 275**
ANSWER: D. **SYSTEM # C34; N21; N30** **K/A 295008 AK1.01: 3.0/3.2**
245000 A3.01: 3.6/3.6
LP# GG-1-LP-OP-C3401 **259001 K6.07: 3.8/3.8**
OBJ. 3f; 3g2; 3i; 22; 23 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 04-1-02-H13-P680 4A2-A2 & D1 NEW MODIFIED ***BANK*** **NRC 6/2001**
DIFF 2; CA
RO SRO ***BOTH*** **CFR 41.4/41.5**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 17

The Control Room has been abandoned and control has been established at the Remote Shutdown Panels.

Reactor pressure	600 psig
Indicated Reactor level at the Remote Shutdown Panel	66 inches

With present plant conditions, which one of the following describes Narrow Range Level, Actual Level and the availability of RCIC for level control?

05-1-02-II-1 Attachments I and II are provided.

	NARROW RANGE LEVEL	ACTUAL LEVEL	RCIC
A.	55 inches	52 inches	Not available
B.	45 inches	43 inches	Available
C.	48 inches	43 inches	Available
D.	60 inches	60 inches	Not available

QUESTION 17 **NRC RECORD # WRI 603**
ANSWER: A. **SYSTEM # C61; B21** **K/A 295016** **AA2.02: 4.2/4.3**
2.1.25: 2.8/3.1
LP# GLP-OPS-C6100 **2.4.11: 3.4/3.6**
OBJ 19 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**
REFERENCE: 05-1-02-I-1 Att I & II NEW
MODIFIED BANK
DIFF 2; CA **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.5/41.10/43.5**
REFERENCE MATERIAL REQUIRED: 05-1-02-II-1 Att. I & II

QUESTION 18

The plant is operating at 100 % power.

RCIC is to be operated for surveillance testing to return the system to operable.

Standby Service Water 'A' is operating.

Which one of the following describes the limitations and monitoring of the Suppression Pool Temperature?

A. Suppression Pool Temperature is limited to 95ºF and must be monitored every five minutes while RCIC is operating. If Suppression Pool Temperature exceeds 100ºF Suppression Pool Cooling must be placed in service.

B. Suppression Pool Temperature is limited to 95ºF and must be monitored every five minutes while RCIC is operating. If Suppression Pool Temperature exceeds 95ºF Suppression Pool Cooling must be placed in service and RCIC secured.

C. Suppression Pool Temperature is limited to 100ºF and must be monitored every five minutes while RCIC is operating. If Suppression Pool Temperature exceeds 95ºF Suppression Pool Cooling must be placed in service. RCIC must be secured if Suppression Pool Temperature exceeds 100ºF.

D. Suppression Pool Temperature is limited to 105ºF and must be monitored every sixty minutes while RCIC is operating and Suppression Pool Temperature exceeds 90ºF. If Suppression Pool Temperature exceeds 105ºF Suppression Pool Cooling must be placed in service and RCIC secured.

QUESTION 18 **NRC RECORD # WRI 605**
ANSWER: C. **SYSTEM # E51; M24** **K/A 295013** **AA2.01: 3.8/4.0**
AA1.02: 3.9/3.9
LP# GG-1-LP-OP-E5100- **2.1.33: 3.4/4.0**
OBJ. 12a; 22 **2.4.4: 4.0/4.3**
LP# GG-1-LP-OP-M7101
OBJ. 23
LP# GG-1-LP-RO-EP03
OBJ. 3; 5
LP# GG-1-LP-OP-M4101
OBJ. 11 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**

REFERENCE:	**Tech Spec 3.6.2.1**	***NEW***	
	Tech Spec SR3.6.2.1.1	MODIFIED	BANK
DIFF 2; CA	**04-1-01-E51-1 sect 5.2.1e**		
	05-S-01-EP-3 step 10 – 12	RO SRO ***BOTH***	**CFR**
	06-OP-1M24-V-0001 sect 5.1.2a		**41.5/41.10/43.3/43.5**

REFERENCE MATERIAL REQUIRED: **Tech Spec 3.6.2.1 & 06-OP-1M24-V-0001**

QUESTION 19

A LOCA has occurred.

The reactor is depressurized.

The Drywell remains inaccessible due to pressure of 2.5 psig and temperatures of 200ºF.

MSIV Leakage Control Outboard System has been initiated.

Which one of the following identifies the method to monitor radiation released outside Secondary Containment at this time with MSIV Leakage Control in operation?

A. The operating Standby Gas Treatment Train Radiation Monitors will give the indication of radiation release.

B. Auxiliary Building Fuel Handling Area Exhaust Radiation Monitors will give indication of radiation release.

C. Auxiliary Building Fuel Handling Area Exhaust and Fuel Pool Sweep Exhaust Radiation Monitors will give indication of radiation release.

D. Auxiliary Building Fuel Handling Area Exhaust and Standby Gas Treatment Radiation Monitors will give indication of radiation release.

QUESTION 19 **NRC RECORD # WRI 606**
ANSWER: A. **SYSTEM # T48; E32; D17** **K/A 295017 AA1.08: 3.1/3.4**
AA1.09: 3.6/3.8
LP# GG-1-LP-OP-E3200 **239003 K1.02: 2.9/3.0**
OBJ. 12c; 13
LP# GG-1-LP-OP-D1721
OBJ. 2
LP# GG-1-LP-OP-T4801
OBJ. 9f **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 04-1-01-E32-1 sect 3.2
sect 3.2; 5.1.1c; 5.2.1c
NEW MODIFIED BANK
DIFF 2; CA
RO SRO ***BOTH*** **CFR 41.11/41.13 43.4**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 20

The plant is operating at 100 % power.

The Component Cooling Water temperature control valve closes to 25% in response to a temperature controller malfunction and the valve is unable to be reopened.

CCW temperatures have risen and continue to rise slowly.

Recirculation Pumps 'A' and 'B' pump 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 manually 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 20 **NRC RECORD # WRI 314**
ANSWER: A. **SYSTEM # P42; ONEPs** **K/A 295018 AK3.03: 3.1/3.3**
LP# GLP-OPS-ONEP
OBJ. 1; 2; 34 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 05-1-02-V-1 sect 3.1 NEW
Section 3.2.2 Note for 2.1 MODIFIED ***BANK***
DIFF 1; M **NRC 12/2000**
RO SRO ***BOTH*** **CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED: 05-1-02-V-1 w/o Imm. Actions

QUESTION 21

The plant is operating at rated conditions.

Plant Air Dryer ‘A’ is in service and Dryer ‘B’ is tagged out for maintenance.

Plant Air Dryer ‘A’ has undergone an “Executed Stop”.

Annunciator “PLANT AIR DRYR TROUBLE” on H13-P870 is in alarm.

Instrument Air Header pressure is 110 psig and stable.

Which one of the following identifies actions to be taken?

A. Immediately scram the reactor in preparation for a complete loss of Instrument Air.

B. Immediately dispatch an operator to isolate Plant Air Dryer ‘A’ by closing isolation valves P51-F207A and P51-F208A.

C. Dispatch an operator to manually crosstie Service Air via SP52-F010 or SP52-F300 and monitor Instrument Air header pressure.

D. Monitor Instrument Air header pressure and determine the cause of the “Executed Stop” using the PDS computer and a local operator’s observations.

QUESTION 21		**NRC RECORD # WRI 607**		
ANSWER: D.	**SYSTEM # P51; P53**	**K/A 295019**	**AK2.14: 3.2/3.2**	
			2.4.31: 3.3/3.4	
LP# GLP-OP-P5101		**300000**	**A2.01: 2.9/2.8**	
OBJ. 2d			**2.1.32: 3.4/3.8**	
LP# GLP-OPS-P5300				
OBJ. 20.1; 21	**SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**			
REFERENCE:	**04-1-02-H13-P870 7A-E3**	***NEW***		
	04-1-01-P51-1	MODIFIED	BANK	
DIFF 1; M	**sect 3.5.4 & 3.7**			
	05-1-02V-9 sect 3.4	RO SRO ***BOTH***	**CFR 41.4/41.10/43.5**	
REFERENCE MATERIAL REQUIRED:	**04-1-02-H13-P870-7A-E3**			

QUESTION 22

The plant is operating at rated conditions.

A rupture in the Instrument Air header has resulted in Instrument Air header pressure dropping to 40 psig.

Which one of the following describes the response of the Containment Cooling System and Containment temperature?

A. Containment Coolers will operate recirculating the Containment atmosphere maintaining temperature stable.

B. Containment Coolers will operate isolated without cooling water allowing Containment temperatures to rise.

C. Containment Coolers will trip due to a loss of cooling water resulting in Containment temperatures rising.

D. Containment Coolers will trip due to the isolation of the inlet and outlet dampers resulting in Containment temperatures rising.

QUESTION 22		**NRC RECORD # WRI 608**		
ANSWER: B.	**SYSTEM # P71; P53; M41**	**K/A 295020**	**AK2.03: 3.1/3.3**	
			AK3.03: 3.2/3.2	
LP# GG-1-LP-OP-M4100		**300000**	**K1.03: 2.8/2.9**	
OBJ. 10a; 13a				
LP# GLP-OPS-P7100				
OBJ. 16.2	**SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**			
REFERENCE:	**E-1213-009 & 012**	***NEW***		
	M-1100B	MODIFIED		BANK
DIFF 1; M	**M-1109D**			
	05-1-02V-9 sect 5.5	RO SRO ***BOTH***		**CFR 41.4/41.7/41.9**
REFERENCE MATERIAL REQUIRED:	**NONE**			

QUESTION 23

The plant is in a startup following a 32 day outage.

MSIVs are closed.

Recirc loop temperatures are at 180 ?F.

Control rods are being withdrawn to achieve criticality. (Minimal decay heat)

Feedwater is operating in long cycle cleanup.

The operating CRD Pump tripped.

What will be the response of the plant?
(ASSUME NO FURTHER OPERATOR ACTIONS)

A. The reactor water level will remain stable at its present level.

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

C. The 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 23 **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# GLP-OPS-G3336 **AA1.04: 2.5/2.6**
OBJ 3.3, 8.6, 21
LP# GG-1-LP-OP-C111A
OBJ 23 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: 03-1-01-1 NEW
sect. 2.2.5; 3.3.1d; 3.3.3a MODIFIED ***BANK***
DIFF 2; CA **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.5**
REFERENCE MATERIAL REQUIRED: None

QUESTION 24

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 -192 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 24 **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, 14, & 15 NEW MODIFIED ***BANK***
DIFF 2, CA 05-S-01-EP3 Step 15 and HCTL **NRC 12/2000**
RO SRO ***BOTH*** **CFR 41.7/41.9/ 41.10/41.14/43.5**
REFERENCE MATERIAL REQUIRED: 05-S-01-EP-2A and EP-3

QUESTION 25

The plant was operating at 100 % Power.

A steam leak has developed in the Containment steam tunnel.

Containment temperature has gone up to 85°F and still rising.

A power reduction has commenced but Containment temperature continues to rise.

Tech. Specs states if Containment temperature exceeds 95°F to restore to < 95°F within 8 hours.

If Containment temperature is unable to be restored to < 95°F within 8 hours; then be in MODE 3 in 12 hours and be in MODE 4 in 36 hours.

Which of the following is the reason for this action?
Tech Specs 3.0 & 3.6.1.5 are provided.

A. Shut down of the Reactor is done to prevent having to initiate Containment Spray to maintain Containment temperature below 185°F.

B. Shut down of the Reactor is done to place the plant in a MODE that the LCO does NOT apply.

C. Shut down of the Reactor is done to prevent having to Emergency Depressurize to maintain Containment temperature below 185°F.

D. Shut down of the Reactor is done to prevent damaging operating equipment inside Containment due to current high temperature.

QUESTION 25 **NRC RECORD # WRI 512**
ANSWER: B. **SYSTEM # M41-1** **K/A 295027** **K3.03: 3.7/3.7**
LP# GG-1-LP-OP-TS001
OBJ. 13
LP# GG-1-LP-OP-M4101
OBJ. 11, 12 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**
REFERENCE: **TECH. SPEC. 3.6.1.5** NEW
TECH. SPEC. BASES MODIFIED ***BANK***
DIFF 1; M **3.6.1.5** **NRC 6/2001**
TECH SPEC 3.0.2 ** RO SRO ***BOTH*** **CFR 41.9/41.10/43.2**
REFERENCE MATERIAL REQUIRED: **Tech Spec 3.6.1.5 & 3.0.2**

QUESTION 26

The plant is operating at rated conditions.

Temperatures in the lower CRD Cavity are rising.

Which one of the following describes the expected response of the Drywell Cooling System?

A. At 145ºF, M51-F009 and M51-F016 open and M51-F006 and M51-F014 close to divert Drywell Cooling flow from the lower Drywell area to the CRD Cavity.

B. At 145ºF, the Standby fans on M51-B001 and B002 will auto start and M51-F009 and M51-F016 open raising the flow of air to the CRD Cavity.

C. At 145ºF, M51-F009 and M51-F016 open raising the flow of air to the CRD Cavity and at 155ºF M51-F006 and M51-F014 close to divert more air flow.

D. At 155ºF, the Standby fans on M51-B001 and B002 will auto start and M51-F009 and M51-F016 open raising the flow of air to the CRD Cavity.

QUESTION 26		**NRC RECORD # WRI 609**		
ANSWER: A.	**SYSTEM # M51**	**K/A 295028**	**EA1.03: 3.9/3.9**	
			EK2.04: 3.6/3.6	
LP# GG-1-LP-OP-M5100			**EK3.04: 3.6/3.8**	
OBJ. 6a	**SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**			
REFERENCE:	**04-1-02-H13-P870**	***NEW***		
	4A-H2; 10A-H2	MODIFIED		BANK
DIFF 2; CA	**M-1101**			
	E-1214-001; 004; 009	RO SRO ***BOTH***		**CFR 41.4/41.7**
REFERENCE MATERIAL REQUIRED:		**Drywell Cooling System Drawing**		

QUESTION 27

Which of the following is the basis for Emergency Reactor Pressure Vessel (RPV) Depressurization when Suppression Pool Level CANNOT be maintained below 24.4 feet?

A. 24.4 feet is the highest Suppression Pool level at which the pressure suppression capability of Containment can be maintained.

B. 24.4 feet is the highest Suppression Pool level at which the Suppression Pool will NOT overflow the weir wall resulting in flooding the Drywell.

C. 24.4 feet is the highest Suppression Pool level at which Suppression Pool level instrumentation taps will become covered resulting in loss of ability to monitor Suppression Pool level.

D. 24.4 feet is the highest Suppression Pool level at which opening Safety Relief Valves (SRVs) will NOT result in exceeding the design blowdown rate for the SRV discharge piping.

QUESTION 27 **NRC RECORD # WRI 513**
ANSWER: A. **SYSTEM # M41-1** **K/A 295029** **K1.01: 3.4/3.7**
LP# GG-1-LP-OP-EP03
OBJ. 6 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
REFERENCE: **GGNS PSTG APP B SP/L-3** NEW
GGNS PSTG APP A SP/L-3 MODIFIED ***BANK***
DIFF 1; M **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.9/41.10**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 28

The plant is in a LOCA with ECCS systems injecting to the reactor.

Suppression Pool level has lowered to 13.5 feet.

Which one of the following is a condition that exists due to this level?

A. The SRV tailpipe exhaust spiders have been uncovered.

B. The RCIC Turbine Exhaust pipe has been uncovered.

C. Suppression Pool temperature is unable to be determined.

D. Containment Pressure is unable to be determined

QUESTION 28		**NRC RECORD # WRI 8**	
ANSWER: C.	**SYSTEM # E30**	**K/A 295030**	**EA2.02: 3.9**
LP# GG-1-LP-OP-EP01			
OBJ. 5			
LP# GG-1-LP-RO-EP03			
OBJ. 6	**SRO TIER 1 GROUP**	**1 / RO TIER 1 GROUP 2**	
REFERENCE:	**05-S-01-EP-3 Caution 2**	NEW	
	GGNS EOP PSTG App B	MODIFIED	***BANK***
DIFF 1; M	**Caution 2**		**NRC 6/2001**
		RO SRO ***BOTH***	**CFR 41.9/41.10/43.5**

REFERENCE MATERIAL REQUIRED: None

QUESTION 29

Preparations are being made to startup following a Refueling Outage.

During the Refueling outage several Control Rod Drive Mechanisms were replaced and the old mechanisms taken to the CRD Maintenance Room for rebuilding.

The Auxiliary Building Operator has reported elevated radiation levels indicated on his dositec in Area 9 185 ft. of 150 mr/hr.

Which one of the following is the possible cause of the elevated radiation levels?

A. This is normal radiation levels for general area Auxiliary Building.

B. Used CRD Drive Mechanisms in the Auxiliary Building

C. Waterborne contamination in the Fuel Pool Cooling System

D. Normal radiation levels from the Fuel Pool Filter Demineralizers.

QUESTION 29 **NRC RECORD # WRI 610**
ANSWER: C. **SYSTEM # G41/46** **K/A 295033** **EA2.03: 3.7/3.7**
LP# GLP-OPS-G4146
OBJ. 2; 4.8; 5.4; **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**
5.5; 5.6; 15.1
REFERENCE: M-1051A; M-1016 ***<u>NEW</u>***
UFSAR 9.1.3.1.2; MODIFIED BANK
DIFF 1; M **12.2.1.3.3 & Table 12.2.-12**
FPCCU System Figure 4 RO SRO ***<u>BOTH</u>*** **CFR 41.12/43.4**
REFERENCE MATERIAL REQUIRED: **None**

QUESTION 30

A GENERAL EMERGENCY has been declared due to a DBA LOCA.

Plant conditions as follows:

- Reactor water level –195”
- Approximately 15% fuel damage
- Large fission product inventory in Containment
- All Containment parameters are within design limits
- Radiation levels at the site boundary are at 15 mRem/hr TEDE

What protective actions, if any, should be recommended?

10-S-01-1 Activation of the Emergency Plan is provided.

A. No evacuation of surrounding areas is required.

B. Evacuate a 2-mile radius and shelter five miles downwind.

C. Evacuate a 2-mile radius and five miles downwind. Shelter the rest of the 10-mile EPZ.

D. Evacuate a 2-mile radius and 10 miles downwind. Shelter the rest of the 10-mile EPZ.

QUESTION 30 **NRC RECORD # WRI 611**
ANSWER: C. **SYSTEM # EPP PARs** **K/A 295038** **EK1.02: 4.2/4.4**

LP# GG-1-LP-EP-EPTS6
OBJ 2 **SRO TIER 1 GROUP 1 / RO TIER 1 GROUP 2**
REFERENCE: 10-S-01-1 sect. 6.1.4.j(1) NEW
MODIFIED ***BANK***
DIFF 2; CA **EPTS 6 EXAM 2**
RO SRO ***BOTH*** **CFR 41.10/41.12**
REFERENCE MATERIAL REQUIRED: 10-S-01-1 **43.4/43.5**

QUESTION 31

A fire has been reported by security at the Hydrogen Bulk Storage Facility.

The Outside Operator has identified the leak as coming from the vent stack on the discharge of the cryogenic compressors.

Which one of the following describes the actions to be taken by operators at the scene?

A. Establish a perimeter of at least 160 feet, and allow the fire to burn itself out.

B. Establish a perimeter of at least 160 feet, and establish a monitor nozzle spraying water on the point where the fire is originating.

C. Evacuate a 2 mile radius of the fire, and establish a monitor nozzle spraying water on the point where the fire is originating.

D. Evacuate a 2 mile radius of the fire, and establish a fire team to enter the area with a fire hose cooling the team and isolate the source of the fire.

QUESTION 31		**NRC RECORD # WRI 612**	
ANSWER: A.	**SYSTEM # P73**	**K/A 600000**	**AK3.04: 2.8/3.4**
			2.1.32: 3.4/3.8
LP# GG-1-LP-OP-P7300			**2.4.25: 2.9/3.4**
OBJ 12; 14	**SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 2**		
REFERENCE:	**04-1-01-P73-1**	***<u>NEW</u>***	
	sect 3.1; 3.2; 3.3; 3.7	MODIFIED	BANK
DIFF 1; M			
		RO SRO ***<u>BOTH</u>***	**CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED:		**NONE**	

QUESTION 32

The plant is in a Refueling Outage with the reactor disassembled five (5) days after the plant was shutdown in Refueling Outage 11.

Reactor Coolant Temperature is 140 ?F

The Fuel shuffle has just begun.

The in-service shutdown cooling pump has just tripped off.

Assume no further operator action.

Determine for this condition:

1. The time to reach 200?F for the Reactor Vessel.

2. The time for level to reach the Top of Active Fuel.

05-1-02-III-1 Attachment I is provided.

A. 1) 0.75 hours
   2) 15 hours

B. 1) 1.2 hours
   2) 18 hours

C. 1) 2.5 hours
   2) 60 hours

D. 1) 4.5 hours
   2) 75 hours

QUESTION 32 **NRC RECORD # WRI 604**
ANSWER: C. **SYSTEM # G41/46; ONEP** **K/A 295021** **AK1.01: 3.6/3.8**
LP# GLP-OPS-ONEP **AA2.01: 3.5/3.6**
OBJ 18; 19 **SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 3**
REFERENCE: **05-1-02-III-1 Att. I** NEW
Figures 2 & 5 ***MODIFIED*** BANK
DIFF 2; CA **Pre-shuffle 150ºF** **NRC 3/1998 WRI37**
RO SRO ***BOTH*** **CFR 41.5/41.10/43.5**
REFERENCE MATERIAL REQUIRED: **05-1-02-III-1 Att I**

QUESTION 33

RHR ‘A’ Pump Room temperature rises to 170 ?F.

Which one of the following identifies the systems or components in addition to RHR ‘A’ that will be affected by this temperature?

A. HPCS

B. MSIVs and RCIC

C. RCIC

D. RWCU

QUESTION 33		**NRC RECORD # WRI 048**		
ANSWER: C.	**SYSTEM # E12; E51; E31**	**K/A 219000**	**A1.08: 3.7/3.6**	
			A2.14: 4.1/4.3	
			A3.01: 3.3/3.3	
LP# GLP-OPS-E3100			**A4.06: 3.9/3.7**	
OBJ 7.4		**295032**	**EK3.03: 3.8/3.9**	
			EK3.07: 3.6/3.8	

SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 3

REFERENCE:	**ARI 04-1-02-H13-P601 20A-B1**	NEW	
		MODIFIED	***BANK***
DIFF 1; M	**05-1-02-III-5 Group 2, 3, 4**		**NRC 3/1998**
		RO SRO ***BOTH***	**CFR 41.4/41.10/43.5**

REFERENCE MATERIAL REQUIRED: NONE

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QUESTION 34

Following a Recirc line rupture, reactor level has dropped to - 80 inches.

Both trains of the Standby Gas Treatment System have initiated.

Which of the following best describes the operation of the Standby Gas Treatment System flow control dampers?

A. When –0.2 inches water column is obtained in the Enclosure Building, the steam tunnel cooler dampers throttle to their intermediate position. 90 seconds later the remaining flow control dampers throttle to their intermediate position.

B. When –0.25 inches water column is obtained in the Enclosure Building, the steam tunnel cooler dampers throttle to their intermediate position. 120 seconds later the remaining flow control dampers throttle to their intermediate position.

C. After 90 seconds, the flow control dampers will go to their intermediate positions to maintain ? 0.75 inches water column in the Auxiliary Building and –0.25 inches water column in the Enclosure Building.

D. After 90 seconds the flow control dampers throttle to maintain –0.25 inches water column in the Auxiliary Building. If the Enclosure Building pressure reaches –0.75 inches water column, the flow control dampers go to their intermediate positions.

QUESTION 34 **NRC RECORD # WRI 007**
ANSWER: A. SYSTEM # T48 **K/A 295035 EA1.02: 3.8/3.8**
LP# GG-1-LP-OP-T4801 **261000 A1.04: 3.0/3.3**
OBJ. 8e SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 3
REFERENCE: E- 1257- 08, 11, 23 NEW
MODIFIED ***BANK***
DIFF 2; CA **NRC 3/1998**
RO SRO ***BOTH*** **CFR 41.4/41.7/41.13**
REFERENCE MATERIAL REQUIRED:

QUESTION 35

The plant is operating normally at 100 % power.

The Suppression Pool Hi/Lo Level and a LPCS Room Sump Level Hi-Hi annunciators have been received on the H13-P870 panel.

The Control Room Operator has noted that Suppression Pool Level is at 18.4 feet. An operator dispatched to the room reports that water is spraying from the LPCS Suction piping, but he was unable to tell the exact location.

Which one of the following are the appropriate actions for this event?

A. Immediately scram the reactor, initiate Suppression Pool Makeup, and emergency depressurize the plant, and isolate the LPCS Suction from the Suppression Pool.

B. Ensure the LPCS Room sump pumps are operating, isolate LPCS Suction from the Suppression Pool and observe the status of the leak and makeup to the Suppression Pool via normal means, if required open the LPCS Room Door.

C. Monitor and control LPCS Room sump levels, rack out the LPCS Pump Breaker and isolate LPCS Suction from the Suppression Pool, scram the reactor since the Max Safe Level has been reached.

D. Verify the LPCS Room sump pumps are operating, isolate LPCS Suction from the Suppression Pool and rack out the LPCS Pump Breaker, and observe the status of the leak and makeup to the Suppression Pool via normal means.

QUESTION 35		**NRC RECORD # WRI 058**		
ANSWER: D.	**SYSTEM # P45; E12; EOP- 4**	**K/A 295036**	**EA2.03: 3.4/3.8** **EK3.03: 3.5/3.6**	
LP# GG-1-LP-RO-EP03			**EA2.02: 3.1/3.1**	
OBJ 3				
LP# GG-1-LP-RO-EP04				
OBJ 4	**SRO TIER 1 GROUP 2 / RO TIER 1 GROUP 3**			
REFERENCE:	**05-S-01-EP-3 step 41**	NEW		
	05-S-01-EP-4 step 9 - 13	MODIFIED		***BANK***
DIFF 2; CA	**ARI 04-1-02-H13-P680 8A1-A4**			**NRC 3/1998**
	ARI 04-1-02-H13-P870 4A-A3; 2A-F1; 4A-C3	RO SRO ***BOTH***		**CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED:	**05-S-01-EP-3 & 4**			

QUESTION 36

A reactor scram has occurred.

All control rods have fully inserted.

Reactor level is stable at + 4 inches narrow range with reactor pressure at rated conditions.

Which one of the following describes the flows observed with present conditions for the Control Rod Hydraulic System?

	CRD Pump Min Flow	**Charging Water Header**	**Cooling Water Header**	**Recirc Pump Seal Purge**
A.	20 gpm	0 gpm	60 gpm	2 gpm / pump
B.	20 gpm	165 gpm	5 gpm	2 gpm / pump
C.	20 gpm	165 gpm	5 gpm	0 gpm
D.	0 gpm	165 gpm	60 gpm	0 gpm

QUESTION 36 **NRC RECORD # WRI 613**
ANSWER: B. **SYSTEM # C11-1A** **K/A 295036** **K5.02: 2.6/2.6**
LP# GG-1-LP-OP-C111A
OBJ 4 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 1**
REFERENCE: **SFD-1081** ***NEW***
04-1-01-B33-1 MODIFIED BANK
DIFF 2; CA **sect 4.1.2b(2)(e)**
04-1-01-C11-1 sect 4.1.2v(2) RO SRO ***BOTH*** **CFR 41.5/41.6**
REFERENCE MATERIAL REQUIRED: **NONE**

QUESTION 37

The plant is operating at 45% power while returning to full power conditions.

A fatigue failure of the High Pressure Turbine First Stage Pressure connection resulted in a loss of all inputs of pressure to Rod Control and Information System.

Which one of the following describes the ability to move control rods with present plant conditions?

Assume the only actions to move control rods are from H13-P680.

A. Control rod movement is restricted to the Rod Pattern Controller.

B. Control rod movements are unrestricted for both withdrawals and insertions.

C. Control rod movement is restricted to 2 notch withdrawals and unlimited insertions.

D. Control rod movement is restricted to 4 notch withdrawals and unlimited insertions.

QUESTION 37 **NRC RECORD # WRI 614**
ANSWER: A. **SYSTEM # C11-2; N11** **K/A 201005 K6.01: 3.2/3.2**
LP# GG-1-LP-OP-C1102
OBJ 5, 6, 7, 13b, 23, 26 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H13-P680-4A2-D5 ***NEW***
03-1-01-2 MODIFIED BANK
DIFF 2; CA **sect 2.15; 5.3; 5.7; 6.4**
Tech Spec 3.3.2.1 & bases RO SRO ***BOTH*** **CFR 41.6/43.6**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 38

The plant is operating at 45% power raising power to full power conditions.

A disturbance on the Entergy Grid resulted in a trip of Circuit Breakers J5228 and J5232 in the GGNS Switchyard.

Reactor water level control responded to control reactor water level above –20 inches wide range.

Reactor pressure control responded to an actuation of B21-F051D momentarily with subsequent pressure control using Main Steam Bypass Valves.

All other systems functioned as designed.

Which one of the following identifies the current configuration of the Recirculation Pump circuit breakers?

	CB-1	CB-2	CB-3	CB-4	CB-5
A.	**CLOSED**	**CLOSED**	**CLOSED**	**CLOSED**	**OPEN**
B.	**OPEN**	**OPEN**	**CLOSED**	**OPEN**	**OPEN**
C.	**CLOSED**	**CLOSED**	**OPEN**	**OPEN**	**OPEN**
D.	**OPEN**	**OPEN**	**OPEN**	**OPEN**	**OPEN**

QUESTION 38 **NRC RECORD # WRI 615**
ANSWER: C. **SYSTEM # B33; N32** **K/A 202002 A2.01: 3.4/3.4**
LP# GLP-OPS-B3300 **202001 A2.15: 3.7/3.9**
OBJ 27; 50 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H13-P680 ***NEW***
3A-D4 & D10 MODIFIED BANK
DIFF 2; CA **Tech Spec 3.3.4.1 & bases**
Tech Spec 3.3.1.1; 3.3.6.5; 3.3.4.2 RO SRO ***BOTH*** **CFR 41.6**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 39

Which one of the following is the reason the LPCI Injection Valves, E12-F042A, B, and C, are designed to remain closed at normal reactor vessel pressure following a LOCA initiation signal?

A. This allows the pump time to pressurize the header, thus minimizing the differential pressure across the injection valve.

B. This ensures reactor pressure has dropped sufficiently to prevent the possibility of over pressurizing low pressure piping.

C. This allows the pump to develop enough discharge head to overcome reactor pressure for injection preventing back flow of hot reactor water into LPCI piping.

D. This ensures reactor pressure has equalized with LPCI pressure to prevent the injection check valves E12-F041A, B, C from slamming the injection piping causing damage.

QUESTION 39 **NRC RECORD # WRI 060**
ANSWER: B. **SYSTEM # E12** **K/A 203000** **K1.17: 4.0/4.0**
K4.01: 4.2/4.2
K4.02: 3.3/3.4
A3.01: 3.8/3.7
A3.08: 4.1/4.1
LP# GLP-OPS-E1200 **A4.08: 4.3/4.3**
OBJ 8.9; 14.2 **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 **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.8**
REFERENCE MATERIAL REQUIRED: None

QUESTION 40

A LOCA has occurred.

Power to bus 15AA has been lost.

All other systems are functioning as required.

Reactor water level is – 170 inches.

Reactor pressure is 840 psig.

Drywell pressure is 8.3 psig.

Which one of the following identifies the response of the Automatic Depressurization System?

A. ADS valves are unable to open due to a loss of air needed to open the valves.

B. ADS valves are unable to automatically open due to a loss of power needed to actuate.

C. ADS valves will automatically open using both solenoids associated with the air actuator.

D. ADS valves will automatically open when the appropriate time delays have been met.

QUESTION 40 **NRC RECORD # WRI 616**
ANSWER: D. **SYSTEM # E21; E12; E22-2; R21** **K/A 209001 K3.02: 3.8/3.9**
218000 K6.01: 3.9/4.1
LP# GG-1-LP-OP-E2202 **K6.02: 4.1/4.1**
OBJ 5c,f; 9a,b; 12b,c; 15; 17; 25 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H13-P601 ***NEW***
18A-B3 & E2 MODIFIED BANK
DIFF 2; CA **19A-B3 & E2**
04-1-01-B21-1 sect 5.1.1 RO SRO ***BOTH*** **CFR 41.7**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 41

The plant is starting up and is currently operating at 80% power.

All systems are operating properly.

There is a spurious High Pressure Core Spray (HPCS) initiation.

All other systems respond properly.

NO operator action is taken.

Which of the following identifies the effect on Reactor Water Level the spurious HPCS initiation will have?

A. Reactor Water Level will RISE, Feedwater Level Control will respond, and Reactor Water level will stabilize at a HIGHER than normal condition.

B. Reactor Water level will RISE, Feedwater Level Control will respond, and Reactor Water level will be returned to NORMAL level.

C. Reactor Water level will RISE, Feedwater Level Control will respond, and Reactor Water level will stabilize at a LOWER than normal condition.

D. Reactor Water level will not be affected due to Feedwater Level Control will respond and maintain Reactor Water level at NORMAL level.

QUESTION 41		**NRC RECORD # WRI 519**		
ANSWER: A.	**SYSTEM # C34; E22**	**K/A 209002**	**K3.01: 3.9/3.9**	
LP# GG-1-LP-OP-MCD7b		**259002**	**A2.08: 4.5/4.5**	
OBJ. 2 A	**SRO TIER 2 GROUP 1 /**	**RO TIER 2 GROUP 1**		
REFERENCE:	**UFSAR 15.5.1.2.1**	NEW		
	UFSAR FIG. 15.5-1	MODIFIED		***BANK***
DIFF 2; CA				**NRC 6/2001**
		RO SRO ***BOTH***		**CFR 41.7/41.8**
REFERENCE MATERIAL REQUIRED:	**NONE**			

QUESTION 42

An ATWS has occurred.

Standby Liquid Control has just been initiated for injection into the reactor vessel.

Reactor power is 10 %.

Reactor pressure is 850 psig.

Reactor water level – 110 inches Fuel Zone.

Which one of the following identifies indications of Standby Liquid Control injection into the Reactor?

	SLC Tank Level	SLC Pump Pressure	Reactor Power	Squib Valve Ready lights	SLC OOSVC Alarms	SQUIB LOSCONT OR PWR LOSS lights
A.	4400 gal	1050 psig	9%	OFF	ON	ON
B.	4600 gal	860 psig	10%	ON	OFF	OFF
C.	4600 gal	1050 psig	9%	ON	OFF	OFF
D.	4400 gal	860 psig	10%	OFF	OFF	ON

QUESTION 42 **NRC RECORD # WRI 617**
ANSWER: A. **SYSTEM # C41** **K/A 211000** **A4.04: 4.5/4.6**
A4.01: 3.9/3.9
A4.03: 4.1/4.1
LP# GLP-OPS-C4100 **A4.07: 3.6/3.6**
OBJ 12 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-01-C41-1 sect 5.3.2b ***NEW***
MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.1/41.6/41.7**
REFERENCE MATERIAL REQUIRED: NONE **43.6**

QUESTION 43

The plant was operating at 60% power when Division I UPS Power Panel 1Y89 trips its incoming circuit breaker.

Which one of the following is the response of the Reactor Protection System?

A. RPS A system tripped resulting in a half scram due to a loss of power to the RPS A logic relays.

B. RPS A system logic energized causing a half scram due to a loss of power to the RPS A Scram Pilot Valve solenoids.

C. RPS A system tripped with no half scram because the RPS A solenoids still have power available.

D. RPS A system logic energized causing alarms indicating the loss of power with no half scram due to RPS Bus A still being energized.

QUESTION 43		**NRC RECORD # WRI 102**		
ANSWER: A.	**SYSTEM # C71; L62**	**K/A 212000**	**K6.01: 3.6**	
			K1.04: 3.4	
LP# GLP-OPS-C7100				
OBJ. 11.10; 23				
LP# GG-1-LP-OP-L6200				
OBJ. 6b	**SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**			
REFERENCE:	**E- 1026**	NEW		
	E- 1173 - 14, 15, & 19	MODIFIED	***BANK***	
DIFF 1; M			**NRC 3/1998**	
		RO SRO ***BOTH***	**CFR 41.2/41.6**	
REFERENCE MATERIAL REQUIRED:		NONE		

QUESTION 44

Which one of the following identifies the power sources to the Intermediate Range Neutron Monitors (IRMs) and the impact on the monitors upon a loss of power?

A. IRMs are powered from Division I and II DC buses and fail upscale on a loss of power.

B. IRMs are powered from Division I and II RPS buses and fail upscale on a loss of power.

C. IRMs are powered from Division I and II UPS buses and fail downscale on a loss of power.

D. IRMs are powered from the BOP UPS buses and fail downscale on a loss of power.

QUESTION 44 **NRC RECORD # WRI 618**
ANSWER: C. **SYSTEM # C51-2** **K/A 215003 K2.01: 2.5/2.7**
LP# GG-1-LP-OP-C5102
OBJ 6b,c; 11a; 18 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-01-C51-1 Att III ***NEW***
04-1-01-L62-1 Att I MODIFIED BANK
DIFF 1; M **04-1-02-1H13-P680**
5A-A8, B8; 7A-A8, B8, B9 RO SRO ***BOTH*** **CFR 41.6**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 45

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

APRM H has four (4) LPRMs currently bypassed.

What would APRM H indicate when the Meter Function switch is taken to COUNT after a fifth (5^{th}) LPRM is taken to BYPASS?

A. 75

B. 80

C. 85

D. 90

QUESTION 45 **NRC RECORD # WRI 326**
ANSWER:. C. **SYSTEM # C51** **K/A 215005** **K6.03: 3.1/3.3**
LP# GG-1-LP-OP-C5104
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 **NRC 12/2000**
RO SRO ***BOTH*** **CFR 41.6/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 46

Which one of the following describes conditions that would prohibit withdrawing Source Range Neutron (SRM) detectors from the core?

A. IRMs are on Range 1 reading between 10 and 25 and all SRMs are reading between 6000 and 9000 cps.

B. Source Range 'A' detector has lost power and has been declared INOP and is bypassed at H13-P680.

C. Under vessel work has been performed during the ongoing refueling outage and work is still in progress.

D. Drywell entry has been made to inspect and identify leaks at rated pressure during a reactor startup.

QUESTION 46 **NRC RECORD # WRI 619**
ANSWER: C. **SYSTEM # C51-1** **K/A 215004** **2.1.32: 3.4/3.8**
LP# GG-1-LP-OP-C5101 **A4.04: 3.2/3.2**
OBJ 7a; 11a **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: **04-1-01-C51-1 sect 3.5** ***NEW***
04-1-02-1H13-P680-7A-C11 MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.5/41.6**
REFERENCE MATERIAL REQUIRED: **NONE**

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QUESTION 47

Which one of the following conditions will allow a start of a Recirculation Pump "A"?

A.	Steam Dome Pressure	950 psig
	Recirc Loop A Temperature	485 ?F
	Recirc Loop B Temperature	529 ?F
	Bottom Head Temperature	500 ?F
	Reactor Power	30 %
B.	Steam Dome Pressure	1014 psig
	Recirc Loop A Temperature	495 ?F
	Recirc Loop B Temperature	529 ?F
	Bottom Head Temperature	495 ?F
	Reactor Power	90 %
C.	Steam Dome Pressure	981 psig
	Recirc Loop A Temperature	499 ?F
	Recirc Loop B Temperature	529 ?F
	Bottom Head Temperature	500 ?F
	Reactor Power	60 %
D.	Steam Dome Pressure	960 psig
	Recirc Loop A Temperature	481 ?F
	Recirc Loop B Temperature	525 ?F
	Bottom Head Temperature	495 ?F
	Reactor Power	60 %

QUESTION 47 **NRC RECORD # WRI 122**
ANSWER: C. **SYSTEM # B33; B21** **K/A 216000 K1.23: 3.3/3.4**
202001 A4.01: 3.7/3.7
LP# GLP-OPS-B3300
OBJ. 26.3 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 06-OP-1B33-V-0005 NEW
Data Sheet IV sect. 5.4 MODIFIED ***BANK***
DIFF 2; CA **04-1-01-B33-1 sect 3.3** **NRC 3/1998**
RO SRO ***BOTH*** **CFR 41.5**
REFERENCE MATERIAL REQUIRED: STEAM TABLES

QUESTION 48

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 48 **NRC RECORD # WRI 328**
ANSWER:. B. **SYSTEM # E51** **K/A 217000 A1.01: 3.7/3.7**
LP# GG-1-LP-OP-E5100
OBJ. 8c, i, k, 19 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: E-1185-02, 06, 15, 34, 35 NEW
MODIFIED ***BANK***
DIFF 1; M **NRC 12/2000**
RO SRO ***BOTH*** **CFR 41.5/41.7/41.10**
REFERENCE MATERIAL REQUIRED: None

QUESTION 49

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 – 155 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 49		**NRC RECORD # WRI 620**	
ANSWER: C.	**SYSTEM # E22-2**	**K/A 218000**	**K4.03: 3.8/4.0**
LP# GG-1-LP-OP-E2202			**K5.01: 3.8/3.8**
OBJ. 15	**SRO TIER 2 GROUP 1 /**	**RO TIER 2 GROUP 1**	
REFERENCE:	**04--1-02-1H13-P601**	NEW	
	18A-B3, B4, C2	MODIFIED	***BANK***
DIFF 1, M	**19A-B3, B4, C2**		**NRC 12/00**
		RO SRO ***BOTH***	**CFR 41.7**
REFERENCE MATERIAL REQUIRED:	None		

QUESTION 50

The plant is operating at 100% power steady state.

All power from offsite is lost.

All systems respond and function properly.

All plant parameters remain in their normal band.

Division 1 and 2 Load Shedding and Sequencing (LSS) functions properly.

Which of the following components is without power at this time?

A. Drywell Chillers A.

B. Division 1 Drywell Cooler Fans.

C. Drywell Chillers B.

D. Division 2 Drywell Cooler Fans.

QUESTION 50		**NRC RECORD # WRI 528**	
ANSWER: A.	**SYSTEM # M51**	**K/A 223001**	**K2.09: 2.7/2.9**
			K2.10: 2.7/2.9
LP# GG-1-LP-OP-M5100			**K2.08: 2.7/3.0**
OBJ. 7a&c; 9a	**SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**		
REFERENCE:	**04-1-01-R21-1 Table 1**	NEW	
	04-1-01-M51-1 Att III	MODIFIED	***BANK***
DIFF 2; CA	**04-1-01-P72-1 Att II**		**NRC 6/2001**
		RO SRO ***BOTH***	**CFR 41.7/41.8**
REFERENCE MATERIAL REQUIRED:	NONE		

QUESTION 51

An LOCA has occurred.

Reactor scram immediate actions are complete.

The following conditions exist:

Reactor water level	+ 20 inches after dropping to – 32 inches
Reactor pressure	40 psig
Drywell pressure	1.5 psig

Which one of the following should be isolated?

A. Reactor Water Cleanup system

B. Reactor Sample Isolation valves

C. Reactor Core Isolation Cooling Vacuum Breaker valves

D. Main Steam Line Drain Isolation valves B21-F016 & F019

QUESTION 51 **NRC RECORD # WRI 385**
ANSWER: C. **SYSTEM # E51** **K/A 223002** **A2.09: 3.6/3.7**
2.4.4: 4.0/4.3
LP# GG-1-LP-OP-E5100 **2.4.21: 3.7/4.3**
OBJ. 8o **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 05-1-02-III-5 Group 9 NEW
MODIFIED ***BANK***
DIFF 1; M **NRC 12/2000**
RO SRO ***BOTH*** **CFR 41.7/41.9**
REFERENCE MATERIAL REQUIRED: None

QUESTION 52

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.

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 52 **NRC RECORD # WRI 337**
ANSWER: D. **SYSTEM # E22-2** **K/A 239002 K1.05: 3.1/3.3**
LP# GG-1-LP-OP E2202
OBJ. 7; 11; 13; 19d; 28 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: **05-1-02-V-9 sect 3.15** NEW
04-1-01-B21-1 MODIFIED ***BANK***
DIFF 2; CA **Sect 4.2.2** **NRC 12/2000**
M-1077C & E RO SRO ***BOTH*** **CFR 41.3**
REFERENCE MATERIAL REQUIRED: None

QUESTION 53

The plant is operating at 45% power.

An incident at the Front Standard of the Main Turbine resulted in a local manual trip of the Main Turbine.

Which one of the following describes the response of the plant?

A. The reactor will scram on Turbine Valve fluid pressure and the Turbine Bypass Valves will open.

B. The reactor will scram on high reactor flux and the Turbine Bypass Valves will open.

C. The reactor will scram on Turbine Valve fluid pressure, the Turbine Bypass Valves will open, and 9 Safety Relief Valves will open.

D. The reactor will scram on high reactor flux, the Turbine Bypass Valves will open, and Safety Relief Valves will open.

QUESTION 53		**NRC RECORD # WRI 244**		
ANSWER: A.	**SYSTEM # N32; C71**	**K/A 241000**	**K6.11: 3.4/3.4**	
			A1.01: 3.9/3.8	
			A1.02: 4.1/3.9	
LP# GLP-OP-C7100			**A1.07: 3.8/3.7**	
OBJ. 9, 10; 23	**SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**			
REFERENCE:	**FSAR Table 15.2-4**	NEW		
	Tech Spec 3.3.1.1 & bases	MODIFIED		***BANK***
DIFF 2; CA	**FSAR Table 15.2-2**			**NRC 4/2000**
		RO SRO ***BOTH***		**CFR 41.5**
REFERENCE MATERIAL REQUIRED:		None		

QUESTION 54

Which one of the following signals will cause a SBGT system 'A' initiation?

A. Fuel handling area exhaust rad monitor 'A' indicating 4.2 mRem/hr.
Fuel handling area exhaust rad monitor 'D' mode switch NOT in operate.

B. Fuel pool sweep exhaust rad monitor 'A' indicating 32 mRem/hr.
Fuel pool sweep exhaust rad monitor 'C' indicating 34 mRem/hr.

C. Fuel handling area exhaust rad monitor 'B' indicating 5.3 mRem/hr.
Fuel handling area exhaust rad monitor 'C' inop trip.

D. Fuel pool sweep exhaust rad monitor 'A' indicating 31 mRem/hr.
Fuel pool sweep exhaust rad monitor 'C' inop trip.

QUESTION 54 **NRC RECORD # WRI 621**
ANSWER: A. **SYSTEM # T48; D17; T42** **K/A 261000 K4.01: 3.7/3.8**
LP# GG-1-LP-OP-T4801
OBJ. 8f **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H13-P870 2A-A3 NEW
04-1-02-1H13-P601 ***MODIFIED*** BANK
DIFF 1, M **19A-B9** **LOT 9/99 ESF**
TRM table 3.3.6.2-1 RO SRO ***BOTH*** **CFR 41.7/41.11**
REFERENCE MATERIAL REQUIRED: None

QUESTION 55

A plant startup is in progress.

The Operator at the Controls has just shifted the ‘A’ Recirculation Pump to fast speed. The ‘B’ Recirculation pump is running in slow speed with its flow control valve at 100% open.

Immediately after the pump up-shift, the following indications were received in the Main Control Room:

Reactor Power 34 % and stable.
Reactor level dropped to + 32 inches.
Annunciator RECIRC FCV A PARTIAL CLOSE/ RFP TRIP (P680-3A-D1) is illuminated.

Which one of the following would be the expected response of the Recirculation System? (No other alarms or indicating lights have been received.)

A. The ‘A’ Recirc Flow Control Valve will remain at present position and will require resetting via the RECIRC PUMP A CAV INTLK RESET pushbutton.

B. The ‘A’ Recirc Flow Control Valve Hydraulic Power Unit will require resetting from the Control Room Back Panels and then the valve opened to 15 – 20 % valve position.

C. The ‘A’ Recirc Flow Control Valve runback to 0 % valve position and ‘B’ Recirc Flow Control valve will runback to 15 – 20 % valve position and then both valves will be reset via the RECIRC PUMP A CAV INTLK RESET pushbutton.

D. The ‘A’ Recirc Flow Control Valve will remain at present position and ‘B’ Recirc Flow Control Valve will runback to 15 – 20 % valve position and then both valves will be reset via the RECIRC PUMP A CAV INTLK RESET pushbutton

QUESTION 55		**NRC RECORD # WRI 235**	
ANSWER: A.	**SYSTEM # B33**	**K/A 202002 A3.01: 3.6/3.4**	
LP# GLP-OPS-B3300			
OBJ. 20, 24, 50	**SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**		
REFERENCE:	**04-1-02-H13-P680**	NEW	
	3A-D1	MODIFIED	***BANK***
DIFF 1; M	**04-1-01-B33-1 section 6.6**		**NRC 4/2000**
		RO SRO ***BOTH***	**CFR 41.6**
REFERENCE MATERIAL REQUIRED:		None	

QUESTION 56

The plant was operating at full power when a leak on the RFPT 'A' lube oil reservoir resulted in a trip of both AC RFPT Lube Oil Pumps.

The ACRO noted bearing oil pressure at 2 psig.

Which one of the following describes the response of the Feedwater System and the ability to inject water to the Reactor?

A. RFPT 'A' will continue to operate using the Emergency RFPT Lube Oil Pump. Reactor water level will continue to be maintained by Feedwater.

B. RFPT 'A' will trip and isolate the RFPT and power will be reduced with Recirc to within the capabilities of RFPT 'B' allowing reactor level to be recovered to close to normal levels.

C. RFPT 'A' will trip and isolate feedwater to the reactor vessel resulting in a lowering reactor water level and eventual reactor scram. Water level must be recovered using ECCS and RCIC.

D. RFPT 'A' will trip and power will be reduced with Recirc to within the capabilities of RFPT 'B' with level being maintained at 18 inches until the Digital Feedwater Control System can be restored to three element control.

QUESTION 56 **NRC RECORD # WRI 622**
ANSWER: B. **SYSTEM # N21; B33** **K/A 259001** **A2.01: 3.7/3.7**
K1.11: 2.7/2.7
K4.06: 2.5/2.6
LP# GG-1-LP-OP-N2100 **K6.09: 2.8/2.9**
OBJ. 12; 14; 16; 37
LP# GLP-OPS-B3300
OBJ. 24.1; 24.2; 47 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H13-P680 ***NEW***
2A-A2, B1, B2; 3A-A3 MODIFIED BANK
DIFF 2; CA **04-1-01-N21-1 sect 3.7**
RO SRO ***BOTH*** **CFR 41.4**
REFERENCE MATERIAL REQUIRED: None

QUESTION 57

The plant was operating at full power.

The variable leg of the transmitters off of D004C Condensing pot has broken and drained the water from the associated level transmitters.

The Digital Feed Control System was aligned for normal operations.

Which one of the following describes the response of the Digital Feed Control System (DFCS) and actual Reactor Water Level?

A. Reactor water level will drop initially then is restored when DFCS automatically transfers from Three Element Control to Single Element Control.

B. Reactor water level will drop initially then is restored when the DFCS automatically deselects C Narrow Range and is replaced with Upset Range for level control.

C. Reactor water level will rise initially then is restored when the DFCS automatically deselects C Narrow Range and is replaced with Upset Range for level control.

D. Reactor water level will remain stable and the DFCS automatically deselects C Narrow Range and is replaced with Upset Range for level control.

QUESTION 57 **NRC RECORD # WRI 623**
ANSWER: D. **SYSTEM # N21; C34; B21** **K/A 259002 K1.03: 3.8/3.9**
LP# GG-1-LP-OP-C3401
OBJ. 3f; 22; 25
LP# GLP-OPS-B2101
OBJ. 8.1; 8.4; 20 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: 04-1-02-1H13-P680 2A-C9 ***NEW*** MODIFIED BANK
DIFF 2; CA
RO SRO ***BOTH*** **CFR 41.4/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 58

The Electrical line up is normal.

A LOCA condition has caused Drywell Pressure to rise to 1.6 psig.

A switching error causes 500 kV voltage to drop.

The voltage to ALL ESF busses drops to 3290 volts.

The voltage transient duration is 10 seconds and then voltage returns to normal.

Which one of the following statements is the condition of the ESF busses 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 58 **NRC RECORD # WRI 11**
ANSWER: B. **SYSTEM # R21** **K/A 264000** **2.4.4: 4.0/4.3**
LP# GG-1-LP-OP-R2100 **K4.05: 3.2/3.2**
A3.05: 3.4/3.4
OBJ. 12; 20; 22; 37 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 1**
REFERENCE: **04-1-01-R21-1 sect 5.1.1a** NEW
04-1-01-P81-1 sect 3.22 MODIFIED ***BANK***
DIFF 2; CA **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.8**
REFERENCE MATERIAL REQUIRED: **NONE**

QUESTION 59

Select the statement that describes the MOST probable cause of the following plant conditions:

Annunciator "**RECIRC PMP B SEAL STG FLO HI/LO**" alarms.

Annunciator "**RECIRC PMP B OUTR SEAL LEAK HI**" alarms.

Recirc pump 'B' # 1 seal cavity pressure: 1020 psig.

Recirc pump 'B' # 2 seal cavity pressure: 100 psig

A. Failure of the # 1 seal.

B. Failure of the # 2 seal.

C. Failure of the CRD seal purge regulator.

D. Plugging of the orifice between # 1 and # 2 seals.

QUESTION 59 **NRC RECORD # WRI 540**
ANSWER: B. **SYSTEM # B33** **K/A 202001** **A2.10: 3.5/3.9**
LP# GLP-OPS-B3300 **A1.09: 3.3/3.3**
A1.10: 2.6/2.7
OBJ. 29.4 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
REFERENCE: 04-1-02-1H13-P680 NEW
3A-A12 & 3A-B11 MODIFIED ***BANK***
DIFF 2; CA **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.3/41.5**
REFERENCE MATERIAL REQUIRED: NONE

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QUESTION 60

The plant is in a refuel outage.

Reactor Water Clean-Up (RWCU) is operating.

Residual Heat Removal (RHR) B is in Shutdown Cooling.

E12-F048B RHR B Heat Exchanger Bypass valve is FULL OPEN.

E12-F003B RHR B Heat Exchanger Outlet valve is FULL CLOSED.

Which of the following would be a valid indication of Reactor Coolant Temperature under present plant conditions?
P & IDs M-1079 and M-1085A are provided.

A. RHR B heat exchanger B001B inlet temperature E12 TE-N004B

B. RHR B heat exchanger B002B inlet temperature E12 TE-N002B.

C. RHR B heat exchanger discharge temperature E12 TE-N027B.

D. RWCU Non-Regen heat exchanger inlet temperature G33 TE-N006.

QUESTION 60		**NRC RECORD # WRI 541**	
ANSWER: C.	**SYSTEM # E12**	**K/A 205000**	**K1.03: 3.4/3.5**
LP# GLP-OPS-E1200			
OBJ. 14	**SRO TIER 2 GROUP 2 /**	**RO TIER 2 GROUP 2**	
REFERENCE:	**04-1-01-E12-1**	NEW	
	sect 4.2.2.e.13 Caution	MODIFIED	***BANK***
DIFF 2; CA	**P&ID M1085A**		**NRC 6/2001**
	M-1079	RO SRO ***BOTH***	**CFR 41.2/41.3/41.4**
REFERENCE MATERIAL REQUIRED:	**M-1079 & M-1085A**		**41.5**

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QUESTION 61

Suppression Pool Cooling is in service to support a RCIC surveillance.

Which of the following statements accurately depicts the required operation of E12-F003A(B), RHR Heat Exchanger Outlet Valve, and E12-F048A(B), RHR Heat Exchanger Bypass Valve, while in Suppression Pool cooling?

A. Maintain flow greater than 4000 gpm. If the F048A(B) is not full OPEN, avoid using F003A(B) to throttle flow for extended periods (30 minutes) in the 0% to 15% open range.

B. Maintain flow greater than 4000 gpm. If the F048A(B) is not full CLOSED, avoid using F003A(B) to throttle flow for extended periods (60 minutes) in the 0% to 15% open range.

C. Maintain heat exchanger flow less than 8600 gpm. If the F048A(B) is not full OPEN, avoid using F003A(B) to throttle flow for extended periods (30 minutes) in the 0% to 15% open range.

D. Maintain heat exchanger flow less than 8600 gpm. If the F048A(B) is not full CLOSED, avoid using F003A(B) to throttle flow for extended periods (60 minutes) in the 0% to 15% open range.

QUESTION 61		**NRC RECORD # WRI 624**	
ANSWER: A.	**SYSTEM # E12**	**K/A 219000**	**K5.04: 2.9/2.9**
LP# GLP-OPS-E1200			**2.1.32: 3.4/3.8**
OBJ. 14.1	**SRO TIER 2 GROUP 2 /**	**RO TIER 2 GROUP 2**	
REFERENCE:	**04-1-01-E12-1**	NEW	
	sect 3.2.3; 3.6.3b;	MODIFIED	***BANK***
DIFF 1; M	**5.2.2a(5) Caution**		**NRC 12/00 id 282**
		RO SRO ***BOTH***	**CFR 41.7**
REFERENCE MATERIAL REQUIRED:	**None**		

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QUESTION 62

In which one of the following situations would containment spray be in service?

A. 5 minutes since LOCA signal received
Reactor water level - 192 inches
RHR A and B pumps operating on minimum flow
Drywell pressure 2 psig
CTMT pressure 9 psig

B. 12 minutes since LOCA signal received
Reactor water level - 192 inches
RHR A and B pumps operating on minimum flow
Drywell pressure 0.7 psig
CTMT pressure 8 psig

C. 13 minutes since LOCA signal received
Reactor water level - 92 inches
RHR A and B pumps were overridden off 2 min. after LOCA
Drywell pressure 5 psig
CTMT pressure 4 psig

D. 15 minutes since LOCA signal received
Reactor water level - 92 inches
RHR A and B pumps were overridden off 2 min. after LOCA
Drywell pressure 3 psig
CTMT pressure 8 psig

QUESTION 62 **NRC RECORD # WRI 625**
ANSWER: D. **SYSTEM # E12** **K/A 226001 A3.07: 3.5/3.5**
LP# GLP-OPS-E1200 **A3.01: 3.0/3.0**
OBJ. 10.1; 11.2 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 2**
REFERENCE: 04-1-01-E12-1 sect 3.3 NEW
04-1-02-1H13-P601 ***MODIFIED*** BANK
DIFF 1; M **17A-F3; 20A-B6** **LOT 7/95**
RO SRO ***BOTH*** **CFR 41.7/41.8**
REFERENCE MATERIAL REQUIRED: None

QUESTION 63

GGNS Main Generator has a limit to carry no more than ? 250 MVARs.

What is the basis for this limitation?

A. This is the Maximum reactive load allowed by the manufacturer due to the heat build up in the stator windings at full power.

B. GGNS is a base load station such that Entergy dispatchers are required to minimize the reactive load carried on the Main Generator.

C. GGNS Main Generator reverse power relays will not recognize a reverse power condition at high reactive load and will not provide the required trip.

D. The Generator V-Curves supplied by the manufacturer limit the power factor on the generator to reduce hysteresis losses.

QUESTION 63		**NRC RECORD # WRI 44**	
ANSWER: C.	**SYSTEM # N41**	**K/A 245000**	**A4.14: 2.5/2.5**
			A3.10: 2.5/2.6
LP# GG-1-LP-OP-N4151			**K4.06: 2.7/2.8**
OBJ 7; 13	**SRO TIER 2 GROUP 2 /**	**RO TIER 2 GROUP 2**	
REFERENCE:	**04-1-01-N40-1 sect. 3.8**	NEW	
		MODIFIED	***BANK***
DIFF 1; M			**NRC 3/1998**
		RO SRO ***BOTH***	**CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED:		**NONE**	

QUESTION 64

The plant is operating normally at full power rated conditions.

A rupture of tubes in the 3A Low Pressure Feedwater Heater resulted in an automatic isolation of the Feedwater Heater String.

Which one of the following describes the limitations on plant operations?

A. Power is limited to a maximum of 50% rated thermal power utilizing Condensate and Heater Drain pumps to a limit of 250 psid differential pressure across the LP Feedwater Heaters due to 1/3 Condensate System capacity.

B. Power is limited to a maximum of 75% rated thermal power without restrictions on the use of Condensate and Heater Drain pumps.

C. Power is limited to a maximum of 100% rated thermal power without restrictions on the use of Condensate and Heater Drain pumps opening the LP Feedwater Heater Bypass valve as necessary to reduce differential pressure.

D. Power is limited as necessary to maintain the turbine parameters within limits without restrictions on the operation of the Condensate and Heater Drain Pumps.

QUESTION 64		**NRC RECORD # WRI 294**		
ANSWER: D.	**SYSTEM # N23; N19**	**K/A 256000**	**A3.07: 2.9/2.9**	
			A3.04: 3.0/3.0	
			A3.01: 2.7/2.7	
LP# GLP-OPS-N2335			**A2.08: 3.1/3.1**	
OBJ. 15	**SRO TIER 2 GROUP 3 /**	**RO TIER 2 GROUP 2**		
REFERENCE:	**04-1-01-N23-1 sect 3.10**	NEW		
	03-1-01-2 sect 2.10.2	MODIFIED		***BANK***
DIFF 1; M				**NRC 4/2000**
		RO SRO ***BOTH***		**CFR 41.4**
REFERENCE MATERIAL REQUIRED:		None		

QUESTION 65

Bus 16AB has experienced an undervoltage condition.

Diesel Generator 12 failed to start.

Power to bus 16AB has been restored by the Control Room Operator from transformer ESF 11.

Reactor water level and pressure are stable.

Which one of the following is the type of load sequencing that will take place?

A. Bus Undervoltage Sequence

B. Loss of Offsite Power Sequence

C. Loss of Coolant Accident Sequence

D. Bus Undervoltage Sequence following automatic source selection

QUESTION 65 **NRC RECORD # WRI 626**
ANSWER: A. **SYSTEM # R21** **K/A 262001 A3.04: 3.4/3.6**
LP# GG-1-LP-OP-R2100
OBJ. 15; 16; 17; 18 **SRO TIER 2 GROUP 1 / RO TIER 2 GROUP 2**
REFERENCE: E-1039 NEW
MODIFIED BANK
DIFF 1; M **LOT 8/02**
RO SRO ***BOTH*** **CFR 41.4/41.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 66

Static inverter 1Y95 has automatically transferred to its alternate power source because of a fault on its normal power source.

Two hours later, the electricians have repaired the fault and the normal power source for 1Y95 is re-energized.

Which one of the following statements describes the restoration of the inverter to its NORMAL source?

A. The inverter static switch can be manually transferred back to the normal power source, only if the power sources are IN SYNC.

B. The inverter static switch will automatically transfer back to the normal power source, only if the power sources are IN SYNC.

C. The inverter static switch will automatically transfer back to the normal power source, regardless of whether the power sources are IN SYNC.

D. The inverter static switch can be manually transferred back to the normal power source, regardless of whether the power sources are IN SYNC.

QUESTION 66 **NRC RECORD # WRI 544**
ANSWER: A. **SYSTEM # L62** **K/A 262002 A3.01: 2.8/3.1**
LP# GG-1-LP-OP-L6200
OBJ. 4b; 10a **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
REFERENCE: 04-1-01-L62-1 NEW
sect 3.2 & 3.5 MODIFIED ***BANK***
DIFF 1; M **NRC 6/2001**
RO SRO ***BOTH*** **CFR 41.7/41.10/43.5**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 67

The plant was operating at 100 % power when Control Room Operators rapidly reduced power due to changes in feedwater heating.

Annunciator "MSL RAD HI" was received.

No other radiation alarms were received and indications on the Main Steam Line Radiation Monitors are elevated.

All other radiation levels have dropped from previous readings.

Which one of the following is the most likely cause of these conditions?

A. Fuel cladding failure

B. Resin intrusion into the reactor

C. Hydrogen water chemistry is in service

D. Release of crud containing Co-60 into the reactor

QUESTION 67 **NRC RECORD # WRI 627**
ANSWER: C. **SYSTEM # P73; D17** **K/A 272000** **A1.01: 3.2/3.2**
LP# GG-1-LP-OP-P7300
OBJ. 8 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
REFERENCE: 04-1-02-1H13-P601 ***NEW***
19A-D4; 18A-D4 MODIFIED BANK
DIFF 1; M
RO SRO ***BOTH*** **CFR 41.10/41.11**
REFERENCE MATERIAL REQUIRED: None **43.4/43.5**

QUESTION 68

The Plant is operating at 100 % power.

The Motor Driven Fire pump is out of service.

A fire in Transformer ESF 12 has initiated the Deluge system for the transformer.

The A Diesel Driven Fire Pump received a signal to start.

Which one of the following describes the starting limitations of the Diesel Driven Fire Pump?

A. The diesel engine will attempt to start for 15 minutes. If the diesel does not start it alarms in the Control Room, and it must be reset from the Control Room before it will attempt to start again.

B. The diesel engine will attempt to start for 15 seconds, then wait for 15 seconds. It will attempt this start sequence for 6 attempts. After that, it must manually be reset before any further start attempts occur.

C. The diesel engine will attempt to start for 15 seconds then wait for 15 minutes to allow the battery to recharge, then it will attempt this cycle again. After that it must manually be reset before any further start attempts occur.

D. The diesel engine will attempt to start as long as air pressure is > 60 psig. After that, the air bank must recharge before additional start attempts can occur.

QUESTION 68		**NRC RECORD # WRI 3**		
ANSWER: B.	**SYSTEM # P64**	**K/A 286000**	**A2.08: 3.2/3.3**	
			K5.05: 3.0/3.1	
			K4.07: 3.3/3.3	
			A3.01: 3.4/3.4	
LP# GG-1-LP-OP-P6400			**A4.06: 3.4/3.4**	
OBJ. 6d	**SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**			
REFERENCE:	**ARI 04-S-02-SH13-P862**	NEW		
	1A-B3; 1A-B5	MODIFIED		***BANK***
DIFF 1; M	**sect. 1.2; 2.1; & 4.5**			**NRC 3/1998**
		RO SRO ***BOTH***		**CFR 41.4**
REFERENCE MATERIAL REQUIRED:		NONE		

QUESTION 69

A station blackout has occurred.

A fire has broken out in the Division II ESF Switchgear Room on 119 ft elevation area 10.

Which one of the following describes the ability to combat the fire?

A. Fire fighting will be limited to the use of portable fire extinguishers.

B. The CO2 fire suppression system can be overridden open and the Auxiliary Building Isolation Valves opened using the AUX BLDG ISO BYPASS Switch.

C. The Fire Water System Auxiliary Building Isolation Valves can be opened using the AUX BLDG ISO BYPASS Switch to provide fire water to hoses.

D. The Fire Water System Auxiliary Building Isolation Valves can be bypassed by manually opening the motor operated bypass valves.

QUESTION	**69**	**NRC RECORD # WRI 264**		
ANSWER: D.	**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		**286000**	**A2.09: 2.7/2.8**	
OBJ. 8a; 10; 16d,e,f; 20; 29	**SRO TIER 2**	**GROUP 1 / RO TIER 2 GROUP 2**		
REFERENCE:	**05-1-02-V-9**	NEW		
	Sect 3.19 & 5.46	MODIFIED		***BANK***
DIFF 2; CA	**05-1-02-III-5**			**NRC 4/2000**
	sect 3.4.4			
	M-0035E	RO SRO ***BOTH***		**CFR 41.9**
REFERENCE MATERIAL REQUIRED:		None		

QUESTION 70

An accident has occurred and a radiological release is in progress.

RCIC was manually initiated to maintain reactor water level.

The Main Steam failed to completely isolate upon a manual isolation when a steam leak was reported in the Turbine Building.

Annunciator "CONT RM VENT RAD HI" has been received.

There are various Turbine Building radiation alarms.

No other radiation alarms were received.

Which one of the following describes the response of the Control Room HVAC System (Z51)?
(ASSUME NO OPERATOR ACTIONS)

A. Control Room HVAC is operating in a normal configuration.

B. Control Room HVAC has isolated and the Control Room Standby Fresh Air Unit associated with the in service Control Room Air Conditioning Unit will automatically start.

C. Both Control Room Standby Fresh Air Units will automatically start to filter Control Room air with the remaining Control Room HVAC components continuing to operate as normal.

D. Control Room HVAC will isolate and both Control Room Standby Fresh Air Units will initiate to filter Control Room air with the in service Control Room Air Conditioning Unit remaining in operation.

QUESTION	**70**	**NRC RECORD # WRI 628**		
ANSWER: A.	**SYSTEM # Z51; D17**	**K/A 290003**	**A1.05: 3.2/3.3**	
LP# GG-1-LP-OP-Z5100				
OBJ. 8; 9; 11	**SRO TIER 2 GROUP 2 /**	**RO TIER 2 GROUP 2**		
REFERENCE:	**04-1-02-1H13-P601**	***<u>NEW</u>***		
	***<u>19A-A9</u>*; A10; A11**	MODIFIED	BANK	
DIFF 2; CA	**04-S-02-SH13-P855**			
	1A-A5; 2A-A5	RO SRO ***<u>BOTH</u>***	**CFR 41.7/41.11/43.4**	
	TRM Table 6.3.1-1			
REFERENCE MATERIAL REQUIRED:		**None**		

QUESTION 71

The operating Instrument Air Compressor has tripped.

The Standby Instrument Air Compressor fails to start.

Which one of the following describes the response of the Instrument/Plant/Service Air Systems?

A. Instrument Air pressure will continue to drop until an operator manually cross ties Service Air to the Instrument Air header down stream of the Instrument Air Dryers.

B. Instrument Air pressure will continue to drop until an operator manually cross ties Service Air to the Instrument Air header up stream of the Instrument Air Dryers.

C. Instrument Air pressure will continue to drop until the Service to Instrument Air cross tie automatically opens to connect to the Instrument Air header down stream of the Instrument Air Dryers.

D. Instrument Air pressure will continue to drop until the Service to Instrument Air cross tie automatically opens to connect to the Instrument Air header up stream of the Instrument Air Dryers.

QUESTION 71		**NRC RECORD # WRI 629**	
ANSWER: D.	**SYSTEM # P51; P52; P53**	**K/A 300000**	**K4.02: 3.0/3.0**
LP# GG-1-LP-OP-P5200			
OBJ. 3; 4			
LP# GLP-OPS-P5300			
OBJ. 3; 4	**SRO TIER 2 GROUP 2 /**	**RO TIER 2 GROUP 2**	
REFERENCE:	**05-1-02-V-9 sect 3.1.1**	***NEW***	
	M-1067A	MODIFIED	BANK
DIFF 1; M	**M-1068D**		
	M-1126	RO SRO ***BOTH***	**CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED:	**None**		

QUESTION 72

The plant is operating in the normal electrical lineup.

CCW pumps “A” and “C” are operating with “B” selected for STANDBY.

A Loss of Coolant Accident occurs resulting in a shedding of loads.

The “C” CCW pump trips on overcurrent.

Which of the following describes the resulting status of the CCW system?

(Assume NO operator action.)

A. Pump “A” operating; Pump “B” operating; Pump “C” tripped

B. Pump “A” operating; Pump “B” not operating; Pump “C” tripped

C. Pump “A” not operating; Pump “B” operating; Pump “C” tripped

D. Pump “A” not operating; Pump “B” not operating; Pump “C” tripped

QUESTION 72 **NRC RECORD # WRI 105**
ANSWER: B. **SYSTEM # P42** **K/A 400000** **K4.01: 3.4/3.9**
LP# GG-1-LP-OP-P4200
OBJ 5; 7a; 11h; 23 **SRO TIER 2 GROUP 2 / RO TIER 2 GROUP 2**
REFERENCE: 04-1-01-R21-1 Table 1 NEW
MODIFIED ***BANK***
DIFF 1; M **NRC 3/1998**
RO SRO ***BOTH*** **CFR 41.4**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 73

Radwaste is discharging the Floor Drain Sample Tank to the River.

Which one of the following would result in an isolation of the G17-F355 Liquid Radwaste Discharge Isolation Valve?

A. The Floor Drain Sample Pump discharge pressure is too low.

B. The blow down flow rate is too low.

C. The discharge flow rate is too low.

D. The effluent radiation monitor high radiation setpoint is reached.

QUESTION 73 **NRC RECORD # WRI 110**
ANSWER: B. **SYSTEM # G17** **K/A 268000** **A1.02: 2.6/3.6**
LP# GG-1-LP-OP-G1718
OBJ 6a, 7h, l **SRO TIER 2 GROUP 3 / RO TIER 2 GROUP 3**
REFERENCE: **ARI 04-1-02-H13-P601** NEW
19A-H7; 19A-H8 MODIFIED ***BANK***
DIFF 1; M **ARI 04-1-02-H13-P870** **NRC 3/1998**
6A-F3 RO SRO ***BOTH*** **CFR 41.13/43.4**
REFERENCE MATERIAL REQUIRED: **NONE**

QUESTION 74

A rise in Fuel Handling Area Exhaust Radiation levels have resulted in an actuation of Standby Gas Treatment. Standby Gas Treatment 'A' and 'B' initiated, but Standby Gas Treatment 'B' Exhaust and Enclosure Building fans failed to start.

Which of the following identifies the condition of the Auxiliary Building Ventilation System?

A. All fan coil units operating, Div I and Div II Secondary Containment Isolation dampers open.

B. All fan coil units shutdown, the Division I Secondary Containment Isolation dampers closed.

C. All fan coil units shutdown, Div I and Div II Secondary Containment Isolation dampers closed.

D. Div I fan coil units shutdown, the Division I Secondary Containment Isolation dampers closed.

QUESTION	**74**		**NRC RECORD # WRI 630**	
ANSWER: C.	**SYSTEM # T41; D17; T48**		**K/A 288000**	**K1.05: 3.3/3.6** **K1.02: 3.4/3.4**
LP# GG-1-LP-OP-T4100				
OBJ. 7; 9; 10; 11	**SRO TIER 2 GROUP 3 / RO TIER 2 GROUP 3**			
REFERENCE:	**05-1-02-III-5 Check list**		NEW	
	E-1257-01		***<u>MODIFIED</u>***	BANK
DIFF 2; CA	**E-1253-01, 02, 06, 07, 12**		**LOT 9/99 Vent**	
			RO SRO ***<u>BOTH</u>***	**CFR 41.7/41.11**
REFERENCE MATERIAL REQUIRED:			**None**	

QUESTION 75

The plant is operating at rated conditions.

The following are the parameters taken from the recent Mon Edit.

MFLCPR	0.94
MAPRAT	1.02
MFLPD	0.96
FDLRX	0.92
FCBB	2.42

Which of the following identifies the consequences of continued operation with thermal limits at the present values?

A. Fuel cladding could exhibit in excess of 1% plastic strain during a LOCA.

B. Possible peak cladding temperatures in excess of 2200ºF during a DBA LOCA.

C. There is a possibility of the onset of transition boiling in greater than 0.1 % of the fuel rods.

D. The core may become unstable during operation in the Restricted Region of the Power to Flow Map.

QUESTION 75 **NRC RECORD # WRI 631**
ANSWER: B. **SYSTEM # B21; Thermal Limits** **K/A 290002 A2.05: 3.7/4.2**
K5.01: 3.5/3.9
LP# General Physics HTFF
Chapter 9 Thermal Limits
OBJ. 9; 10 **SRO TIER 2 GROUP 3 / RO TIER 2 GROUP 3**
REFERENCE: Tech Spec Bases 3.2.1; 3.2.2; 3.2.3; 3.2.4 ***NEW*** MODIFIED BANK
DIFF 2; CA **10CFR50.46(b)(1)**
RO SRO ***BOTH*** **CFR 41.3/41.14/43.2**
REFERENCE MATERIAL REQUIRED: None

QUESTION 76

The Control Room has been abandoned due to a fire.

Prior to leaving the Control Room, the reactor mode switch was placed in the SHUTDOWN position.

When attempting to place RHR 'A' in shutdown cooling, RHR 'A' shutdown cooling suction valve E12-F009 failed to open.

The SRO has elected to use LPCI 'A' as an alternate means of shutdown cooling and has directed opening of breakers 52-1C71105 (CB5A), 52-1C71107 (CB7A), 52-1C71205 (CB5B), and 52-1C71207 (CB7B).

Which one of the following describes the effect of opening the above breakers?

Opening all four breakers will:

A. result in a closure of all MSIV's.

B. result in a reactor scram that is unable to be reset.

C. result in a complete Auxiliary Building and Containment isolation.

D. remove all interlocks associated with the LPCI 'A' injection valve (E12-F042A).

QUESTION 76 SRO **NRC RECORD # WRI 701**
ANSWER: A. **SYSTEM # C61;** **K/A 239001 K2.01: 3.3**
ONEP **295016 AA1.04: 3.2**
LP# GG-1-LP-OP-B1300
OBJ. 11a **SRO TIER 1 GROUP 1 / RO TIER GROUP**
REFERENCE: 05-1-02-II-1 (B) 3.15 Note NEW
MODIFIED BANK
DIFF 1; M **NRC 3/1998**
RO ***SRO*** BOTH **CFR41.7/41.10/43.5**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 77

Which one of the following work practices is NOT required to verify the proper grappling of an irradiated fuel assembly with the Fuel Handling Platform, prior to raising the hoist?

A. Attempt to rotate the mast.

B. Attempt to disengage the grapple.

C. Visually observe that the channel fastener is visible, if possible.

D. Obtain independent verification that the fuel assembly is correctly grappled.

QUESTION 77 SRO		**NRC RECORD # WRI 187**	
ANSWER: B.	**SYSTEM # F11**	**K/A 295023**	**AA1.03: 3.6**
LP# GG-1-LP-RF-F1108			
OBJ. 5c			
LP# GG-1-LP-RF-F1107			
OBJ. 1	**SRO TIER 1 GROUP 1 /**	**RO TIER**	**GROUP**
REFERENCE:	**04-1-01-F11-1**	NEW	
	Sect 4.5.2 Caution	MODIFIED	***BANK***
DIFF 1; M	**Operations Expectation 9**		**NRC 6/2001**
	GE RICSIL 036	RO ***SRO*** BOTH	**CFR 41.2/41.6/43.6**
REFERENCE MATERIAL REQUIRED:	None		**43.7**

QUESTION 78

Which one of the following is the basis for Hydrogen Control of the Emergency Procedures during accidents in a Mark III Containment?

Ignition of excess Hydrogen when mixed with sufficient concentrations of Oxygen in a confined space could result in:

A. peak pressures in excess of either Drywell structural capability **or** Drywell-to-Containment differential pressure.

B. peak pressures in excess of either Containment structural capability **or** Drywell-to-Containment differential pressure.

C. peak pressures in excess of either Drywell structural capability **or** Drywell pressurization rates.

D. peak pressures in excess of either Drywell-to-Containment differential pressure **or** Drywell pressurization rates.

QUESTION	**78 SRO**		**NRC RECORD # WRI 505**	
ANSWER: B.	**SYSTEM # EP Bases**		**K/A 500000**	**EK1.01: 3.9**
LP# GG-1-LP-RO-EP03				**2.4.18: 3.6**
OBJ. 6	**SRO TIER 1 GROUP 1 / RO TIER GROUP**			
REFERENCE:	**GGNS PSTG Appendix B**		NEW	
	PC/G Combustible Gas Conc.		***MODIFIED***	BANK
DIFF 1; M			**NRC 6/2001**	
			RO ***SRO*** BOTH	**CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED:	None			

QUESTION 79

A station blackout has occurred and the Baxter Wilson and Franklin Transmission lines are out of service. Bus 17AC has tripped on overcurrent lockout.

Reactor water level is stable at +4 inches.

Reactor pressure is 850 psig and slowly dropping.

A leak has developed in the RHR ‘C’ suction piping.

Suppression Pool level is currently 16.5 feet.

Containment is inaccessible.

Which one of the following systems can be utilized to raise Suppression Pool water level from the Control Room?

A. High Pressure Core Spray

B. Reactor Core Isolation Cooling

C. Refueling Water Transfer System

D. Suppression Pool Makeup System

QUESTION 79 SRO **NRC RECORD # WRI 703**
ANSWER: B. **SYSTEM # EP3** **K/A 295030 EA1.02: 3.5**
LP# GG-1-LP-RO-EP03
OBJ. 2; 3 **SRO TIER 1 GROUP 1 / RO TIER GROUP**
REFERENCE: 05-S-01-EP-3 steps 40, 41 ***NEW***
MODIFIED BANK
DIFF 2; CA
RO ***SRO*** BOTH **CFR 41.9/41.10/43.5**
REFERENCE MATERIAL REQUIRED: 05-S-01-EP-3

QUESTION 80

Which one of the following describes the Reactor Vessel Pressure Safety Limit and actions to be taken if violated?

A. Reactor Pressure above 1325 psig as read on Reactor Pressure Wide Range instrumentation. This pressure may be exceeded during vessel hydro with the permission of the NRC.

B. Reactor Pressure above 1325 psig as read on Reactor Pressure Wide Range instrumentation. When exceeded pressure must immediately be reduced and the reactor shutdown until NRC permission is granted for restart.

C. Reactor Pressure above1375 psig as read on Reactor Pressure Wide Range instrumentation. This pressure may be exceeded during vessel hydro with the permission of the NRC.

D. Reactor Pressure above 1375 psig as read on Reactor Pressure Wide Range instrumentation. When exceeded pressure must immediately reduced and the reactor shutdown until NRC permission is granted for restart.

QUESTION 80 SRO **NRC RECORD # WRI 704**
ANSWER: B. **SYSTEM # Safety Limits** **K/A 295025** **EK1.05: 4.7**
2.2.22: 4.1
2.2.25: 3.7
LP# GG-1-LP-OP-TS001 **EK1.02: 4.2**
OBJ. 24; 28; 29; 30 **SRO TIER 1 GROUP 1 / RO TIER GROUP**
REFERENCE: **Tech Specs 2.1.2 & Bases** ***<u>NEW</u>***
01-S-06-5 MODIFIED BANK
DIFF 1; M **sect 6.2.3 Caution**
RO ***<u>SRO</u>*** BOTH **CFR 41.3/43.2**
REFERENCE MATERIAL REQUIRED: **NONE**

QUESTION 81

The plant is operating at 100% power.

Steam flow transmitter C34-N030B has failed upscale.

Which one of the following describes the response of actual reactor water level and the Digital Feed Control System (DFCS)?

A. Reactor water level will remain stable when the DFCS system automatically de-selects and locks out three element control and selects single element control.

B. Reactor water level will remain stable when the level dominance of the DFCS takes over and automatically substitutes average steam flow for the failed value

C. Reactor water level will immediately rise then return to normal level when the DFCS system automatically de-selects and locks out three element control and selects single element control.

D. Reactor water level will immediately rise then return to normal level when the level dominance of the DFCS takes over and automatically substitutes average steam flow for the failed value.

QUESTION 81 SRO **NRC RECORD # WRI 705**
ANSWER: A. **SYSTEM # C34; B21** **K/A 295009** **AA2.02: 3.7**
LP# GG-1-LP-OP-C3401
OBJ. 5c; 23 **SRO TIER 1 GROUP 1 / RO TIER GROUP**
REFERENCE: 04-1-02-1H13-P680 ***NEW***
2A-C9 MODIFIED BANK
DIFF 2; CA
RO ***SRO*** BOTH **CFR 41.7/43.5**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 82

Power has been lost to Division I and II buses. Division III bus and Diesel Generator are available.

The Shift Manager has decided to cross tie Division III bus to Division II bus.

Which one of the following describes the alignment of power to supply Division II bus from Division III?

A. Division III bus is aligned through the ESF Transformer 21 feeder to back feed through the secondary windings of ESF 21 through the normal bus feeder to Division II bus from ESF 21 Transformer.

B. Division III bus has interlocks defeated and is aligned through the ESF Transformer 11 feeder to back feed through the secondary windings of ESF 11 through the normal bus feeder to Division II bus from ESF 11 Transformer.

C. Division III bus has interlocks defeated and is aligned through the ESF Transformer 12 feeder to back feed through the secondary windings of ESF 12 through the normal bus feeder to Division II bus from ESF 12 Transformer.

D. Division III bus has interlocks defeated and is aligned through the ESF Transformer 21 feeder to back feed through the secondary windings of ESF 21 through the normal bus feeder to Division II bus from ESF 21 Transformer.

QUESTION 82 SRO **NRC RECORD # WRI 706**
ANSWER: C. **SYSTEM # R27; R21** **K/A 295003** **AK2.03: 3.9**
AK1.06: 4.0
LP# GLP-OPS-ONEP **AA1.01: 3.8**
OBJ. 12
LP# GG-1-LP-OP-R2100
OBJ. 28; 37 **SRO TIER 1 GROUP 1 / RO TIER GROUP**
REFERENCE: E-0001 ***NEW***
05-1-02-I-4 sect 3.2.9 MODIFIED BANK
DIFF 1; M
RO ***SRO*** BOTH **CFR 41.4/41.10/43.5**
REFERENCE MATERIAL REQUIRED: E-0001

QUESTION 83

A Refueling Outage is in progress.

The plant is in Mode 4 making preparations for vessel disassembly.

An incident on the Refueling Floor has resulted in radiation levels on the 208 and 245ft elevations in the Auxiliary Building to rise to 20 mr/hr.

Fuel Handling Area Ventilation Radiation Monitor is indicating 16 mr/hr.

Personnel have been evacuated.

Which one of the following describes the actions that should be taken with present plant conditions?

A. Verify Fuel Handling Area Ventilation has isolated and Standby Gas Treatment has initiated.

B. Manually isolate Fuel Handling Area Ventilation and once isolated manually initiate Standby Gas Treatment.

C. Set Secondary Containment, verify Fuel Handling Area Ventilation has isolated and Standby Gas Treatment has initiated.

D. Set Primary and Secondary Containment, and manually isolate Fuel Handling Area Ventilation and once isolated manually initiate Standby Gas Treatment.

QUESTION	**83 SRO**		**NRC RECORD # WRI 707**	
ANSWER: C.	**SYSTEM # T42; T48; M41-1**		**K/A 295034**	**EK2.05: 3.7**
LP# GG-1-LP-OP-T4200				
OBJ. 7a & b	**SRO TIER 1 GROUP 2 /**		**RO TIER**	**GROUP**
REFERENCE:	**04-1-02-1H13-P601 19A-B9**	***NEW***		
	05-1-02-II-8 sect 3.2	MODIFIED		BANK
DIFF 2; CA	**Tech Specs 3.6.1.1; 3.6.4.3; 3.6.4.1**			
	SOER 96-01	RO ***SRO*** BOTH		**CFR 41.4/41.10 41.13/43.4**
REFERENCE MATERIAL REQUIRED:	**NONE**			

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QUESTION 84

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 Duty Manager; notify the NRC within one (1) hour.

B. General Manager-Operations; notify the NRC within four (4) hours.

C. Licensed Senior Reactor Operator; notify the NRC within one (1) hour.

D. Licensed Reactor Operator; notify the NRC within four (4) hours.

QUESTION	**84 SRO**		**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-OP-PROC				
OBJ. 11o & 14h		**SRO TIER 3 GROUP / RO TIER GROUP**		
REFERENCE:	**01-S-06-5 Att. III, I.3**		NEW	
	01-S-06-2 sect. 6.2.1e(4)		***MODIFIED***	BANK
DIFF 1; M	**10 CFR 50.54x & y**		**NRC 12/2000**	
			RO ***SRO*** BOTH	**CFR41.10/43.3/43.5**
REFERENCE MATERIAL REQUIRED:	**01-S-06-5**			

QUESTION 85

You have assumed the shift as Control Room Supervisor.

The Crew has the following complement.

1 Shift Manager (SRO)	1 Control Room Supervisor (SRO)
1 Shift Supervisor (SRO/STA)	3 Reactor Operators (RO)
2 Radwaste Operators	5 Nuclear Operator 'B's (NOB)

All crew members are qualified fire brigade except the Shift Manager and the Reactor Operators.

An NOB becomes ill and is transported to the hospital by Health Physics personnel.

Which one of the following describes the status of shift manning for the Fire Brigade?

A. Fire Brigade requirements are unable to be met until another qualified fire brigade member arrives within two (2) hours.

B. Fire Brigade requirements are being met using a Health Physicist as a member of the fire brigade until another operator arrives.

C. Fire Brigade requirements are being met using the Shift Supervisor as a member of the fire brigade until another operator arrives.

D. Fire Brigade requirements are being met using the Roving Reactor Operator as Safe Shutdown and a Radwaste Operator as Fire Brigade Leader.

QUESTION 85 SRO		**NRC RECORD # WRI 486**	
ANSWER: D.	**SYSTEM # Fire Brigade**	**K/A Generic**	**2.4.26: 3.3** **2.1.4: 3.4**
LP# GG-1-LP-OP-PROC			
OBJ. 11x, y	**SRO TIER 3 GROUP**	**RO TIER GROUP**	
REFERENCE:	**01-S-06-2 sect 6.5**	NEW	
	01-S-10-6 Att II	MODIFIED	***BANK***
DIFF 2; CA	**TRM table 7.2.2-1**		**NRC 6/2001**
		RO ***SRO*** BOTH	**CFR41.10/43.1/43.2**
REFERENCE MATERIAL REQUIRED:	None		**43.5**

QUESTION 86

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

C. Transfer to Run is allowed. Power ascension is restricted to 15% power until all chemistry parameters are within specifications, and continue sampling reactor water at least once per 8 hours.

D. Transfer to Run is allowed. Consult with the Duty Manager prior to raising reactor power. Reactor chemistry has been demonstrated under control, and continue sampling reactor water at least once per 24 hours.

QUESTION 86 SRO		**NRC RECORD # WRI 197**	
ANSWER: D.	**SYSTEM # Chemistry**	**K/A Generics 2.1.34: 2.9**	
LP# GG-1-LP-OP-PROC			
OBJ. 28	**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**		**NRC 6/2001**
	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>; 03-1-01-1 sect 6.2.15**
05-1-02-V-12; TRM 6.4.1; Tech Spec 3.0

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QUESTION 87

The CYCLOPS computer is out of service.

The following are the Core Thermal Power calculations determined by the Reactor Engineer:

Time	Core Thermal Power	Time	Core Thermal Power	Time	Core Thermal Power
0000	3833 MW	0800	3829 MW	1600	3833 MW
0100	3833 MW	0900	3836 MW	1700	3830 MW
0200	3833 MW	1000	3833 MW	1800	3833 MW
0300	3829 MW	1100	3833 MW	1900	3834 MW
0400	3833 MW	1200	3828 MW	2000	3830 MW
0500	3833 MW	1300	3833 MW	2100	3833 MW
0600	3832 MW	1400	3833 MW	2200	3833 MW
0700	3834 MW	1500	3835 MW	2300	3833 MW

Which one of the following describes compliance with the plant operating license considerations of Maximum Core Thermal Power?

A. Core Thermal Power is within compliance of the Operating License.

B. Core Thermal Power has exceeded the limitations of the Operating License requiring immediate notification of the NRC.

C. Core Thermal Power has exceeded the eight hour average limitations of the Operating License requiring immediate notification of the NRC.

D. Core Thermal Power has exceeded the limitations of the Operating License requiring immediate plant shutdown and immediate notification of the NRC.

QUESTION 87 SRO **NRC RECORD # WRI 708**
ANSWER: A. SYSTEM # OP License K/A Generics 2.1.10: 3.9
LP# GG-1-LP-OP-IOI02
OBJ. 2.c.6
LP# GG-1-LP-OP-TS001
OBJ. 4l SRO TIER 3 GROUP / RO TIER GROUP
REFERENCE: GGNS Operating License ***NEW***
Sect 2.C(1) MODIFIED BANK
DIFF 2; CA GGNS Tech Specs sect 1.1
03-1-01-2 sect 2.3.6 RO ***SRO*** BOTH **CFR 43.1**
06-OP-1000-D-0001 Att I
REFERENCE MATERIAL REQUIRED: None

QUESTION 88

The plant is in Mode 2.

The following parameters have been reported to the Control Room:

SLC Tank level	4600 gallons
SLC Tank temperature	112 ºF
SLC Sodium Petaborate concentration	15.3%

Which one of the following describes the actions that should be taken with present plant conditions?

Tech Specs 3.0 and 3.1.7 are provided.

A. No actions are required. Continue plant startup and continue to Mode 1.

B. Concentrations are unacceptable. Initiate actions to be in Mode 3 in 12 hours.

C. Restore concentrations to Normal Operation Region within 72 hours and verify temperatures within limits every 4 hours. Continue plant startup and continue to Mode 1.

D. Restore concentrations to Normal Operation Region within 72 hours and verify temperatures within limits every 4 hours. Remain in Mode 2 until concentrations returned to Normal Operation.

QUESTION 88 SRO **NRC RECORD # WRI 709**
ANSWER: D. **SYSTEM # Tech Specs; C41** **K/A Generics 2.1.25: 3.1**
2.1.33: 4.0
LP# GG-1-LP-OP-C4100 **2.2.22: 4.1**
OBJ. 18
LP# GG-1-LP-OP-TS001
OBJ. 17; 34 **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: Tech Spec 3.1.7 ***NEW***
Tech Spec 3.0.4 MODIFIED BANK
DIFF 2; CA
RO ***SRO*** BOTH **CFR 41.6/41.10**
REFERENCE MATERIAL REQUIRED: Tech Specs 3.0 & 3.1.7 **43.2/43.5**

QUESTION 89

A Refueling outage is in progress.

Core Alterations are in progress.

Who supervises lifting activities on the Containment Refuel Floor and who must concur with the lifting?

A. The Refuel Manager supervises all lifting and must have the concurrence of the Shift Manager.

B. The Refuel Manager supervises all lifting and must have the concurrence of the Refueling SRO.

C. The Refuel Floor Supervisor supervises all lifting and must have the concurrence of the Shift Manager.

D. The Refuel Floor Supervisor supervises all lifting and must have the concurrence of the Refueling SRO.

QUESTION 89 SRO **NRC RECORD # WRI 702**
ANSWER: D. **SYSTEM # Refueling** **K/A Generics 2.2.26: 3.7**
LP# GG-1-LP-RF-F1105 **2.2.27: 3.5**
OBJ. 5d & 5e **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: 01-S-06-2 sect 6.7.7 ***<u>NEW</u>***
MODIFIED BANK
DIFF 1; M
RO ***<u>SRO</u>*** BOTH **CFR 41.10/43.5/43.7**
REFERENCE MATERIAL REQUIRED: None

QUESTION 90

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) (southwest corner of Containment) 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 90 SRO		**NRC RECORD # WRI 411**	
ANSWER: A.	**SYSTEM # Equipment Control-Refueling**	**K/A Generic 2.2.28: 3.5**	
LP# GG-1-LP-OP-IOI05			
OBJ. 2d			
LP# GG-1-LP-RF-F1105			
OBJ. 14b; 16f	**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**		**NRC 12/2000**
	TRM 6.9.6	RO ***SRO*** BOTH	**CFR41.9/41.10/43.2/**
REFERENCE MATERIAL REQUIRED:	**Drawing of 208 ft Ctmt**		**43.4/43.5/43.7**

QUESTION 91

Which one of the following conditions does NOT require the issuance of an approved Maintenance Action Item (MAI)?

A. Electrical Maintenance is to troubleshoot a motor operated valve on Plant Service Water by observing the valve stroke open and closed using the local handswitch to determine when the limit switch functions.

B. I & C is to troubleshoot a Control Room trip unit by lifting leads on the trip unit that allows the technician to modify the input signal and observe the functioning of the trip unit.

C. Mechanical Maintenance is required to inspect the pump impeller on a Condensate Transfer pump that when operating fails to develop sufficient discharge pressure to prevent operation of the standby pump.

D. I & C is to modify the instrument air supply to Primary Containment Isolation Valve G36-F106 to raise the stroke time to prevent slamming the valve into the closed seat.

QUESTION 91 SRO		**NRC RECORD # WRI 492**	
ANSWER: A.	**SYSTEM # Control of Work**	**K/A Generic 2.2.20: 3.3**	
LP# GG-1-LP-OP-PROC			
OBJ. 25c(1)	**SRO TIER 3 GROUP**	**/ RO TIER GROUP**	
REFERENCE:	**07-S-01-228 sect 6.2 NOTE**	NEW	
	07-S-01-205 sect 6.5.1	MODIFIED	***BANK***
DIFF 2; CA	**01-S-07-1 sect 5.2 & 5.2.1**		**NRC 6/2001**
		RO ***SRO*** BOTH	**CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED:	**07-S-01-205; 07-S-01-228; 01-S-07-1 & WM-100**		

QUESTION 92

Under which one of the following conditions is new or spent fuel allowed to be stored in the Upper Containment Fuel Storage Pool?

A. The reactor is at 130 0F and with the plant in Mode 5 ONLY.

B. The reactor is at 180 0F with the plant subcritical and shutdown cooling operating.

C. The reactor is at 20% power with a plant startup in progress following RF12.

D. The reactor is at 20 % power with a plant shutdown in progress in preparation for RF12.

QUESTION 92 SRO		**NRC RECORD # WRI 491**	
ANSWER: B.	**SYSTEM # Refueling**	**K/A Generic 2.2.32: 3.3**	
LP# GG-1-LP-RF-F1105		**2.2.28: 3.5**	
OBJ. 18 c & e	**SRO TIER 3 GROUP**	**/ RO TIER GROUP**	
REFERENCE: 17-S-02-100		NEW	
sect 6.1.1; 6.2.1; 6.3.8		MODIFIED	***BANK***
DIFF 2; CA			**NRC 6/2001**
		RO ***SRO*** BOTH	**CFR 43.6/43.7**
REFERENCE MATERIAL REQUIRED: 17-S-02-100			

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QUESTION 93

The Control Room Operator has a tagout which requires verification.

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

A. Lineup on the Instrument Air Header Auxiliary Building Automatic Bleed off valve 8 foot off the floor in area 10, 166 ft elevation.

B. A Red Tag to be hung on a Main Steam Drain Valve on the HP Main Steam Stop Valve at 100 % Power.

C. A Temporary Alteration on the Division III Diesel Air Start Header.

D. A procedure step for lineup restoration following the Load Shedding and Sequencing Monthly surveillance.

QUESTION 93 SRO		**NRC RECORD # WRI 127**	
ANSWER: B.	**SYSTEM # ADMIN**	**K/A Generic**	**2.3.2: 2.9**
	Rad Con		**2.2.13: 3.8**
			2.2.11: 3.4
LP# GG-1-LP-OP-PROC			**2.1.2: 4.0**
OBJ. 10s; 12g; 22g	**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	**01-S-06-3 sect 6.2.3c**		**NRC 3/1998**
		RO ***SRO*** BOTH	**CFR 41.12/43.4**
REFERENCE MATERIAL REQUIRED:		**NONE**	

QUESTION 94

The plant is operating at rated conditions.

A leak has been identified on a valve in the Auxiliary Building Steam Tunnel.

Plans are to lower reactor power to 40% to allow a Steam Tunnel entry to attempt to back seat the valve to stop the leak allowing continued plant operation.

It is estimated the job will take 10 minutes to complete.

Radiation levels are expected to be 1 - 1.5 R/Hr in the area of the work.

Determine whether the General Operations Radiation Work Permit is acceptable for this job?

01-S-08-34 and Operations RWP are provided.

A. No actions are required. The General Operations RWP is sufficient.

B. No actions are required. The General Operations RWP is sufficient however, a special pre-job briefing is required.

C. A job specific RWP is required. Radiation Protection will require more in-depth planning and special pre-job briefings.

D. A job specific RWP is required. Radiation Protection will require specific General Manager approvals due to the possibility of exceeding Administrative dose limits.

QUESTION	**94 SRO**	**NRC RECORD # WRI 710**	
ANSWER: C.	**SYSTEM # Rad Protection**	**K/A Generics 2.3.7: 3.3**	
LP# ELP-GET-RWT01			
OBJ. RWT68	**SRO TIER 3 GROUP**	**/ RO TIER GROUP**	
REFERENCE:	**01-S-08-34**	***NEW***	
	sect 6.1.2d(4); 6.1.2e	MODIFIED	BANK
DIFF 2; CA	**Operations RWP**		
		RO ***SRO*** BOTH	**CFR 41.10/41.12**
REFERENCE MATERIAL REQUIRED:		**01-S-08-34 & Ops RWP & calculator**	**43.4/43.5**

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

No personnel were able to closely monitor Reactor Water level as it dropped.

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 95 SRO **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
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)** **NRC 12/2000**
RO ***SRO*** BOTH **CFR41.10/43.5**
REFERENCE MATERIAL REQUIRED: 05-S-01-EP-2

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QUESTION 96

The plant is operating at rated conditions.

Subversives have entered the Main Control Room and taken over.

Communication with the Main Control Room has been lost.

You are the Shift Supervisor working in the Work Control Center with the Tagging Group.

Which one of the following describes the actions to be taken and Emergency Classification?

A. Man Remote Shutdown Panels, maintain the plant in stable conditions until the security situation is resolved, declare an Unusual Event.

B. Man and isolate the Remote Shutdown Panels, manually scram the plant and cooldown the plant using Division II equipment, declare an Alert.

C. Man and isolate the Remote Shutdown Panels, manually scram the plant and cooldown the plant using Division I equipment, declare a Site Area Emergency.

D. Man and isolate the Remote Shutdown Panels, manually scram the plant and cooldown the plant using Division I equipment, declare a General Emergency.

QUESTION SRO 96 **NRC RECORD # WRI 192**
ANSWER: D. **SYSTEM #** **K/A Generics 2.4.40: 4.0**
Emergency Ops SRO **2.4.11: 3.6**
Responsibility **2.1.2: 4.0**
Security Threat **2.1.49: 4.0**
LP# GG-1-LP-OP-PROC **2.4.28: 3.3**
OBJ. 11d & g
LP# GG-1-LP-OP-EPTS6
OBJ. 1 **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: 10-S-01-1 EAL 14.4.1 NEW
01-S-06-2 MODIFIED ***BANK***
DIFF 3; CA **sect 6.1.2a & 6.2.3l** **NRC 4/2000**
05-1-02-VI-4 sect 2.0; 3.0 RO ***SRO*** BOTH **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED: **10-S-01-1 & 05-1-02-VI-4**
w/o immediate actions

QUESTION 97

A plant transient has resulted in the following conditions:

All control rods inserted to 00 except 2 peripheral control rods stuck full out.
All MSIVs isolated.
RPV pressure 980 psig
RPV power 1%
Drywell pressure 1.4 psig
Suppression Pool temperature 95ºF
Suppression Pool level 18.9 feet

Which one of the following describes the requirements for RPV level and pressure control given the above conditions?

A. Maintain RPV water level between +11.4 and + 53.5 inches and control RPV pressure less than 1064.7 psig.

B. Maintain RPV water level between – 192 and + 53.5 inches and control RPV pressure less than 1064.7 psig.

C. Terminate and prevent all injection to the RPV except Boron, CRD and RCIC and control RPV level between – 192 and - 140 inches and control RPV pressure less than 1064.7 psig.

D. Terminate and prevent all injection to the RPV except Boron, CRD and RCIC and open 8 SRVs controlling RPV pressure based on the MARFP table.

QUESTION 97 SRO **NRC RECORD # WRI 711**
ANSWER: B. **SYSTEM # EOPs** **K/A Generics 2.4.7: 3.8**
LP# GG-1-LP-RO-EP02A **2.4.14: 3.9**
OBJ. 5 **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: 05-S-01-EP-2A step 45 ***NEW***
MODIFIED BANK
DIFF 2; CA
RO ***SRO*** BOTH **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED: 05-S-01-EP-2/2A & 3

QUESTION 98

The plant is operating at 100% power.

An employee with authorized access to the plant was observed by co-workers to possess a small handgun in their lunch box in the M & E Building.

Security was notified and the handgun was removed from the protected area.

Which one of the following describes the reportability of this incident?

A. One hour notification of NRC Regional Office

B. One hour notification of NRC Operations Center

C. Four hour notification of NRC Regional Office

D. Four hour notification of the NRC Operations Center

QUESTION 98 SRO **NRC RECORD # WRI 712**
ANSWER: B. **SYSTEM #** **K/A Generics 2.4.30: 3.6**
Reportable events
LP# GG-1-LP-OP-PROC
OBJ. 14h, i, j **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: 01-S-06-5 Att III sect I.13 ***NEW***
MODIFIED BANK
DIFF 1; M
RO ***SRO*** BOTH **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED: 01-S-05-6-5

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QUESTION 99

A plant transient has resulted in the following conditions:

All control rods inserted to 00 except 2 peripheral control rods stuck full out.
All MSIVs isolated.
RPV power 1%
RPV level – 210 inches
RPV pressure 60 psig
8 SRVs are open
Drywell pressure 1.4 psig
Suppression Pool temperature 145ºF
Suppression Pool level 18.9 feet

Conditions warrant entry into the Severe Accident Procedures.

Which one of the following identifies entry into the Severe Accident Procedures?

A. The Control Room enters the appropriate SAP and implements actions from the Control Room.

B. The Control Room enters the appropriate SAP with concurrence of the Emergency Director and implements actions from the Control Room.

C. The TSC determines entry into the appropriate SAP and directs implementation of the SAPs from the TSC.

D. The TSC determines entry into the appropriate SAP with concurrence of the Offsite Emergency Coordinator and the Emergency Director directs implementation from the TSC.

QUESTION 99 SRO **NRC RECORD # WRI 714**
ANSWER: B. **SYSTEM # EOPs; SAPs** **K/A Generics 2.4.16: 4.0**
2.4.8: 3.8
LP# GLP-EP-EPTS19 **2.4.14: 3.9**
OBJ. 3; 4; 10 **SRO TIER 3 GROUP / RO TIER GROUP**
REFERENCE: 05-S-01-SAP-1/2/3/4/5/6 ***NEW***
NOTE on Yellow MODIFIED BANK
DIFF 1; M **Background steps**
RO ***SRO*** BOTH **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED: NONE

QUESTION 100

An Alert has been declared at GGNS.

Which one of the following identifies the Emergency Response Facilities required to be activated for this emergency?

A. No facilities are required, they may be activated at Emergency Director's discretion.

B. TSC and OSC only

C. TSC, OSC, and EOF only

D. TSC, OSC, EOF, and ENMC/EIC only

QUESTION 100 SRO NRC RECORD # WRI 714
ANSWER: D. SYSTEM # EPPs K/A Generics 2.4.42: 3.7
LP# GLP-EP-EPTS6
OBJ. 5 SRO TIER 3 GROUP / RO TIER GROUP
REFERENCE: 10-S-01-1 sect 6.1.4i (2) ***NEW***
MODIFIED BANK
DIFF 1; M
RO ***SRO*** BOTH **CFR 41.10/43.5**
REFERENCE MATERIAL REQUIRED: NONE