U.S. NUCLEAR REGULATORY COMMISSION
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SENIOR REACTOR OPERATOR

QUESTION 1

The plant was operating at rated conditions with the electrical distribution system in the preferred lineup.

Conditions on the Entergy Grid resulted in grid voltage dropping to 200 KV for 10 seconds then returning to 500 KV.

Which one of the following describes the response of the plant electrical buses?
ASSUME NO OPERATOR ACTIONS AND ALL SYSTEMS FUNCTIONED AS DESIGNED.

	BOP BUSES **11HD; 12HE; 13AD; 14AE**	**15AA**	**16AB**	**17AC**
A.	de-energized	energized from diesel w/ loads shed and re-sequenced	energized from diesel w/ loads shed and re-sequenced	energized from diesel w/ loads locked out
B.	energized w/ all loads restored	energized from ESF transformer w/ no loss of loads	energized from ESF transformer w/ no loss of loads	energized from ESF transformer w/ no loss of loads
C.	energized w/ no loss of loads	energized from ESF transformer w/ no loss of loads	energized from ESF transformer w/ no loss of loads	energized from ESF transformer w/ no loss of loads
D.	energized w/ major pumps locked out	energized from diesel w/ loads shed and re-sequenced	energized from diesel w/ loads shed and re-sequenced	energized from diesel w/ loads restored

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QUESTION 2

The plant was operating at 100% power when a low primary water tank level activated the Electrical Generator Protection (EGP) system.

Which of the following best describes valve response to stabilize reactor pressure?

ASSUME NO OPERATOR ACTIONS AND ALL SYSTEMS FUNCTIONED AS DESIGNED.

	Main Turbine Stop Valves	Main Turbine Control Valves	Main Turbine Bypass Valves	Safety Relief Valves
A.	Open	Open throttling controlling pressure	Closed	Closed, throughout transient
B.	Closed	Closed	Cycling open & closed to control pressure	Closed following an initial opening
C.	Closed	Closed	Cycling open & closed to control pressure	Closed, throughout transient
D.	Closed	Closed	Closed	Cycling open & closed to control pressure

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QUESTION 3

A LOCA occurred 45 minutes ago in the Auxiliary Building steam tunnel.

The inboard MSIVs failed to isolate and the outboard MSIV on the damaged pipe remained open.

HPCS is tagged out for motor repairs.

The following conditions exist:

Reactor water level	-155 inches wide range and dropping
Reactor pressure	285 psig and stable
Drywell pressure	1.0 psig and stable
Aux Bldg Steam Tunnel Temperature	reached 285°F 5 minutes into the transient and is presentlyF235°F and dropping

Which one of the following identifies a pump capable of restoring and maintaining reactor water level?
ASSUME NO OPERATOR ACTIONS AND ALL SYSTEMS FUNCTIONED AS DESIGNED.

A. Condensate Pump 'A'

B. LPCS

C. RCIC

D. RHR 'A'

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QUESTION 4

The plant is operating at 100% power.

Feed flow transmitter C34-N002B 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 immediately drop then return to normal level when the level dominance of the DFCS takes over and automatically substitutes the opposite line feed flow for the failed value.

B. Reactor water level will immediately drop then return to normal level when the DFCS system automatically de-selects and locks out three element control and selects single element control.

C. Reactor water level will remain stable when the level dominance of the DFCS takes over and automatically substitutes the opposite line feed flow for the failed value.

D. Reactor water level will remain stable when the DFCS system automatically de-selects three element control and selects single element control.

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QUESTION 5

Plant Service Water is lost to the Auxiliary Building.

Which one of the following best describes the effects on drywell chillers and the drywell atmosphere?

ASSUME NO OPERATOR ACTION.

A. Drywell chillers will continue to operate but drywell temperature will rise. Drywell pressure will drop to the point that the Drywell Normal Vacuum relief valves will open equalizing pressure between the drywell and containment.

B. Drywell chillers will continue to operate, but drywell temperature will rise. Drywell pressure will rise to the point that the Drywell Normal Vacuum relief valves will open equalizing pressure between the drywell and containment.

C. Drywell chillers will trip causing drywell temperature to rise. Drywell pressure will remain constant due to the communication between the containment and drywell atmospheres via the drywell vents.

D. Drywell chillers will trip causing drywell temperature to rise. Drywell pressure will rise such that High Drywell Pressure alarms will actuate and an isolation of containment, drywell, and Auxiliary Building will occur due to a high drywell pressure.

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QUESTION 6

The plant is performing a reactor startup from cold shutdown.

The reactor was critical with a 120 second period.

The At-The-Controls Operator felt power was slow to rise and withdrew the next control rod from position 08 to 10 as allowed by the Control Rod Movement Sequence Sheet.

This resulted in a sustained 15 second period.

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. Monitor reactor power and range IRMs as necessary and verify the effects of the reactor reaching the point of adding heat and turning power ascension.

C. Insert the Control Rod back to position 08 and any other control rods as necessary to obtain a reactor period of > 50 seconds and inform supervision.

D. Inform the Reactor Engineer of the power rise, and insert the Control Rod as far as necessary to turn power then when the point of adding heat is reached control rod withdrawals may resume.

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QUESTION 7

The plant was operating at 100% power when the Operator At-The-Controls observed indications that require a reactor scram to be inserted.

He placed the Reactor Mode Switch to Shutdown and noted no movement of the control rods.

Given the attached pictures of the H13-P680 indications, determine which one of the following identifies the primary reason control rods have failed to insert?
See attached Control Room Photos.

A. The Scram Discharge Volume has a hydraulic block.

B. The Reactor Protection System failed to de-energize.

C. ATWS ARI failed to de-energize and vent the Scram Air Header.

D. The Reactor Mode Switch failed to transfer from RUN to SHUTDOWN.

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QUESTION 8

Power to the Safety Relief Valves (SRVs) via circuit breakers 72-11A23 and 72-11B34 has been lost.

Status lights on H13-P628 (Upper Control Room) and H13-P631 (Main Control Room) are de-energized.

Which one of the following describes the operation of the Low-Low Set SRVs from the Remote Shutdown Panels?

A. Low-Low Set SRVs will only operate on the Safety Function.

B. Low-Low Set SRVs will only operate on the Safety Function or by using the Remote Shutdown Panel handswitches.

C. Only the two ADS SRVs will operate on the Relief, ADS (as applicable), and Safety Functions as well as the Remote Shutdown Panel handswitches.

D. Low-Low Set SRVs will operate on the Relief, ADS (as applicable), and Safety Functions as well as the Remote Shutdown Panel handswitches.

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QUESTION 9

The plant is operating at 100% power.

Control Room HVAC has isolated and Standby Fresh Air has initiated.

Which one of the following identifies the signal with present plant conditions that caused the isolation of the Control Room envelope?

A. High-High radiation levels in the outside air intake duct.

B. Smoke detected in the Control Room HVAC fan inlet.

C. High inlet air chlorine concentrations.

D. High inlet air Freon concentrations.

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QUESTION 10

You have been directed to line up Suppression Pool Cooling.

Which one of the following identifies who must be notified and the reason for this notification?

A. The Auxiliary Building Operator to verify the RHR system piping is vented prior to starting the RHR pump.

B. Radiation Protection to allow personnel to perform surveys of the Containment for elevated radiation levels.

C. Plant Services to ensure NO personnel are working in the Suppression Pool or on the Suppression Pool in the plant boat.

D. Plant Security to determine which personnel are in the Containment Building such that they can be notified of the RHR System start.

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QUESTION 11

A LOCA has occurred.

Reactor water level is being maintained by Condensate and Feedwater with Startup Level Control in automatic.

Drywell pressure is stable at 2.23 psig.

The Entergy power grid is stable.

Which one of the following describes the operation of the Diesel Generators?
ASSUME THE DIESELS ARE OPERATING NORMALLY.

A. Division 1 & 2 DG operating and may be tied to the bus or shutdown.
Division 3 DG operating and may be tied to the bus or shutdown.

B. Division 1 & 2 DG operating and are unable to be tied to the bus or shutdown.
Division 3 DG operating and is unable to be tied to the bus or shutdown.

C. Division 1 & 2 DG operating may be tied to the bus, however are unable to be shutdown.
Division 3 DG operating and may be tied to the bus or shutdown.

D. Division 1 & 2 DG operating may be tied to the bus, however are unable to be shutdown.
Division 3 DG operating and is unable to be tied to the bus or shutdown.

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QUESTION 12

The plant was operating at 100% power when a transient caused reactor pressure to rise rapidly.

Reactor pressure rose to maximum pressure of 1130 psig and is currently at 956 psig.

Reactor water level dropped to a minimum of -20 inches wide range before recovery to +18 inches.

Which one of the following describes the operation of the RPS, ATWS ARI and SRV valves?
ASSUME NO OPERATOR ACTIONS.

	RPS Scram Pilot Valves	**ATWS ARI Valves**	**SRVs**
A.	Energized ready to reset	Energized ready to reset	2 SRVs open
B.	De-energized ready to reset	De-energized ready to reset	6 SRVs open
C.	Energized ready to reset	De-energized ready to reset	2 SRVs open
D.	De-energized ready to reset	Energized ready to reset	6 SRVs open

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QUESTION 13

An ATWS has caused Containment conditions to degrade.

Containment Sprays are operating.

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

	Drywell Temperature	Drywell Pressure	Containment Temperature	Containment Pressure	Suppression Pool Level
A.	188°F rising	8.5 psig	135°F rising	3.0 psig	18.2 ft
B.	250°F rising	8.5 psig	188°F rising	3.0 psig	18.2 ft
C.	188°F lowering	3.0 psig	135°F lowering	8.5 psig	22.2 ft
D.	250°F lowering	3.0 psig	188°F lowering	8.5 psig	22.2 ft

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QUESTION 14

Suppression Pool level has dropped to 14 ft 6 inches due to a leak.

Which one of the following describes the significance of this loss of level?

A. The Suppression Pool temperature monitors will be uncovered such that they will indicate Containment air temperature instead of pool temperature.

B. The Safety Relief Valve (SRV) spiders do not have sufficient coverage to prevent uncondensed steam from being introduced to the Containment.

C. The ECCS pumps are at the limit below which cavitation may result due to insufficient suction pressure because of Suppression Pool temperatures.

D. The Drywell to Containment Suppression Pool vents are partially uncovered causing a loss of the pressure suppression capability of the Suppression Pool.

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QUESTION 15

The following conditions exist in the plant:

Reactor power 2% with 44 rods withdrawn.
Reactor pressure 300 psig and stable.
Reactor level - 230 inches Fuel Zone and lowering
6 Safety Relief Valves have been manually opened.
RCIC is injecting into the reactor vessel.

Which one of the following identifies the state of core cooling?

A. Adequate core cooling is NOT assured.

B. Adequate core cooling is assured by Minimum Alternate RPV Flooding Pressure (MARFP).

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.

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QUESTION 16

The plant is being controlled from the Remote Shutdown Panels.

RCIC is being used to control Reactor Water level.

Reactor pressure is 400 psig.

Reactor Water Level indication on H22-P150 is – 30 inches.

Which one of the following identifies actual Reactor Water Level?
05-1-02-II-1 Attachments I & II are provided.

A. - 30 inches

B. - 35 inches

C. - 40 inches

D. -45 inches

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QUESTION 17

During execution of the Hydrogen Control Leg of EP-3, the Hydrogen Igniters are directed to be started if hydrogen concentration is determined to be less than the Containment or Drywell Hydrogen High annunciator setpoint, without reference to the Containment Hydrogen Deflagration Overpressurization Limit.

Which one of the following describes the reason this is allowed?

A. If Containment or Drywell hydrogen concentrations are below the referenced alarm setpoints, adequate core cooling is assured.

B. NO hydrogen generation or buildup will occur within the expected time that the Hydrogen Control leg of EP-3 would be implemented.

C. Starting the igniters with hydrogen concentrations above the alarm setpoint will result in excessive Containment temperatures.

D. Starting the igniters with hydrogen concentrations above the alarm setpoint could result in damage to the igniters.

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QUESTION 18

An ATWS has occurred.

RCIC has automatically started to assist in control of Reactor Water level.

Reactor pressure is rising.

Which one of the following describes the response of RCIC?
ASSUME NO OPERATOR ACTION.

A. RCIC speed will drop with injection rate remaining relatively stable.

B. RCIC speed will rise with injection rate remaining relatively stable.

C. RCIC speed will drop causing the injection rate to drop.

D. RCIC speed will rise causing the injection rate to rise.

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QUESTION 19

The plant was operating in the MEOD region of the Power to Flow Map.

A reduction in total core flow combined with a reduction in Feedwater temperature could result in which one of the following conditions?
ASSUME NO OPERATOR ACTIONS.

A. Thermal hydraulic instability, which left unimpeded, would result in violation of the MCPR thermal and safety limits.

B. Actual core thermal power being higher than indicated that could lead to violation of the APLHGR thermal limit.

C. Thermal hydraulic instability, which immediately reduces the margin of safety to the LHGR and APLHGR thermal limits.

D. Actual core thermal power being higher than indicated that could lead to violation of the MCPR thermal and safety limits.

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QUESTION 20

An ATWS has occurred.

Reactor Feed Pumps are unavailable.

Reactor power is at 35 %. Reactor water level is at – 90 inches and lowering.

The plant is at rated pressure.

The SRO directing actions per EP-2A has directed reactor pressure to be lowered to 500 psig to support the condensate system feeding the reactor vessel.

Which one of the following describes the Reactor Power response when reducing Reactor Pressure with present conditions?

A. reactor power will rise due to the collapsing of the voids resulting in more neutron thermalization which in turn heats the moderator.

B. Reactor power will rise due to boron blowing out of the core region which was absorbing thermal neutrons.

C. Reactor power will drop due to the voiding of the core and remain lower than the original power.

D. Reactor power will initially drop due to voiding followed by a rise in power due to the lowering the moderator temperature.

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QUESTION 21

The plant is in cold shutdown with reactor level being maintained by CRD and RWCU.

A breach of primary containment has occurred.

Suppression Pool level has dropped and the Control Room Operator is unable to determine level.

RCIC suction has been aligned to the Suppression Pool.

Drywell pressure	-0.01 psig
Containment pressure	-0.1 psig
RCIC suction pressure on E51-R604	+3.5 psig

What is Suppression Pool Level?
05-1-01-EP-2 Att 29 is provided.

A. 11.8 feet

B. 13.8 feet

C. 14.1 feet

D. 14.3 feet

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QUESTION 22

Given the following conditions:

Reactor power 45%
Reactor level -100 inches
Reactor pressure 850 psig
Suppression pool temperature 150°F
Suppression pool level 19 feet 6 inches
4 SRVs are open

Which one of the following best describes the required actions to be taken given the above conditions?

A. Close two of the four SRVs and raise the reactor pressure band to a top end of 1000 psig, to reduce the amount of heat entering the Suppression Pool.

B. Immediately commence an Emergency Depressurization in accordance with EP-2A because limits in the Containment have been exceeded based on Suppression Pool temperature.

C. Lower reactor pressure using cooldown rates that may exceed 100 °F/Hr, to avoid jeopardizing Containment by exceeding the heat capacity temperature limit of the Suppression Pool.

D. Conditions at present are acceptable, however add water from the CST to the Suppression Pool to lower temperature and raise level to add capacity for the Suppression Pool.

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QUESTION 23

The plant is at 900 psig with the MSIVs open.

Reactor power is 5%.

Reactor water level is +45 inches.

Damage occurs to the IP Condenser boot resulting in Main Condenser vacuum dropping to 8 inches Hg vac in all three condensers.

Which one of the following describes the immediate response of the plant?
ASSUME NO IMMEDIATE OPERATOR ACTIONS.

A. The reactor will remain critical and the MSIVs will remain open.

B. The reactor would scram due to high reactor water level with pressure control on the SRVs.

C. The reactor would scram due to high reactor pressure with pressure control on the SRVs.

D. The reactor will remain critical with pressure control on the SRVs.

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QUESTION 24

The plant is operating at 100% power.

125 VDC breakers 72-11D15 and 72-11D16, DC control power breakers for 6.9 KV bus 11HD, have tripped.

Reactor Recirculation Pump A motor amps are indicating off-scale high on H13-P680.

Which one of the following correctly describes the response of Reactor Recirculation Pump A breaker?

Reactor Recirculation Pump A breaker:

A. will trip on overcurrent.

B. will NOT trip on overcurrent, but can be tripped manually from the H13-P680.

C. will NOT trip on overcurrent, but can be tripped locally using the local control switch (pistol grip) on breaker 252-1103 (CB-5A).

D. will NOT trip on overcurrent, but can be tripped locally, using the local manual trip pushbutton on breaker 252-1103 (CB-5A)

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QUESTION 25

The plant was at 22% power.

An EGP trip of the Main Generator occurred.

Which one of the following describes the affect on the temperature of Feedwater entering the reactor?

A. Feedwater temperature will rise due to higher steam pressure applied to the Feedwater heaters.

B. Feedwater temperature will drop due to removal of heating steam to the Feedwater heaters.

C. Feedwater temperature will remain stable because the turbine stop and control valves will remain open.

D. Feedwater temperature will remain stable because the rise in steam pressure will offset the reduced steam flow to the Feedwater heaters.

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QUESTION 26

The plant is in Mode 2 following a refueling outage.

Reactor temperature is 140°F.

A leak in the RWCU Regen Heat Exchanger has caused the RWCU Heat Exchanger Room temperature to rise to 125°F.

Which one of the following describes the effect this will have on reactor water level?

A. Reactor level will remain stable.

B. Reactor water level will rise; the reactor will scram on high reactor water level.

C. Reactor water level will rise; the reactor will NOT scram on high reactor water level.

D. Reactor water level will lower; the reactor will scram on low reactor water level.

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QUESTION 27

A flange rupture on the RWCU Regenerative Heat Exchanger inlet has caused an isolation of RWCU.

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

The following conditions exist in the plant:

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

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

A. Containment Coolers with chilled water
Containment Steam Tunnel Coolers with chilled water

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

C. Containment Coolers without chilled water
Containment Steam Tunnel Coolers with chilled water

D. Containment Coolers with chilled water
Containment Steam Tunnel Coolers without chilled water

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QUESTION 28

A complete loss of offsite power has occurred.

Instrument air is unavailable to the Containment and Auxiliary Buildings.

All SRV accumulators have bled down to 0 psig.

The Control Room Supervisor has ordered nitrogen bottles be installed per the loss of Instrument Air ONEP to allow use of SRVs for reactor pressure control.

Which one of the following identifies the SRVs that may be used for reactor pressure control?

A. All ADS valves and the lead Low-Low Set valve

B. All ADS valves and all Low-Low Set valves

C. Only Low-Low Set valves

D. Only ADS valves

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QUESTION 29

The plant is in Mode 2 following a refueling outage.

A disturbance on the grid caused a loss of offsite power to the plant.

The emergency diesel generators automatically started and restored power to their associated buses.

Unit I Instrument Air Compressor has been started.

HPCS and RCIC were manually started to control reactor water level.

The current conditions exist:
Reactor level +35 inches
Drywell Pressure 0.23 psig

Which one of the following describes the required actions to restore the Auxiliary Building Instrument Air Isolation valves (P53-F026A and P53-F026B)?

A. NO action is required. The valves did NOT automatically close.

B. The valves will automatically open when power and air are restored.

C. The valves can be manually opened using their associated handswitches as soon as power and air are restored

D. The valves can be manually opened using their associated handswitches ONLY after the Auxiliary Building Bypass switches have been placed in the BYPASS position.

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QUESTION 30

The plant is in Mode 5.

ADHR is in service in Spent Fuel Pool to Reactor mode.

Under vessel work resulted in a leak causing RPV level to lower to -50 inches.

Which one of the following describes the affects on ADHR shutdown cooling operation?

A. ADHR pumps will trip due to a loss of suction pressure when E12-F008 and F009, RHR SDC Isolation valves isolate on low reactor level.

B. ADHR will continue to operate as long as level in the Spent Fuel Pool remains sufficient to provide makeup to the suction of the ADHR pumps.

C. ADHR suction valves from the Spent Fuel Pool will isolate causing a loss of suction pressure to the ADHR pumps which will subsequently trip.

D. ADHR will continue to operate indefinitely, however cooling to the ADHR heat exchangers is lost until Plant Service Water is restored.

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QUESTION 31

The plant is critical in Mode 2 at 500 psig.

CRD pump 'B' is tagged out for repairs.

CRD pump 'A' has tripped.

Control rod 20-05 is at position 24; the Auxiliary Building Operator has reported accumulator pressure is at 1400 psig and there is a nitrogen leak on the accumulator.

Which one of the following describes the action to take for these conditions?

A. Declare control rod 20-05 slow, monitor conditions and attempt to restore the CRD system status to normal.

B. Declare control rod 20-05 INOP, monitor conditions and attempt to restore the CRD system status to normal.

C. Declare control rod 20-05 accumulator INOP and place the Reactor Mode Switch to SHUTDOWN.

D. Insert an individual control rod scram on control rod 20-05 by taking both SRI Test switches to TEST then return the switches to NORM, monitor conditions and attempt to restore the CRD system status to normal.

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QUESTION 32

The following conditions are observed after a Loss of Coolant Accident:

Reactor Pressure	50 psig
166' elev. temperature in the Drywell	320°F
Drywell Pressure	5.8 psig
139' elev. temperature in the Containment	192 °F
119' elev. temperature in the Containment	181 °F
Containment Pressure	2.0 psig
Shutdown Range Level Indication	+154 inches
Upset Range Level Indication	+154 inches
Wide Range Level Indication	+ 60 inches

All level indicators appear to be tracking.

Which one of the following is true regarding Reactor Water Level?

A. Assume all level indicators are indicating properly until spiking or notching is observed.

B. Shutdown and Upset Range level indications are the only reliable level indication.

C. Wide Range level indication is the only reliable level indication.

D. There are NO reliable level indications at this time.

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QUESTION 33

The plant is operating at 100% power.

The Riley temperature switches for RCIC Room are in alarm with readings of 260°F and continuing to rise.

All other temperatures are indicating normal.

Reactor steam flow and feed flow indications are matched.

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

A. Isolate all systems discharging into Secondary Containment except as required to suppress a fire and enter EP - 2.

B. Isolate all systems discharging into Secondary Containment and perform a plant shutdown per IOI 03-1-01-2.

C. Monitor plant conditions and determine the cause of the high temperature and restore Secondary Containment parameters to within limits per EP-4.

D. Isolate all systems connected to the RPV which are discharging into Secondary Containment and continue to monitor plant conditions per EP-4.

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QUESTION 34

The plant was operating at 100% power when Main Steam Tunnel temperature and radiation levels started rising.

The reactor was manually scrammed.

Reactor level and pressure are stable.

All equipment functioned as designed.

The following conditions exist:

Main Steam Line Rad. Monitors	A 8.5×10^4 mR/HR	B 7.8×10^4 mR/HR
	C 7.9×10^4 mR/HR	D 7.5×10^4 mR/HR
Main Steam Tunnel Temp 176°F		
RCIC Room Temp. 218°F	RCIC Room Rad. Monitor 8.4×10^4 mR/HR	
RHR A Room Temp. 215°F	RHR A Room Rad. Monitor 7.3×10^4 mR/HR	
RHR B Room Temp. 195°F	RHR B Room Rad. Monitor 6.9×10^4 mR/HR	

Which one of the following lists the appropriate actions/responses for this situation?

A. MSIVs automatically isolated; Standby Gas Treatment System manually initiated; Emergency Depressurization required; EP-2 entered.

B. MSIVs manually isolated; Standby Gas Treatment System in standby; IOI-3 entered.

C. MSIVs automatically isolated; Standby Gas Treatment System automatically initiated; IOI-3 entered.

D. MSIVs open; Standby Gas Treatment System NOT initiated; EP-2 entered.

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QUESTION 35

The plant is operating at 100% power.

High radiation in the Fuel Handling Area caused initiation of Standby Gas Treatment System 'A'.

Which one of the following describes the effect this will have on the fan coil units in the Auxiliary Building?

A. Auxiliary Building Zone 1, 2, 3, 4, and CRD Repair Rm. Fan Coil Units will trip.
Fuel Handling Area Fan Coil Units B002 (208' el.) and B005 (185' el.) will trip.

B. Auxiliary Building Zone 1, 3, and CRD Repair Rm. Fan Coil Units will trip.
Fuel Handling Area Fan Coil Units B005 (185' el.) and B007 (139' el.) will trip.

C. Auxiliary Building Zone 2 and 4 Fan Coil Units will trip.
Fuel Handling Area Fan Coil Units B002 (208' el.) and B005 (185' el.) will trip.

D. Auxiliary Building Zone 1, 2, 3, 4, and CRD Repair Rm. Fan Coil Units will trip.
All Fuel Handling Area Fan Coil Units will trip.

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QUESTION 36

The plant is operating at 100% power.

Fuel Handling Area differential pressure rose to 0 inches wc.

Which one of the following describes the possible cause and remedy for this situation?

A. Standby Gas Treatment is operating and requires securing.

B. Both Fuel Handling Area Supply fans are operating requiring one of the fans to be secured.

C. Both Fuel Handling Area Exhaust fans are operating requiring one of the fans to be secured.

D. Controller T42-PDK-R600 for T42-F021 Fuel Handling Area Pressure Cont has malfunctioned and closed the damper requiring manual control to open the damper.

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QUESTION 37

A LOCA has occurred and the signals are still present.

When RHR 'A' automatically started on high drywell pressure, a leak developed on the Suppression Pool side of E12-F004A, RHR 'A' Suppression Pool Suction.

RHR 'A' was secured and E12-F004A closed.

Water level in the RHR 'A' pump room is 5 inches over the top of the floor on 93 ft Elevation.

Which one of the following describes the actions to be taken to control water level in the RHR 'A' Pump Room?

A. Verify the RHR 'A' Pump Room Sump Pumps are operating and pumping water to the Auxiliary Building Floor Drain Transfer tank and then on to Radwaste.

B. Verify the RHR 'A' Pump Room Sump Pumps are operating and pumping water to the Auxiliary Building Floor Drain Transfer tank and then on to the Suppression Pool via P45-F273 and F274.

C. Declare RHR 'A' INOP and dispatch an operator to open circuit breakers associated with RHR 'A' equipment and allow water level in the RHR 'A' Pump Room and Suppression Pool level to equalize.

D. Verify the RHR 'A' Pump Room Sump Pumps are operating and pumping water to the Auxiliary Building Floor Drain Transfer tank and then transfer water on to Radwaste by overriding the Auxiliary Building isolation valves.

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QUESTION 38

The plant is operating at rated conditions.

A smoke detector in the hallway area 8, 119 ft elevation of the Auxiliary Building is in alarm.

Which one of the following describes the actions that occur for this alarm?

A. The Control Room Security and Fire Protection Computer will activate the fire protection Wet Pipe Sprinkler system in area 8 119 ft elevation to suppress the fire.

B. The Control Room Security and Fire Protection Computer will activate the fire protection Carbon Dioxide (CO_2) systems in area 8 119 ft elevation to suppress the fire.

C. Upon verification by an operator of a fire, the operator will manually activate the deluge valve for the Wet Pipe Sprinkler system in area 8 119 ft elevation.

D. The local fire panel and the Control Room Security and Fire Protection Computer will alarm requiring an operator to be dispatched to investigate. NO other automatic actions will occur from the detection system.

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QUESTION 39

The plant is operating at 36% power.

A malfunction of the IPC results in the Main Steam Bypass Valves opening and passing 10% power to the Main Condenser.

The combined Main Stop and Control Valves responded lowering turbine output.

Which one of the following describes the movement of control rods with present plant conditions?

A. Rod movements are bound by the constraints of the Rod Pattern Controller. As long as the Rod Pattern is met control rods may be moved as desired.

B. Rod movements are bound by the Rod Withdrawal Limiter to limit control rod withdrawals to 2 notches. Control rod insertions are unlimited.

C. Rod movements are bound by the Rod Withdrawal Limiter to limit control rod withdrawals to 4 notches. Control rod insertions are unlimited.

D. Rod withdrawals are prohibited until the Main Steam Bypass valves are closed. Control rod insertions are unlimited.

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QUESTION 40

The plant is operating at rated conditions.

The Recirc System FCVs are 70% open when a Recirc Flow Control Valve Runback occurs.

Hydraulic Power Unit 'B' Subloop '2' pump discharge pressure drops to 1600 psig causing FCV B HYD EQUIP REDUN SUBLP INOP annunciator to illuminate as valve movement begins.

All equipment operates as designed.

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

A. Both Recirc Flow Control Valves will fail to stroke, causing an automatic downshift of Recirc pumps to slow speed.

B. Recirc 'A' Flow Control Valve will stroke to ≈20% valve position.
Recirc 'B' Flow Control Valve will stroke to ≈20% valve position.

C. Recirc 'A' Flow Control Valve will stroke to ≈20% valve position.
Recirc 'B' Flow Control Valve will stop in mid stroke.

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

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QUESTION 41

A LOCA has occurred.

RHR 'A' is injecting to the Reactor.

Standby Service Water 'A' Pump trips on motor overcurrent.

Which one of the following statements describes the response of RHR 'A'?

A. RHR 'A' Pump will trip due to a loss of cooling water flow to the RHR pump seal cooler.

B. RHR 'A' Pump will continue to run indefinitely since the LOCA signal has all of the trips bypassed.

C. RHR 'A' Pump will continue to inject until the motor overheats or the shaft seals overheat and seize the pump.

D. RHR 'A' Pump will continue to run but E12-F048A, RHR A BYP VLV will maintain itself open due to the loss of cooling water to the RHR 'A' Heat Exchangers.

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QUESTION 42

The plant is in a refueling outage.

LPCS is in its normal standby lineup.

E21-F005, LPCS INJ VLV, has been repacked and requires stroke timing.

The CRO places the LPCS MOV Test Switch to TEST and the LPCS INJ VLV handswitch to the OPEN position.

The valve fails to stroke open.

NO abnormal alarms are noticed.

Which one of the following prevented E21-F005 LPCS INJ VLV from stroking open?
P&ID M-1087 is provided.

A. Pressure indicating switch E21-PSH-N655 has failed low

B. Pressure indicating switch E21-PIS-N650 has failed high.

C. E21-F007, LPCS Injection HDR Manual Isolation, is closed.

D. Breaker 52-151114, LPCS INJ SHUTOFF VLV, thermal device has tripped.

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QUESTION 43

An ATWS has occurred from rated conditions and actions are being directed from EP-2A.

Standby Liquid Control (SLC) was ordered started.

The Control Room Operator takes the handswitch to START for both SLC pumps.

The circuit breakers for SLC Pumps A & B magnetic overloads tripped immediately when the pump motors started.

Which one of the following identifies the present valve positions for SLC and RWCU?

	C41-F001A/B STORAGE TANK OUTLET	**C41-F004A/B SLC SQUIB**	**G33-F001 PMP SUCT DRWL INBD ISOL**	**G33-F004 PMP SUCT CTMT OTBD ISOL**	**G33-F251 RWCU SPLY TO RWCU HXS**
A.	Open	Open/Fired	Closed	Closed	Closed
B.	Open	Closed	Closed	Open	Open
C.	Closed	Open/Fired	Open	Open	Closed
D.	Closed	Closed	Closed	Closed	Closed

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QUESTION 44

The plant is operating at 100 % power in a normal alignment.

RPS 'A' Motor Generator has tripped.

Which one of the following identifies the status of the Main Steam Isolation Valves (MSIVs)?
ASSUME NO OPERATOR ACTIONS.

A. All MSIVs are isolated, causing a reactor scram.

B. The Inboard MSIVs are isolated and the Outboard MSIVs are open.

C. The Inboard MSIVs are open and the Outboard MSIVs are isolated.

D. All MSIVs are open with only one of the solenoids energized on each valve.

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QUESTION 45

RF13 is in progress.

Control Rod Drive Mechanism change out is complete.

I & C has requested the Source Range Detectors be stroked in and out of the core for an I&C work order.

Which one of the following describes action that must be performed prior to moving the Source Range detectors?

A. An SRO with NO other concurrent assigned duties must be in the Control Room to supervise the activity.

B. Shorting Links must be verified installed in the Reactor Protection circuitry to prevent inadvertent scram signals from being received.

C. Personnel must be dispatched to the Drywell to ensure SRM cables and the under vessel service platform are placed to allow free travel.

D. Ensure NO other activities are being performed from the Refuel Floor during the activity to prevent multiple reactivity additions to occur at the same time.

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QUESTION 46

The plant is in mode 2 at 12 % of rated power.

APRM H is bypassed due to failed power supply.

The following is the present status of the APRMs versus LPRM inputs and indicated power:

APRM	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**
LPRM LVL D	5	5	5	2	3	2	4	5
LPRM LVL C	5	4	3	5	4	4	3	4
LPRM LVL B	3	2	2	4	3	3	3	3
LPRM LVL A	2	4	4	4	4	4	5	3
INDICATED POWER	12%	13%	14%	10%	10%	11%	10%	14% byp

LPRM **26-27B** power supply to the detector has failed.

With the present conditions, which one of the following describes current plant status?
The LPRM vs APRM assignments table is attached.

A. RPS and RCIS remain in a normal configuration.

B. Half Scram RPS A and Rod Withdrawal Block on RCIS.

C. Half Scram RPS B and Rod Withdrawal Block on RCIS

D. A full actuation of RPS should have occurred, RCIS will have a Rod Withdrawal Block.

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QUESTION 47

The plant is operating at 100% power.

The reference leg for Condensing chamber B21-D004A has ruptured in Containment.

Which one of the following describes the actions that will occur due to this leak and the actions that need to be taken?
Partial P&ID M-1077B is provided.

A. Level indication will go low resulting in a half scram signal. The trip function must be declared INOP with the required actions already complete.

B. Level indication will go high resulting in a half scram signal and half isolation signal of RCIC. The trip functions must be declared INOP with the required actions already complete.

C. Level indication will go low resulting in a half scram signal, and a RCIC, RHR 'A', and LPCS initiation and half building isolation signal to the outboard valves. The trip functions must be declared INOP with the required actions already complete. Required systems must be bypassed and restored.

D. Level indication will go high resulting in a half scram signal and half building isolation signal to the outboard valves. The trip functions must be declared INOP with the required actions already complete. Required systems must be bypassed and restored.

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QUESTION 48

The plant is operating at 100% power.

RCIC has been started for a quarterly surveillance.

The operator at RCIC has informed the control room that there is a steam leak on E51-F045, RCIC Steam Supply.

The Control Room Operator depresses the RCIC Manual Isolation pushbuttons on H13-P601.

Which one of the following describes the results of the Control Room Operator's actions?

A. RCIC will continue to run normally.

B. RCIC will isolate the Group 4 Outboard Isolation valves.

C. RCIC will completely isolate Group 4 Isolation valves and E51-F045 will remain open.

D. RCIC will completely isolate Group 4 Isolation valves and close E51-F045.

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QUESTION 49

The plant transient resulted in the following plant conditions:

Reactor power	55%
Reactor water level	+ 20 inches narrow range and stable
Reactor pressure	1045 psig and lowering
Drywell pressure	0.93 psig and stable
Drywell temperature	115 °F and stable
Containment temperature	85 °F and stable
Suppression Pool temperature	91 °F
Suppression Pool level	18.1 ft
Main Steam Tunnel temperature	155 °F and stable

All other plant conditions are normal.

Which one of the following identifies the Emergency Procedures that should be entered?

A. EP-2 only

B. EP-3 only

C. EP-4 only

D. EP-2 & 3

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QUESTION 50

The plant is operating at 100% power.

Radiography is in progress on 166 ft elevation inside Containment.

The following conditions exist:

Fuel Handling Area Exhaust Radiation Monitors	2.7 mR/hr
Fuel Pool Sweep Exhaust Radiation Monitors	27 mR/hr
Main Steam Line Radiation Monitors	1500mR/hr
Containment Vent Exhaust Radiation Monitors	4.5 mR/hr
Standby Gas Treatment Radiation Monitors	1.5 mR/hr

All channels of the Radiation Monitors are reading the same.

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

	FHA Vent	FPS Vent	CTMT Vent	SBGT	MSIVs
A.	Isolated	Isolated	Isolated	Operating	Isolated
B.	Operating	Operating	Operating	Standby	Open
C.	Isolated	Isolated	Isolated	Operating	Open
D.	Operating	Operating	Isolated	Standby	Open

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QUESTION 51

A LOCA occurred 12 minutes ago actuating LSS.

Drywell conditions have caused all RPV level indications to fail upscale.

Drywell pressure is 5.6 psig.

Containment pressure is 8.2 psig.

Containment temperature is 120°F.

Which one of the following describes the response of Containment Spray?

A. Containment Spray should have automatically initiated.

B. Containment Spray is in standby and should NOT be manually initiated due to plant conditions being UNSAFE for initiation.

C. Containment Spray is in standby due to a lack of appropriate signals for automatic initiation but may be manually initiated.

D. Containment Spray is in standby due to a lack of the appropriate signals for automatic initiation and will NOT manually initiate due to the lack of appropriate signals.

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QUESTION 52

The plant is operating at 100% power.

ADS/SRV B21-F041K opened at time 1000.

The following conditions exist:

H13-P601 section 19B Red light OFF
19C Red light ON
H13-P628 Clear lights ON
Red light ON
H13-P631 Both sets of Clear lights ON
Green light ON
Annunciator H13-P601 18A-G2 ADS/SRV LEAK is in alarm.
Annunciator H13-P601 19A-A5 SRV/ADS VLV OPEN/DISCH LINE PRESS HI is in alarm.

Current time is 1003.

Given the above indications, which one of the following describes the status of B21-F041K?

A. The valve is closed.

B. Open via relief valve logic.

C. Open via ADS logic.

D. Open via safety actuation.

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QUESTION 53

The plant is operating at 20% power.

The Turbine IPC system gradually lowered its control to 800 psig.

Which one of the following describes the response of the plant?
ASSUME NO OPERATOR ACTIONS.

A. Turbine Control Valves will open to lower pressure followed by a MSIV closure and reactor scram, the Main Generator will trip on reverse power which will trip the Main Stop and Control Valves.

B. Turbine Control Valves will remain at present positions with the Main Steam Bypass Control Valves opening to lower pressure followed by an MSIV closure and reactor scram, the Main Generator will trip on reverse power which will trip the Main Stop and Control Valves.

C. Turbine Control Valves will close to lower pressure followed by a Main Turbine and Generator trip on Load reject followed by a reactor scram on Turbine Stop and Control valve closure, the MSIVs will close on low pressure.

D. Main Steam Bypass Control Valves will remain open to lower pressure followed by a MSIV closure and reactor scram, the Main Generator will trip on reverse power which will trip the Main Stop and Control Valves.

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QUESTION 54

The plant is operating at 100% power.

Narrow Range Level 'A' indicates +36.2 inches
Narrow Range Level 'B' indicates +36.5 inches
Narrow Range Level 'C' indicates +36.1 inches
Upset Range Level indicates +38.1 inches

Level Transmitter C34-LT-N004C diaphragm ruptures.

Which one of the following describes the response of the Digital Feedwater Control System (DFCS)?
ASSUME NO OPERATOR ACTION.

A. Level indication on Narrow Range 'C' will fail downscale and DFCS will shift from three element to single element and replace it with Upset Range.

B. Level indication on Narrow Range 'C' will fail downscale and DFCS will automatically remove 'C' from the level calculations and replace it with Upset Range.

C. Level indication on Narrow Range 'C' will fail upscale and DFCS will automatically shift the controlling level signal to Narrow Range 'A' from 'C'.

D. Level indication on Narrow Range 'C' will fail upscale and DFCS will automatically remove 'C' from the level calculations and replace it with Upset Range.

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QUESTION 55

Both trains of Standby Gas Treatment (SBGT) System were started for a surveillance using the Manual Initiation pushbuttons.

SBGT 'A' was placed in standby per the SOI.

A valid Fuel Handling Area exhaust high-high radiation signal was received.

Which one of the following describes the response of the Standby Gas Treatment System and required operator response?

A. SBGT 'A' will automatically re-initiate and SBGT 'B' will remain operating, requiring NO additional operator action.

B. SBGT 'A' will remain in standby and requires manual operator initiation to resume operation, SBGT 'B' will remain operating.

C. SBGT 'A' will remain in standby, SBGT 'B' will perform all required actions as long as Enclosure Building pressures remain satisfactory NO further operator action is required.

D. SBGT 'A' Enclosure Building and Exhaust fans will automatically restart without repositioning of building dampers and SBGT 'B' will remain operating controlling building pressure. The operator must follow by depressing manual initiation pushbuttons to get the dampers operating.

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QUESTION 56

The plant is operating at 100% power.

Bus 11HD experiences a bus over-current lockout.

Which one of the following identifies the final breaker lineup of the Reactor Recirculation Pumps?

	RECIRC PUMP 'A'				
	CB1A	**CB2A**	**CB3A**	**CB4A**	**CB5A**
A.	OPEN	OPEN	CLOSED	CLOSED	OPEN
B.	OPEN	OPEN	CLOSED	CLOSED	CLOSED
C.	OPEN	OPEN	CLOSED	OPEN	OPEN
D.	CLOSED	CLOSED	CLOSED	CLOSED	OPEN

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QUESTION 57

The Division I Diesel Generator is being operated locally for Systems Engineering.

The STBY/EMER switch on H22-P113 is in the EMER position.

A rupture of a fuel oil pipe from the Division 1 Diesel Generator Day Tank causes a fire that required a complete evacuation of the room.

Which one of the following describes the required action(s) to shutdown the diesel generator?

A. Depress the REMOTE MANUAL DG 11 STOP pushbutton on 1H13-P864.

B. Depress the DG 11 EMERG SHUTDOWN pushbutton on 1H22-P113.

C. Open breakers 72-11A48 and 72-11A50, STBY DSL GEN 11 TRAIN A and B START/STOP CONTROL.

D. Open breaker 72-11A57, STBY DSL GEN 11 RLY PNL 1H22-P113 FIELD FLASHING.

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QUESTION 58

The plant is in Mode 1.

Which one of the following describes the normal alignment for ventilation systems in the Auxiliary Building to maintain proper building differential pressure?

	AB General Area Fan Coil Units	FHA Supply Fans	FHA Exhaust Fans	FPS Supply Fans	FPS Exhaust Fans	T42-F021 Pressure Control Valve
A.	Fans cycling on temperature	1 Fan running	2 Fans running	1 Fan running	2 Fans running	Fully open
B.	Fans running	2 Fans running	2 Fans running	2 Fans running	2 Fans running	Full open
C.	Fans running	1 Fan running	1 Fan running	1 Fan running	1 Fan running	Modulating
D.	Fans cycling on temperature	1 Fan running	1 Fan running	NO Fan running	1 Fan running	Modulating

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QUESTION 59

A station blackout has occurred.

It has been estimated offsite power will return in 6 hours.

Reactor water level is below the top of active fuel.

The Shift Manager has decided to cross tie Division III Diesel Generator to bus 16AB.

Which one of the following describes the return of loads to bus 16AB?

A. Division II Load Shedding and Sequencing panel will automatically sequence loads limiting load on Division III Diesel Generator.

B. Division II Load Shedding and Sequencing panel has initiated a failure signal locking out the panel requiring manual starting of loads.

C. Division II loads will only start as required for their LOCA signals with non-essential loads remaining de-energized.

D. Division II Load Shedding and Sequencing panel is manually turned off requiring loads to be manually started in a prescribed order.

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QUESTION 60

The following annunciators have been received in the Control Room concerning the Control Rod Drive Hydraulic System:

CONT ROD DRIFT	H13-P680-4A2-E4
CRD CLG WTR TO RX DP HI	H13-P680-4A1-A6

All other annunciators are clear concerning CRD.

Which one of the following describes the status of the Control Rod Drive (CRD) Hydraulic System?

A. The CRD Pressure Control Valve C11-F003 is improperly positioned too far open.

B. CRD Hydraulic System is operating in response to a reactor scram.

C. The in-service CRD Flow Control Valve C11-F002 has failed closed.

D. The CRD Stabilizing Valves have failed closed.

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QUESTION 61

The plant is starting up following a refueling outage.

Recirculation Pump A is running in fast speed.

Activities are in progress to shift Recirculation Pump B to fast speed.

As the operator depresses the START pushbutton on TRANS TO LFMG/START handswitch on 1H13-P680 for Recirculation Pump B, annunciator H13-P680-3A-E8, LFMG B OVERLD/TRIP alarms.

Which one of the following describes the affect this alarm will have on Recirculation Pump B?

A. Circuit breaker CB-1B will remain closed, CB-2B will trip and CB-5B will open. Recirculation Pump B will coast down.

B. Circuit breaker CB-1B and CB-2B will trip and circuit breaker CB-5B will remain open. Recirculation Pump B will coast down.

C. Circuit breaker CB-1B will remain closed, CB-2B will trip, and CB-5B will close. Recirculation Pump B will accelerate to rated speed.

D. Circuit breaker CB-1B and CB-2B will remain closed and circuit breaker CB-5B will remain open. Recirculation Pump B will remain in slow speed.

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QUESTION 62

The plant is operating at 100% power.

All Containment Cooling is out of service.

A leak in the RWCU "A" Filter Demineralizer Room has caused room temperature to rise to 145°F.

Control Room annunciator RWCU DMIN RM 1 TEMP HI on H13-P680 is in alarm.

Which one of the following describes the affect this will have on the Reactor Water Cleanup (RWCU) System?

A. The RWCU system will continue to operate normally.

B. RWCU "A" Filter Demineralizer will isolate.

C. Both RWCU "A" and "B" will isolate.

D. RWCU "A" will isolate.

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QUESTION 63

The plant is in Mode 4 at 170°F.

RHR 'A' was in shutdown cooling when E12-F008 inadvertently isolated.

Which one of the following would be an indication of a change in plant Mode status?

A. RX TEMP LO annunciator has been received.

B. Source Range Nuclear Instrumentation count rate rising.

C. Steam is reported from B21-F001 and F002 Reactor Head vents.

D. Reactor Engineering reports available Shutdown Margin has been reduced.

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QUESTION 64

The plant is operating at rated conditions.

RHR 'A' was placed in Suppression Pool cooling following a RCIC run.

While RHR was operating, power was lost to bus 15AA for approximately 4 minutes.

Power has been restored from an offsite source.

Which one of the following describes the actions to be taken to re-establish Suppression Pool Cooling?

A. Start RHR 'A' pump and verify E12-F024A Suppression Pool Test Return is open and E12-F048A RHR Heat Exchanger Bypass valve is closed.

B. With system as is, open E12-F073A and F074A RHR Heat Exchanger Vents for 30 seconds, then re-start RHR 'A' pump in Suppression Pool Cooling.

C. Return RHR 'A' system to LPCI standby then realign RHR 'A' pump in Suppression Pool Cooling.

D. RHR 'A' will automatically resume Suppression Pool Cooling when Load Sequencing occurs.

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QUESTION 65

The plant is in a refueling outage.

RHR 'A' is operating in Shutdown Cooling mode.

Both loops of Spent Fuel Pool Cooling and Cleanup are operating.

Core alterations are in progress.

Due to a failed flow transmitter, E12-F064A, RHR A MIN FLO TO SUPP POOL opens.

Which one of the following would be a result of this event?

A. Containment and Spent Fuel Pool temperature rising.

B. Radiation levels on 208' el. Auxiliary Building and Containment rising.

C. Water clarity in the Containment and Spent Fuel Pool lowering.

D. Area temperature on 208' el. Auxiliary Building and Containment rising.

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QUESTION 66

The river is at high water level when a barge strikes the Radial Well Switchgear house and causes all radial well pumps to trip.

Operators and Electricians estimate 24 hours to restore the switchgear at the river.

The Control Room has reduced power to 67 Mlbm/hr core flow.

The Turbine Building operator has reported TBCW temperature is 116°F and rising steadily.

Temperatures on all lube oil systems are rising rapidly.

Main Condenser vacuum is degrading and the plant was manually scrammed.

Which one of the following describes the actions to be taken for RPV level control?

A. Maintain reactor pressure stable and control RPV level with RCIC and secure the Condensate and Feedwater systems.

B. Emergency depressurize the reactor allowing low pressure ECCS to be used for RPV level control.

C. Maintain reactor pressure stable and alternate the Reactor Feed Pumps, Condensate Booster and Condensate pumps for level control.

D. Emergency depressurize the reactor to within the capabilities of the Condensate pumps and alternate operation of pumps while monitoring temperatures.

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QUESTION 67

Annunciator H13-P807-3A-G3, STATIC INVRTR 1Y98 TROUBLE is in alarm.

Investigation reveals that the static inverter output frequency is oscillating.

The following indications are present on Inverter 1Y98:

INVERTER FAILURE light energized
IN SYNC light de-energized
INVERTER SUPPLYING LOAD energized
ALT SOURCE SUPPLYING LOAD de-energized

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

A. The static switch will transfer automatically when inverter output frequency lowers to the required setpoint.

B. Manually transfer Inverter 1Y98 to its alternate power source using the ALT SOURCE TO LOAD pushbutton.

C. Manually transfer Inverter 1Y98 to its alternate power source using the Manual Bypass Switch.

D. Open breaker 72-11K05, 1Y98 PRIMARY DC POWER to allow the inverter to automatically swap to its alternate power source.

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QUESTION 68

The plant is operating at 100% power.

The in-service Offgas train flow has steadily risen from 18 scfm to 50 scfm and remains stable.

A check of the Offgas system lineup reveals a normal valve lineup.

Which one of the following describes the possible cause of the elevated flow in Offgas?

A. Hydrogen Water Chemistry hydrogen injection has been secured resulting in more Oxygen passing out of the reactor with the steam.

B. Offgas loop seals have been blown resulting in leakage into the Offgas process from the drains.

C. A Hydrogen fire is ongoing in the Offgas Charcoal Adsorbers resulting in the release of gases in the Offgas system.

D. Leakage into the condenser has risen resulting in more flow of non-condensables into the Offgas system.

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QUESTION 69

ESF Inverter 1Y88 Manual Bypass switch has failed resulting in a loss of power to UPS power panel 1Y84.

FH AREA EXH DIV 2,3 RAD HI-HI/INOP is in alarm.
FP EXH DIV 2,3 RAD HI-HI/INOP is in alarm.

Standby Gas Treatment System 'B' has automatically started due to a loss of logic power.

A half scram on RPS 'B' has occurred.

Which one of the following describes the affect on the Fuel Handling Area (FHA) Exhaust and Fuel Pool Sweep (FPS) Radiation Monitoring Systems?

A. Only FHA and FPS channel B has tripped due to an INOP signal.

B. Only FHA and FPS channel C has tripped due to an INOP signal.

C. FHA and FPS channels B and C have tripped due to INOP signals.

D. FHA and FPS channels B and D have tripped due to INOP signals.

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QUESTION 70

The plant is operating at 100 % power.

Unit I Instrument Air Compressor is tagged out of service for impeller replacement.

Service Air Compressor 'A' is operating with Service Air Compressor 'B' in standby.

Unit II Instrument Air Compressor trips on motor overload.

Instrument Air header pressure has dropped to 97 psig and lowering.

Which one of the following describes the operation of the Plant Air System in response to the current conditions?

A. Service Air will require manual cross-tying to the Instrument Air header upstream of the Plant Air Dryers.

B. Service Air will require manual cross-tying to the Instrument Air header downstream of the Plant Air Dryers.

C. Service Air will automatically cross tie to the Instrument Air header upstream of the Plant Air Dryers.

D. Service Air will automatically cross tie to the Instrument Air header downstream of the Plant Air Dryers.

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QUESTION 71

Which one of the following describes the safety design basis for maintaining Control Room ambient air temperatures?

A. Ensure Control Room personnel remain comfortable during normal and accident conditions.

B. Ensure Control Room atmosphere remains at temperatures above that which would result in condensation in the Control Room.

C. Ensure optimal performance of the Control Room Standby Fresh Air charcoal adsorbers during accident conditions.

D. Ensure Control Room temperatures remain less than that required for equipment operability during normal and accident conditions.

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QUESTION 72

The plant is operating at 100% power.

Due to maintenance work, the Fuel Pool Cooling and Cleanup is lined up to supply only the Spent Fuel Pool.

Water level in the Upper Containment Pool was lowered approximately 1 foot to facilitate maintenance on temperature elements.

Maintenance work has been completed and Fuel Pool Cooling and Cleanup is being re-aligned to supply both the Spent Fuel Pool and the Upper Containment Pool.

Which one of the following is a potential consequence of opening the G41-F028, FPCC RTN VLV CTMT OTBD ISOL, too rapidly?

A. Possible overflow of the Fuel Pool Drain Tank due to the rapid return of water from the Upper Containment Pool.

B. Possible trip of the Fuel Pool Cooling and Cleanup pump(s) on low Fuel Pool Drain Tank level.

C. Possible overflow of the Spent Fuel Pool into the ventilation system.

D. Possible overflow of the Upper Containment Pools into the ventilation system.

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QUESTION 73

The plant is operating at rated pressure.

The Riley temperature switch E31-TS-N604C, MSL Temperature has failed upscale.

All other trip units are reading normal.

Which one of the following describes the status of the Main Steam Isolation Valves (MSIVs)?

A. The 'A' MSIV solenoid on all eight MSIVs are de-energized with a half isolation signal.

B. The 'A' MSIV solenoids on the Outboard MSIVs are de-energized with a half isolation signal.

C. The 'A' MSIV solenoids on the Inboard MSIVs are de-energized with a half isolation signal.

D. Both MSIV solenoids on all eight MSIVs are energized requiring a second temperature signal to cause any isolation signals.

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QUESTION 74

The plant was operating at 100% power.

A slight power rise has occurred.

The following indications are present in the Main Control Room:

CNDS PMP DISCH CNDCT HI NOT in alarm.
CNDS DMIN EFL CNDCT HI in alarm.
CNDS DMIN SYS TROUBLE in alarm.
RFP DISCH CNDCT HI in alarm.
FW TRBY HI/LO in alarm.
RWCU FLTR DMIN EFL CNDCT HI/LO NOT in alarm.
MSL RAD HI in alarm.
MSL A/MSL D RAD HI-HI/INOP in alarm.
MSL B/MSL C RAD HI-HI/INOP in alarm.

Which one of the following describes the cause of chemistry changes in the plant?

A. Condensate Pre-coat Filter isolation valve leaking by.

B. Condensate Deep Bed Demineralizer resin breakthrough.

C. Main Condenser tube break from Circulating Water System.

D. Reactor Water Cleanup Filter Demineralizer resin break through.

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QUESTION 75

The Drywell Floor Drain Sump 'A' pump is tagged out of service.

The Drywell Floor Drain Sump 'B' pump handswitch is selected for AUTO.

The handswitch on the control panel is in the ALTERNATE position.

The Floor Drain System Valve lineup is per SOI.

Which one of the following describes the operation of the Drywell Floor Drain Sump in the present configuration?

A. Sump Pump 'B' will automatically start each time the sump High level switch is activated.

B. Sump Pump 'B' will bypass the High level switch and automatically start on the High-High level switch.

C. Sump Pump 'B' will automatically start when the leak detection timer times out on sump fill rate.

D. Sump Pump 'B' will NOT cycle automatically on High or High-High level switches or any leak rate timers.

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QUESTION 76

The plant is operating at 100 % power following a return to power after a MSIV closure scram.

Multiple SRVs are weeping.

Which one of the following describes the limitations and monitoring of the Suppression Pool Temperature?
Tech Spec 3.6.2.1 and Surveillance 06-OP-1M24-V-001 are provided.

A. Suppression Pool Temperature is limited to 95ºF and must be monitored every sixty minutes when temperature is above 90ºF to verify average temperature is less than 105ºF. If Suppression Pool Temperature exceeds 95ºF, Suppression Pool Cooling must be placed in service.

B. Suppression Pool Temperature is limited to 95ºF and must be monitored every five minutes while testing is adding heat to the Suppression Pool. If Suppression Pool Temperature exceeds 100ºF Suppression Pool Cooling must be placed in service and reactor power reduced to less than 1%.

C. Suppression Pool Temperature is limited to 100ºF and must be monitored every five minutes while testing is adding heat to the Suppression Pool. If Suppression Pool Temperature exceeds 95ºF Suppression Pool Cooling must be placed in service. Testing must be secured if Suppression Pool Temperature exceeds 105ºF.

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

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QUESTION 77

The plant is in day 19 of RF13.

Fuel Pool Cooling and Cleanup pumps have tripped and are not expected back within the next 5 days.

Spent Fuel Pool temperature is 139°F and rising 1 degree every 2 hours.

Preparations are in progress for plant startup within the next 8 hours.

Which one of the following is the course of action that should be taken with regard to plant operations?
Procedure 05-1-02-III-1 and Tech Spec 6.7.4 are provided.

A. Proceed with plant startup and plant Mode change to MODE 2. Monitor Spent Fuel Pool temperatures and start additional area fan coil units on 208 ft elevation.

B. Install fire hoses on 208 ft elevation discharging into the Spent Fuel Pool and drain the Spent Fuel Pool to the Suppression Pool. Delay plant startup until Spent Fuel Pool temperatures are less than 140°F, then plant startup may proceed to MODE 2.

C. Align RHR A or B for Fuel Pool Cooling Assist. Delay plant startup until Fuel Pool Cooling can be restored to service or Spent Fuel Pool temperatures will remain less than 140°F without the assistance of RHR.

D. Proceed with plant startup and plant mode change to MODE 2. Enter LCO on Spent Fuel Pool temperature and take exception to 3.0.4. Align RHR A or B for Fuel Pool Cooling Assist to restore Spent Fuel Pool temperatures.

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QUESTION 78

Which one of the following identifies a condition that would require declaration of an ALERT?
10-S-01-1 is provided.

A. A scram occurred but 6 control rods remain withdrawn Reactor power is indicating stable on range 4 of the IRMs. All neutron monitoring detectors have been fully inserted into the core.

B. A scram should have occurred but the operator had to place the reactor mode switch to shutdown to activate RPS, once the mode switch was in SHUTDOWN all control rods inserted fully and reactor power has dropped to the source range.

C. A scram occurred with RPS actuation however 50 control rods failed to fully insert. Reactor power is 10% with Reactor water level being maintained at -110 inches on the Fuel Zone indication.

D. A scram occurred when the Operator At-The-Controls placed the mode switch to SHUTDOWN but control rod 28-33 remains stuck fully withdrawn. Reactor power has dropped to the source range and is stable at 6000 counts.

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QUESTION 79

A LOCA has occurred at GGNS.

Conditions have warranted the declaration of a General Emergency with a release in progress.

Dose projections on Highway 61 at the junction with Highway 18 in Port Gibson have been determined to be 100 mRem TEDE.

The wind is coming from 320 degrees at 15 mph.

Which one of the following identifies the protective action recommendations that should be made and the affected sectors?
10-S-01-1; 10-S-01-12 and the EPZ map are provided.

A. Evacuate 2 miles in all sectors, and 5 miles in sectors F, G, H. Shelter the remainder of the 10 mile emergency planning zone.

B. Evacuate 2 miles in all sectors, and 5 miles in sectors P, Q, R. Shelter the remainder of the 10 mile emergency planning zone.

C. Evacuate 2 miles in all sectors, and 10 miles in sectors F, G, H. Shelter the remainder of the 10 mile emergency planning zone.

D. Evacuate 2 miles in all sectors, and 10 miles in sectors P, Q, R. Shelter the remainder of the 10 mile emergency planning zone.

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QUESTION 80

You are the Shift Manager.

Which one of the attached Batch Liquid Radwaste Discharge Permits should be approved to allow a liquid radwaste discharge?
01-S-08-11 and permits are provided.

A. Batch Liquid Discharge Radwaste Permit 04-02-06-1

B. Batch Liquid Discharge Radwaste Permit 04-02-06-2

C. Batch Liquid Discharge Radwaste Permit 04-02-06-3

D. Batch Liquid Discharge Radwaste Permit 04-02-06-4

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QUESTION 81

RF13 Mode 5 core alterations are in progress.

RHR 'A' is operating in Shutdown Cooling with ADHR as the alternate decay heat removal subsystem.

LPCS Pump motor is disassembled.

11DB1 DC bus is de-energized for bus repairs.

Engineering just reported HPCS Pump and Motor bearing oil has metal filings in the oil.

Which one of the following statements describes the actions to be taken for plant conditions?
Tech Spec 3.5.2 is provided.

A. Restore required ECCS system to operable status within four hours.

B. Immediately suspend Core Alterations and OPDRVs, restore required ECCS system to operable status within four hours.

C. Verify Reactor water level is ≥22 ft 8 inches above the reactor pressure vessel flange and the upper containment reactor cavity and transfer canal gates are removed.

D. Restore required ECCS system to operable status within four hours. Immediately suspend OPDRVs. Initiate action to restore one SBGT Train and Secondary Containment to Operable status and isolate Secondary Containment penetrations unable to be isolated.

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QUESTION 82

Both ADS Booster Compressors are broken.

ADS Air Receiver pressure dropped to 110 psig.

The Control Room Supervisor dispatched operators to install nitrogen bottles per the Loss of Instrument Air ONEP and establish 165 psig pressure on the ADS Air Receivers.

Which one of the following statements describes the actions to be taken for plant conditions?
Tech Spec 3.0; SR3.0; and 3.5.1 are provided.

A. Immediately enter LCO 3.0.3 until reactor pressure is ≤ 150 psig or ADS Air Receivers and ADS Booster Compressors have been restored to an operable status.

B. Be in Mode 3 within 12 hours and reduce reactor pressure to ≤ 150 psig within 36 hours or restore ADS Air Receivers and ADS Booster Compressors to an operable status.

C. Monitor ADS Air Receiver Pressure once per 7 days and restore ADS Booster Compressors to an operable status within 31 days.

D. Restore ADS Air Receivers and ADS Booster Compressors to an operable status within 31 days.

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QUESTION 83

The crew has had the shift for eight hours and a replacement Shift Manager is arriving to relieve the On-Duty Shift Manager.

Which one of the following is NOT required for the On-coming Shift Manager to assume the duties?

A. Log the relief in the Shift Manager's Logbook

B. The plant should be a stable condition before beginning turnover.

C. Complete a walkdown of the Control Room and understand plant conditions

D. Conduct a shift briefing to discuss plant status and scheduled evolutions/tasks.

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QUESTION 84

The Outside Operator is performing switching in the 500KV switchyard per Switching Orders from the dispatcher.

The Operator notes the switching orders from the dispatcher are ordering an operation that contradicts the 500KV System Operating Instruction (SOI).

The System Engineer has researched the procedure and the switching orders requested by the dispatcher and determined the switching orders would NOT violate any licensing basis documents.

Entergy – Mississippi personnel are awaiting the completion of the switching to begin work on a 500 KV equipment outage.

Which one of the following describes the method to prevent violating the switching orders and GGNS procedures?

A. The Shift Manager may approve deviation from the GGNS SOI since the work to be done is in the Entergy – Mississippi portion of the switchyard.

B. A revision of the SOI is required to be approved by the OSRC, Electrical Superintendent and Operations Manager prior to proceeding with work.

C. A Temporary Change Notice should be written and issued with a 50.59 evaluation for the 500 KV SOI.

D. A Component Position Control Form should be written and issued with a 50.59 evaluation.

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QUESTION 85

The Control Room Supervisor has dispatched operators with the N19 Condensate System Manual Valve Lineup and Electrical Lineup Check sheets for restoration following RF13.

Which one of the following describes the use of these checksheets?

A. An SRO verifies proper revisions and marks the checksheets as a controlled copy and signs and dates the checksheet, this is valid the entire time the checksheet is in use. The operators may perform the checksheet in any sequence, unless otherwise noted.

B. An SRO verifies proper revisions and marks the checksheets as a 24 hour controlled copy and signs, dates and times the checksheet, this validation must be renewed every 24 hours until the checksheet is complete. The operators may perform the checksheet in any sequence, unless otherwise noted.

C. An SRO verifies proper revisions and marks the checksheets as a controlled copy and signs, dates and times the checksheet, this is valid the entire time the checksheet is in use. The operators must perform the checksheet in sequence with the manual valve lineups completed before electrical lineups.

D. An SRO verifies proper revisions and marks the checksheets as a 24 hour controlled copy and signs, dates and times the checksheet, this validation must be renewed every 24 hours until the checksheet is complete. The operators must perform the checksheet in sequence, unless otherwise specified by the SRO.

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QUESTION 86

The plant is in a refueling outage on day 4 with core alterations in progress.

Shutdown cooling and forced circulation are lost due to a loss of electrical power.

The fuel handlers on 208 ft in Containment report an excessive amount of steam emanating from the Reactor Cavity area.

RWCU inlet temperature indications in the Main Control Room are indicating 215°F and rising.

Which one of the following identifies the Plant Mode of Operation and any actions that should be taken?
Tech Specs 3.6.1.1 and 3.6.4.1 are provided.

A. Mode 3 requiring Primary Containment to be operable.

B. Mode 4 requiring Secondary Containment to be operable.

C. Mode 4 with NO requirements for Primary or Secondary Containment.

D. Mode 5 with NO requirements for Primary or Secondary Containment.

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QUESTION 87

The plant is in a refueling outage on day 4 with core alterations in progress.

The Polar Crane Operator is lifting a Hydrogen Recombiner unit from beside the 208 ft Containment Airlock to place it next to the Containment Equipment hatch on 166 ft.

During the move the crane operator begins a planned crane lift to move the recombiner over the Upper Containment Fuel Storage Pool.

Which one of the following identifies the minimum level of personnel authorized to stop the planned crane lift?

A. Any personnel in the area

B. Refueling Floor Supervisor

C. Refueling Senior Reactor Operator

D. Lift Person-In-Charge (PIC)

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QUESTION 88

The plant is operating at 100% power.

A fire has been reported on the 133 ft. elevation of the Turbine Building.

The Fire Brigade Leader has requested that both Smoke Exhaust Fans be started and the Turbine Building Roof Hatches be opened to facilitate the removal of smoke that has accumulated in the areas.

Which one of the following describes the correct actions to be taken prior to starting the fans and opening the hatches?

A. Verify Turbine Building Vent Stack Monitors are in operation and install Continuous Air Monitors (CAMs) at the roof hatches to be opened.

B. Ensure Turbine and Radwaste Building rollup doors are open to allow air flow to enhance smoke removal.

C. Operate both Turbine Building Exhaust fans through the Turbine Building Exhaust Filter Train for representative sampling of the Turbine Building atmosphere.

D. Notify Radiation Protection/Plant Chemistry to draw an air sample from the Smoke Exhaust Fans and setup monitoring equipment at the roof hatches to be opened.

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QUESTION 89

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

A. Construction Water is being connected to the Instrument and Service Air compressors to allow disconnecting TBCW piping for replacement, estimated job should be completed in 10 days.

B. I&C is lifting leads in H13-P625 to allow E22-F015, HPCS PMP SUCT FM SUPP POOL to be closed and E22-F001, HPCS PMP SUCT FM CST to be opened due to an inoperable Suppression Pool level transmitter.

C. Plant Services has a fire hose hooked up at the SSW basin to wash out mud per a WO and is estimated to take 2 days and hoses will be removed per the WO instructions.

D. An operator is opening a service air valve to allow mechanical maintenance to use air operated tools to support work, per a WO.

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QUESTION 90

The plant is operating at full power.

Which one of the following activities could be worked WITHOUT initiating a Work Request?

A. Tighten the packing to stop a leak on P66-F029A, Domestic Water Supply to the Auxiliary Building.

B. Repair the open (green) light bulb on circuit breaker 152-1411 LFMG B MTR FDR (CB-1B).

C. Repair the latching mechanism for the Control Room Door OC506 that accesses the Operations Kitchen.

D. Install a pressure gauge on the discharge of RHR 'A' Jockey pump at PP-N408A on E12-FX056.

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QUESTION 91

A plant startup is in progress.

At 60 psig, RCIC was placed in Standby per the SOI.

At 150 psig, RCIC surveillance 06-OP-1E51-C-0005 was started.

During the surveillance, the Auxiliary Building Operator found pieces of the RCIC Gland Seal Compressor on the floor.

Soon after this discovery, the compressor tripped its circuit breaker.

The balance of the surveillance was completed satisfactorily.

All other systems are Operable.

Which one of the following describes the status of RCIC and the allowances for continuing power ascension to Mode 1?
Tech Spec 3.5.3, Surveillance 06-OP-1E51-C-0005, and 01-S-06-44 are provided.

A. RCIC is operable and power ascension and mode change may continue as planned.

B. RCIC is functional but inoperable; however, power ascension may continue up to 950 psig but the plant must remain in Mode 2.

C. RCIC is functional but inoperable, power ascension halted and reactor pressure maintained less than 150 psig. The plant may remain in Mode 2.

D. RCIC is functional but inoperable; however, power ascension may continue up to 950 psig and the mode change to Mode 1 is allowed provided HPCS is operable.

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QUESTION 92

A Refueling Outage is in progress.

Which one of the following describes a core alteration requiring the presence of a Senior Reactor Operator dedicated to Refueling?
04-1-01-C11-2 Figure 1a, 17-S-02-40 Att. V and 17-S-02-300 Att. V are provided.

A. During core loading verification, LPRM string 26-35 has been found out of position. A tool is to be used to reposition the string for proper alignment.

B. During core loading verification, fuel bundle 1-36 has been found oriented improperly requiring reorientation.

C. Control rod 16-45 has a full blade guide installed with the cell de-fueled and requires withdrawal to allow for control rod drive mechanism maintenance.

D. Replacement of IRM detector 'G' is complete and the technicians want to stroke the detector in and out of the core with it bypassed.

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QUESTION 93

A truck driver with Framatone has called the Control Room to report that a truck load of new fuel bundles has been involved in an accident on Highway 61 in Warren County.

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

The Radiation Protection Lab has a supervisor and three (3) Radiation Protection Technicians.

Who is responsible to provide any technical or Radiation Protection assistance to the accident scene?
Radioactive Material/Non-Radioactive Hazardous Material Transportation Accident Plan is provided.

A. Shift Manager

B. Chemistry Superintendent

C. On-Call Radiation Protection Manager

D. General Manager, Plant Operations

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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.

Moderate Hydrogen Water Chemistry has just been secured.

It is estimated the job will take 10 minutes to complete.

The worker selected to perform the job has a current exposure of 200 mRem.

Radiation levels are expected to be 2 - 2.5 R/Hr in the area of the work.

Determine whether the General Operations Radiation Work Permit is acceptable for this job?

NMM RP-105 and Operations RWP are provided.

A. The General Operations RWP is sufficient without further actions.

B. 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 a pre-job briefings.

D. A job specific RWP is required. Radiation Protection will require approval of the ALARA Committee due to the excessive dose commitment.

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QUESTION 95

The plant has experienced a transient.

Multiple control rods did NOT fully insert.

Plant conditions are as follows:

Reactor water level:	-189" and stable
Reactor pressure:	124 psig
Drywell temperature:	245°F
Drywell pressure:	4.8 psig
Drywell hydrogen:	3.1%
Containment temperature:	125°F
Containment pressure:	2.3 psig
Containment hydrogen:	1.2%
Suppression Pool level:	23.9 ft.
Suppression Pool temperature:	113°F

Which one of the following sets of procedures takes priority for controlling the current plant conditions?

A. System Operating Instructions (SOIs) and Off-Normal Event Procedures (ONEPs)

B. Off-Normal Event Procedures (ONEPs) and Emergency Procedures (EPs)

C. Emergency Procedures (EPs) and Severe Accident Procedures (SAPs)

D. Severe Accident Procedures (SAPs) only

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QUESTION 96

The plant is operating at 100% power.

The shift has the normal complement of licensed operators: 3 SROs and 3 ROs.

Security has notified the Shift Manager that armed adversaries have entered the Protected Area and are presently occupying the Fire Water Pump House.

Which one of the following describes the actions to be taken by Operations personnel and the Emergency Response Organization (ERO)?

A. Operations personnel are to immediately return to the Control Room using routes inside the power block. The ERO should report to their Emergency Response Facilities.

B. One SRO and one RO will man the Remote Shutdown Panels with the balance of operations personnel taking cover. The ERO should report to any Emergency Response Facilities outside of the Protected Area.

C. One SRO and one RO will man the Remote Shutdown Panels with the balance of operations personnel taking cover. The ERO should take cover until the all clear is given by Security.

D. Control Room personnel should remain in the Control Room. All other personnel on site should take cover in their locations and remain out of the power block until the all clear is given by Security.

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QUESTION 97

A LOCA has occurred and reactor water level has dropped to -220 inches and is slowly lowering.

ECCS Systems are in a degraded condition.

The Emergency Response Organization has manned all Emergency Facilities.

The Shift Manager determines that entry into the Severe Accident Procedures is warranted.

Which one of the following describes whose concurrence is required and the basis for this concurrence?

A. Offsite Emergency Coordinator concurrence is required to ensure the proper Emergency Declaration and protective action recommendations are made.

B. Emergency Director and Offsite Emergency Coordinator concurrence is required to ensure proper Emergency Declaration and protective action recommendations are made.

C. Radiation Emergency Manager concurrence is required due to the significant radiological consequences associated with actions in the SAPs.

D. Emergency Director concurrence is required due to the significant radiological consequences associated with actions in the SAPs.

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QUESTION 98

The plant is operating at rated conditions.

A fire in the Turbine Building resulted in a loss of power to the 'D' and 'E' DC buses.

The Operator-at-the Controls notices his H13-P680 annunciators are NOT functioning.

Further investigation concludes NONE of the Control Room annunciators are working.

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

A. Dispatch operators in the Control Room and plant to continuously monitor applicable in-plant instrumentation and declare an Alert to activate the ERO.

B. Setup the PDS computers to sound alarms on key parameters and call in additional operators to begin a controlled shutdown of the plant.

C. Declare an Alert to activate the ERO and manually scram the reactor then proceed to place the plant in Cold Shutdown.

D. Dispatch operators in the Control Room and plant to continuously monitor applicable in-plant instrumentation, call in additional operators to begin a controlled shutdown of the plant.

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QUESTION 99

The plant has experienced an ATWS.

Due to rising Drywell pressure, the CRS decided to dispatch two operators from the Control Room to shutdown the Drywell Purge Compressors, per EP-2, Attachment 15.

Which one of the following describes the radiological monitoring required for this task?
EP-2 Attachment 15 is provided.

A. Operators can perform this task under current RWPs with NO additional monitoring required.

B. The Control Room RP technician can provide the required radiological monitoring for this task.

C. The operators must report to the Operational Support Center (OSC) to be briefed prior to performing this task, with NO additional monitoring required.

D. The operators must report to the Operational Support Center (OSC) to be briefed and have an RP technician assigned to perform radiological monitoring for this task.

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QUESTION 100

The plant has experienced an ATWS.

Due to severe weather in the area, ALL telephone lines for the plant are damaged.

Which one of the following describes the backup method for notification of state and local agencies?

A. Satellite phone

B. Cellular phones

C. Shortwave radios

D. Emergency Response Data System (ERDS) computer system