Question Number 1

Plant conditions are as follows:

- A Reactor startup is in progress.
- The Reactor Mode Switch is in STARTUP & HOT STBY.
- Reactor power is 8.0% with preparations being made to place the Reactor Mode Switch to RUN.
- The C Area just reported the Diesel Generator (DG) parameters:

Div 1A air receiver pressure 205 psig and stable
fuel level 45,000 gal

Div 1B air receiver pressure 115 psig and stable
fuel level 45,000 gal

Div 1C air receiver pressure 200 psig and stable
fuel level 30,000 gal

Evaluate the above conditions and determine:

(1) Diesel 1A, B, and C operability._____
(2) The start up can _____

A: (1) ALL Division DG's are INOPERABLE.
(2) not continue, halt actions to place the Reactor Mode Switch to RUN.

B: (1) Diesel 1A&C OPERABLE, Division 1B INOPERABLE.
(2) not continue, halt actions to place the Reactor Mode Switch to RUN.

C: (1) Diesel 1B&C OPERABLE, Division 1A INOPERABLE.
(2) continue the power ascension including placing the Reactor Mode Switch to RUN.

D: (1) Diesel 1A&C OPERABLE, Division 1B INOPERABLE.
(2) continue the power ascension including placing the Reactor Mode Switch to RUN.

Question Number 2

The following annunciators have just been received:

5004-2D, DIV 1 OR 4 TCV FST CL TRIP
5005-2D, DIV 2 OR 3 TCV FST CL TRIP
5007-1B, TURB TRIP EHC SYS

Current Reactor Power is 38%

(1) Which of the following actions must be directed?

(2) If this caused a MCPR Safety Limit violation operation of the unit shall not resume until authorized by the…

A: (1) Perform a rapid plant shutdown
(2) Plant Manager

B: (1) Perform a rapid plant shutdown
(2) NRC

C: (1) Place the mode switch in Shutdown
(2) Plant Manager

D: (1) Place the mode switch in Shutdown
(2) NRC

Question Number 3

The Main Control Room is evacuated due to heavy smoke.

Control of shutdown systems from the remote shutdown panel is completed in 20 minutes.

What is the classification?

A: Notification of Unusual Event

B: Alert

C: Site Area Emergency

D: General Emergency

Question Number 4

The plant is in Hot Shutdown with RHR Loop 'B' being placed into shutdown cooling.

SX Service Water Effluent B 1RIX-PR039 Alarmed High. A check of the monitor history showed it to be spiking.

With 1RIX-PR039 spiking it is required to _____(1)_____.

It is determined that a release has been in progress for 25 minutes at 210 X ODCM release rate limits.

Subsequent actions are governed by _____(2)_____.

A: (1) sample for a release
(2) 4979.05, Abnormal Release of Radioactive Liquids

B: (1) isolate RHR B
(2) 4979.05, Abnormal Release of Radioactive Liquids

C: (1) sample for a release
(2) EOP-9, Radioactivity Release Control

D: (1) isolate RHR B
(2) EOP-9, Radioactivity Release Control

Question Number 5

A transient has occurred, the reactor has scrammed and plant conditions are as follows:

- All control rods are fully inserted.
- Drywell Pressure is at 5.0 psig and steady.
- Drywell Temperature is at 222°F and steady.
- Containment Temperature is at 120°F and steady.
- Containment pressure is at 2.7 psid and steady.
- RPV pressure is at 50 psig and dropping due to performing a Blowdown because of low RPV water level.
- The MSIVs are closed due a loss of Instrument Air.

Which of the following describes (1) an operator action that must be directed and (2) the reason for the action should these conditions remain unchanged for greater than 3 hours?

A: (1) verify the Standby Liquid Control System is running
(2) to maintain suppression pool pH at or above 7

B: (1) start the Aux Seal Injection Pump
(2) to maintain the integrity of the RR Pump seals

C: (1) verify both FC Pumps are running
(2) to cool the Upper Containment Pools

D: (1) start SBGT "A" or "B" on Primary Containment
(2) to lower Containment pressure

Question Number 6

The plant is in MODE 4, preparing for an outage, with the following:

- Main condenser is opened for maintenance and is unavailable
- RHR Pump ‘B’ is tagged out for a motor replacement and is unavailable
- RHR Pump ‘A’ is running in Shutdown Cooling Mode
- RHR Pump ‘A’ trips and becomes unavailable
- Engineering is performing the RWCU decay heat removal calculation
- Reactor water level is 80 inches on shutdown range and stable
- All other plant systems are operable for MODE 4

Using procedure OU-CL-104 determine the following:

(1) Shutdown Risk Level for Decay Heat Removal?
(2) The decay heat removal method you would use next?

A: (1) Orange
(2) RWCU in a maximum cooling lineup

B: (1) Orange
(2) ECCS feed and bleed through the SRVs

C: (1) Red
(2) RWCU in a maximum cooling lineup

D: (1) Red
(2) ECCS feed and bleed through the SRVs

Question Number 7

Which one of the following is a Tech Spec Bases for the Suppression Pool high water level limit?

Prevent excessive…

A: containment wall loading during SRV operation.

B: reduction in Hydrogen mixing system capacity.

C: pool swell loads during an LOCA.

D: RCIC exhaust pressure.

Question Number 8

A RX startup is in progress with the following conditions:

- Below the point of adding heat.
- No rod motion is currently being performed.
- Annunciator 5005-3J IRM downscale is received.
- Annunciator 5006-4G Rod Drift is received.
- One Rod Drift Light is energized.
- SRM ‘A’ shows a -100 sec. period.

(1) As the CRS which procedure should you enter?
(2) What action must you as CRS verify/direct is performed?

A: (1) CPS 4007.02 Inadvertent Rod Movement
(2) Depress ROD SELECT CLEAR

B: (1) CPS 4007.03 Rod Drop
(2) Depress ROD SELECT CLEAR

C: (1) CPS 4007.02 Inadvertent Rod Movement
(2) Scram the reactor

D: (1) CPS 4007.03 Rod Drop
(2) Scram the reactor

Question Number 9

Plant conditions are currently as follows:

Drywell temperature is 300 °F, stable.
Drywell pressure is 8.5 psig, rising at 0.1 psig/minute.
RPV water level is -142 inches (Wide Range), stable.
RPV pressure is 200 psig, lowering at 5.0 psig/minute.
Suppression Pool level is 18 feet 10 inches, lowering at 0.1 inch/minute.
Suppression Pool Temperature is 180 °F, rising at 1.0 °F/minute.·
Containment pressure is 1.3 psig, stable.
Containment temperature is 132°F, stable.
A Group 1 isolation is complete.

Which ONE of the following describes the next required operator action?

A: Dump upper pools.

B: Start containment sprays.

C: Perform a Reactor blowdown.

D: Rapidly depressurize the RPV using the main turbine bypass valves

Question Number 10

The reactor has scrammed, and plant conditions are currently as follows:

Containment Pressure 2.0 psig
Containment Temperature 175°F
RPV water level is stable at -140 inches

NO high pressure injection systems are available.
Operation of ALL low pressure Emergency Core Cooling Systems (ECCS) is required to maintain this RPV water level.

Which of the following actions has the highest priority?

A: Blowdown

B: Flood the RPV

C: Start Containment Sprays

D: Start all available containment cooling

Question Number 11

Core Alterations are in progress, with the following:

- A fuel bundle has been removed from the Upper Containment Fuel Storage Pool (UCP) per the move sheets.
- That same fuel bundle has just been placed in the core, BUT the grapple has NOT been released.
- THEN, the Refuel SRO recognizes the fuel bundle is NOT in its correct core location.

Which ONE of the following describes the NEXT required actions?

A: RELEASE the grapple and contact the Reactor Engineer for further guidance.

B: Remove the bundle from the core and place it in its CORRECT core location.

C: Remove the bundle from the core and return it to its UCP rack location.

D: RELEASE the grapple and update the move sheets.

Question Number 12

Plant conditions are as follows:

- The Reactor is at 90% power.
- TURB TRIP EHC SYS, 5007-1B annunciator alarms.
- The B RO reports that Bearing Oil Pressure reads 9 psig and is lowering.

Concerning the Main Turbine, which one of the following is correct?

An Emergency Condition____(1)_____, the order shall be given to____(2)_____.

A: (1) exists
(2) break vacuum

B: (1) doesn't exist
(2) break vacuum

C: (1) exists
(2) lower vacuum to 25 in. Hg

D: (1) doesn't exist
(2) lower vacuum to 25 in. Hg

Question Number 13

The plant is near rated power when SRV 51G fails open.

All attempts to close SRV 51G have failed.

Both loops of Suppression Pool Cooling have been placed in service.

CCP has been shifted to the filtered mode of operation.

(1) What will Suppression Pool Temperature do?

(2) What procedure actions shall be performed next?

A: (1) Rise
(2) Unit Power Changes Emergency Power Reduction

B: (1) Rise
(2) Unit Power Changes Rapid Plant Shutdown

C: (1) Lower
(2) Unit Power Changes Emergency Power Reduction

D: (1) Lower
(2) Unit Power Changes Rapid Plant Shutdown

Question Number 14

Plant conditions are as follows:

- A DBA Loss Of Coolant Accident has occurred.
- All plant systems responded as designed.

EOP-1 and EOP-6 have been entered.

(1) What is the status of Fuel Building Ventilation and Standby Gas (VG)?
(2) What action(s) shall be directed?

A: (1) VF and both trains of VG are running.
(2) Shutdown one train of VG.

B: (1) VF is shutdown and both trains of VG are running.
(2) Shutdown one train of VG.

C: (1) VF and one train of VG are running.
(2) Start the second train of VG only.

D: (1) VF is shutdown and one train of VG is running.
(2) Shutdown VG and restart VF.

Question Number 15

The plant is operating at 90% Rated Thermal Power.

While performing CPS No. 9052.01, LPCS/RHR A PUMPS & LPCS/RHR A WATER LEG PUMP OPERABILITY, the LPCS pump
room fan trips. It is determined to be a winding short requiring extensive repairs.

If a Technical Specifications action is required, what is the maximum time allowed?

A: No Technical Specification actions are required LPCS is OPERABLE.

B: Restore LPCS to operable with in 72 hours or be in Mode 3 in 12 hours and Mode 4 in 36 hours.

C: Restore the LPCS system to operable in 7 days or be in Mode 3 in 12 hours and Mode 4 in 36 hours.

D: Restore the LPCS system to operable in 14 days or be in Mode 3 in 12 hours and Mode 4 in 36 hours.

Question Number 16

Plant is at full power and High Pressure Core Spray (HPCS) valve testing is being performed. The HPCS Pump, Trip and
Close fuses were removed. And, 1E22-F001, HPCS Storage Tank Suction Valve is shut.

What impact will the following actions have on the HPCS system and what procedure required action(s) will be performed
prior to replacing the Trip and Close fuses?

- 1E22-F023, HPCS Test Valve To Suppression Pool is opened then shut for valve stroke time testing.

- 1E22-F001, HPCS Storage Tank Suction Valve is opened.

A: HPCS system drains.
Fill and vent HPCS system.

B: HPCS system drains.
Verify suction pressure is returned to normal.

C: The 1E22-F015 HPCS Supp Pool suction valve opens.
Fill and vent HPCS system.

D: The 1E22-F015 HPCS Supp Pool suction valve opens.
Verify suction pressure is returned to normal.

Question Number 17

The plant is in a refueling outage with Core Alterations in progress.

The verification of in-core coordinates should be performed as a minimum by the:

A: Refuel Bridge Operator only.

B: Refuel Bridge Operator and Spotter only.

C: Refuel Bridge Operator, Spotter and Refuel SRO only.

D: Refuel Bridge Operator, Spotter, Refuel SRO and Reactor Engineer.

Question Number 18

Considering the MINIMUM staffing requirement for either the SROs, or Fire Brigade Members, which ONE of the following
describes a situation that SATISFIES the respective requirement?

A: While in MODE 1, you have a total of TWO SROs, one of whom is BOTH the Shift Manager and IA, and the other is
BOTH the Control Room Supervisor AND designated STA.

B: While in MODE 3, you have a total of FOUR Fire Brigade Members, one of whom is also the designated Safe Shutdown Qualified Operator.

C: While in MODE 5, you have a total of THREE Fire Brigade Members, ALL of whom are ‘C Area Qualified’.

D: While in MODE 4, you have total of TWO SROs, NEITHER of whom is qualified as STA.

Question Number 19

You are the SRO in the control room when the following conditions exist:

10:05 Event for Alert occurred.
10:20 an Alert is declared.
11:00 Event for Site Area Emergency occurred.
11:15 a Site Area Emergency is declared.

What are the times by which the reports to the State and NRC must be made?

A:	Alert State 10:50 NRC 11:20	Site Area Emergency State 11:30 NRC 12:00
B:	Alert State 10:35 NRC 11:35	Site Area Emergency State 11:45 NRC 12:00
C:	Alert State 10:35 NRC 11:05	Site Area Emergency State 11:45 NRC 12:15
D:	Alert State 10:35 NRC 11:20	Site Area Emergency State 11:30 NRC 12:15

Question Number 20

The A Main EHC Pump is causing pressure oscillations.

An investigation into the cause is required.

What procedure is used to manage the investigation?

A: ER-AA-10, Equipment Reliability Process

B: MA-AA-716-004, Conduct of Troubleshooting

C: 3105.01, Turbine (TG EHC TS)

D: 1070.01, Coordination Plans

Question Number 21

The plant is in Mode 5.

- A dropped fuel bundle causes dose rates of 200 Rem/hr on the refuel floor.
- During evacuation the spotter falls and breaks his leg.
- An emergency exposure is authorized to rescue the spotter.
- It will take 10 minutes to get the spotter off of the refuel floor.

Who is responsible for giving a radiological condition brief?

A: RP Technician

B: TSC Director

C: No one, its for life saving

D: Station Emergency Director or Shift Manager

Question Number 22

Given the following Conditions:

Reactor Mode Switch is in Shutdown.

Average Reactor Coolant Temperature is 205 degrees F.

Reactor Vessel Head closure bolt tensioning will be complete in 2 hours.

The Unit is currently in _____(1)_____ and will be in _____(2)_____ when Reactor Vessel Head closure bolt tensioning is complete.

A: (1) MODE 3
(2) MODE 3

B: (1) MODE 4
(2) MODE 3

C: (1) MODE 5
(2) MODE 3

D: (1) MODE 5
(2) MODE 4

Question Number 23

Following a major plant transient from rated power, the following plant conditions exist:

Reactor is shutdown with all rods in.
All Preferred Injection Systems have malfunctioned.
ADS was initiated when Reactor level dropped below -160 inches on Wide Range instruments.
Reactor pressure is at 55 psig, lowering at 10 psig/minute.
Several Alternate Injection Systems are lined up and injecting.
Reactor water level has trended from -200 inches to -269 inches over the last 10 minutes.

Which of the following describes the required operator action?

A: Initiate RPV Flooding, enter EOP-2, to flood to the Main Stream lines.

B: Initiate Primary Containment Flood, exit all EOP flowcharts and enter all SAG flowcharts.

C: Initiate Primary Containment Flood, enter all SAG flowcharts and continue actions in EOP-1 to raise RPV level.

D: Initiate additional pressure relief by opening more SRVs for core flooding. Restore the RFP 1C for injection.

Question Number 24

A LOCA has occurred, the appropriate procedures have been entered.

- Reactor Pressure is 2 psig.
- RHR A Pump is injecting at 5000 gpm.
- Reactor Water Level is stable at +10”.

(1) Predict the impact of an RHR A suppression pool suction valve closure.

(2) Identify the procedure that should be used to correct the conditions.

A: (1) RHR A Pump trips
(2) EOP-1 RPV CONTROL

B: (1) RHR A Pump continues to run
(2) EOP-6 PRIMARY CONTAINMENT CONTROL

C: (1) RHR A Pump trips
(2) EOP-3 BLOWDOWN

D: (1) RHR A Pump continues to run
(2) EOP-2 RPV FLOOD

Question Number 25

A failure to scram has occurred.

The following conditions exist:

- ADS has been inhibited.
- SLC pump A is operating.
- Seven SRVs are operable and are being manually cycled for pressure control.
- MDRFP and RCIC are maintaining RPV level.
- Suppression pool level is 17.5 feet and lowering at 1 inch per 5 minutes.

Blowdown is required due to high Suppression pool temperature.

What action must be taken by the crew prior to blowdown?

A: ADS must be un-inhibited.

B: The upper pools must be dumped.

C: Feedwater injection must be terminated.

D: All injection (RCIC, Feed, & SLC) must be terminated.