NRC SRO REFERENCES

SRO EXAM

1. *34AB-B21-002-1, RWL Corrections, Attachment 3*
2. *U1 EOP Graphs 11A - Core Spray Pump NPSH Limit Above 146 inches*
3. *U1 EOP Graphs 11B - Core Spray Pump NPSH Limit Below 146 inches*
4. *34SO-N40-001-1, Att. 1, Operating Limits For Generator Voltage Regulator in Automatic*
5. *Unit 1 TS 3.1.3 Control Rod Operability*
6. *NMP-EP-110-GL02, "Figure 3 - Cold Initiating Condition Matrix, SYSTEM Columns with Notes*
7. *Unit 1 HCTL Limit Curve (Graph 2)*
8. *NMP-EP-110-GL02, "Figure 1 - Fission Product Barrier Matrix*
9. *Unit 2 LCO 3.1.7, Standby Liquid Control (SLC) System*

U.S. Nuclear Regulatory Commission

Site-Specific SRO Written Examination

Applicant Information	
Name:	
Date:	Facility/Unit:
Region: I ☐ II X III ☐ IV ☐	Reactor Type: W ☐ CE ☐ BW ☐ GE X
Start Time:	Finish Time:

Instructions

Use the answer sheets provided to document your answers. Staple this cover sheet on top of the answer sheets. To pass the examination you must achieve a final grade of at least 80.00 percent overall, with 70.00 percent or better on the SRO-only items if given in conjunction with the RO exam; SRO-only exams given alone require a final grade of 80.00 percent to pass. You have 8 hours to complete the combined examination, and 3 hours if you are only taking the SRO portion.

Applicant Certification

All work done on this examination is my own. I have neither given nor received aid.

_____
Applicant's Signature

Results		
RO/SRO-Only/Total Examination Values	____ / ____ / ____	Points
Applicant's Scores	____ / ____ / ____	Points
Applicant's Grade	____ / ____ / ____	Percent

HLT-06 SRO NRC EXAM

ANSWER KEY

1.	A	B	**C**	D	46.	**A**	B	C	D	91.	**A**	B	C	D
2.	A	B	C	**D**	47.	A	B	C	**D**	92.	**A**	B	C	D
3.	**A**	B	C	D	48.	**A**	B	C	D	93.	A	**B**	C	D
4.	A	B	C	**D**	49.	A	B	C	**D**	94.	A	B	**C**	D
5.	A	**B**	C	D	50.	**A**	B	C	D	95.	A	**B**	C	D
6.	A	B	C	**D**	51.	**A**	B	C	D	96.	A	B	**C**	D
7.	A	B	**C**	D	52.	**A**	B	C	D	97.	A	B	**C**	D
8.	A	B	**C**	D	53.	A	**B**	C	D	98.	**A**	B	C	D
9.	**A**	B	C	D	54.	A	B	**C**	D	99.	A	B	C	**D**
10.	A	**B**	C	D	55.	A	**B**	C	D	100.	A	B	C	**D**
11.	A	B	C	**D**	56.	A	B	C	**D**					
12.	**A**	B	C	D	57.	A	B	**C**	D					
13.	A	B	**C**	D	58.	**A**	B	C	D					
14.	**A**	B	C	D	59.	A	**B**	C	D					
15.	A	B	C	**D**	60.	A	B	C	**D**					
16.	A	**B**	C	D	61.	A	**B**	C	D					
17.	A	B	C	**D**	62.	A	B	**C**	D					
18.	**A**	B	C	D	63.	A	B	C	**D**					
19.	A	**B**	C	D	64.	**A**	B	C	D					
20.	A	B	**C**	D	65.	A	**B**	C	D					
21.	A	**B**	C	D	66.	A	**B**	C	D					
22.	A	B	**C**	D	67.	A	B	C	**D**					
23.	A	**B**	C	D	68.	A	**B**	C	D					
24.	A	B	**C**	D	69.	A	B	**C**	D					
25.	A	B	**C**	D	70.	A	**B**	C	D					
26.	**A**	B	C	D	71.	A	B	**C**	D					
27.	A	**B**	C	D	72.	**A**	B	C	D					
28.	**A**	B	C	D	73.	A	B	**C**	D					
29.	A	B	**C**	D	74.	A	**B**	C	D					
30.	A	B	C	**D**	75.	A	**B**	C	D					
31.	A	B	**C**	D	76.	**A**	B	C	D					
32.	A	B	C	**D**	77.	A	B	**C**	D					
33.	A	B	C	**D**	78.	A	B	C	**D**					
34.	**A**	B	C	D	79.	A	**B**	C	D					
35.	A	B	**C**	D	80.	A	**B**	C	D					
36.	A	B	C	**D**	81.	A	B	C	**D**					
37.	A	B	C	**D**	82.	A	**B**	C	D					
38.	A	B	C	**D**	83.	**A**	B	C	D					
39.	**A**	B	C	D	84.	A	B	C	**D**					
40.	A	**B**	C	D	85.	A	B	C	**D**					
41.	A	B	C	**D**	86.	A	**B**	C	D					
42.	**A**	B	C	D	87.	**A**	B	C	D					
43.	A	B	**C**	D	88.	**A**	B	C	D					
44.	**A**	B	C	D	89.	A	**B**	C	D					
45.	A	B	**C**	D	90.	A	B	C	**D**					

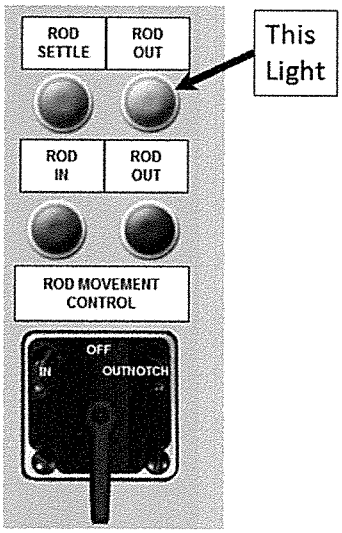
1. 201002A2.03 001

Unit 1 is at 15% power and is performing a reactor startup.

Control Rod 30-31 has an Insert limit of 04 and a Withdraw limit of 08.

- All rods in this group are at position 04.

When the NPO withdraws the control rod, the rod begins DRIFTING OUT past position 06.



Which ONE of the choices below completes both of the following statements?

When rod 30-31 reaches position 10, the Rod Movement Control "Rod Out" white light will be _____ .

IAW 34AB-C11-004-1, Mispositioned Control Rods, a reactor scram _____ required.

A. illuminated;
is NOT

B. extinquished;
is NOT

C. extinquished;
is

D. illuminated;
is

2. 201003A4.02 001

A coupling check is being performed on Rod 38-27.

Which ONE of the choices below completes the condition that will indicate rod 38-27 is UNCOUPLED?

Position indication on the Four-Rod display will _____ **AND** the Red Full-Out light will be _____ .

A. indicate 49;
illuminated

B. indicate 49;
extinguished

C. be blank;
illuminated

D. be blank;
extinguished

3. 201006A4.02 001

Unit 1 was operating at 100% RTP when an event occurred requiring a manual scram. The OATC inserted the scram and observed ALL "White" RPS Scram Group lights remaining ILLUMINATED.

Which ONE of the choices below completes the following statements concerning the Rod Worth Minimizer (RWM)?

In order to determine "Rod Status" using RWM, the RWM "Confirm Shutdown" display screen pushbutton, _____ depressed to confirm rod status.

Two (2) minutes later, the RWM "Confirm Shutdown" display screen indicates the following:

All Rods In	NO
Shutdown	YES
Rods Not Full-In	18

Based on these indications, ALL control rods _____ inserted to at least position 02.

A. MUST be;
are

B. MUST be;
are NOT

C. is NOT required to be;
are

D. is NOT required to be;
are NOT

4. 203000A2.13 001

A **Unit 1** Reactor startup is in progress with reactor pressure 400 psig.

At 10:00 a LOCA signal is received causing Reactor pressure to decrease 50 psig per minute.

Which ONE of the following states when the 1E11-F015A, RHR injection valve, will automatically start opening and IAW 31EO-EOP-114-1, Preventing Injection Into The RPV From Core Spray And LPCI, how RHR A Loop injection can be prevented?

1E11-F015A will automatically start opening _____ .

At 10:04, WITHOUT overriding ANY interlocks, RHR A Loop injection can be prevented by _____ .

A. ONLY after reactor pressure is less than 370 psig;
EITHER tripping RHR pumps OR closing 1E11-F017A, RHR injection valve

B. ONLY after reactor pressure is less than 370 psig;
tripping RHR pumps ONLY

C. IMMEDIATELY;
EITHER tripping RHR pumps OR closing 1E11-F017A, RHR injection valve

D. IMMEDIATELY;
tripping RHR pumps ONLY

5. 203000K5.01 001

Unit 2 has experienced a LOCA.

- o 2B Loop of RHR is injecting in the LPCI mode to maintain RWL
- o A leak develops on the flange of 2E11-F017B, RHR Injection valve
- o When both B Loop RHR pumps are secured, 2E11-F050B, RHR Injection Check valve, sticks in the OPEN position

Which ONE of the following completes both statements?

The water leaking from 2E11-F017B will be leaking into _____ Containment.

Closing 2E11-F015B, RHR Injection valve, _____ isolate the reactor water leaking from 2E11-F017B flange.

A. Secondary;
will NOT

B. Secondary;
will

C. Primary;
will

D. Primary;
will NOT

6. 205000A4.12 001

Unit 2 is in Mode 4 with 2B RHR pump in Shutdown Cooling. Preparations are in progress to warm the "B" Loop of Recirc and then start the 2B Recirc pump.

The following temperatures currently exist:

Reactor Coolant	180°F
"2B" Recirc Suction	135°F

IAW 34SO-B31-001-2, Reactor Recirculation System, with the above temperatures, which ONE of the following completes both statements?

The temperature difference between the reactor coolant inside the idle loop to be started and the coolant in the reactor pressure vessel _____ WITHIN limits.

"2B" Recirc loop Suction temperature will be monitored on panel _____ .

A. is NOT;
2H11-P602

B. is NOT;
2H11-P601

C. is;
2H11-P601

D. is;
2H11-P602

7. 206000A4.10 001

IAW 34SO-E41-001-2, High Pressure Coolant Injection (HPCI) System, Turbine speed is REQUIRED to be maintained above a MINIMUM of _____ rpm, during prolonged operation, to prevent _____ .

A. 1500;
Turbine exhaust check valve chattering

B. 1500;
cycling of the 2E41-C002-3, Aux Oil Pump, ON and OFF

C. 2000;
Turbine exhaust check valve chattering

D. 2000;
cycling of the 2E41-C002-3, Aux Oil Pump, ON and OFF

8. 209001K5.01 001

A LOCA is in progress. The 2A Core Spray pump is injecting at 1000 gpm to maintain RPV water level above the top of active fuel.

Which ONE of the following would be an indication that the 2A Core Spray pump is experiencing cavitation?

A. The motor amps are steadily increasing.

B. The pump trips due to low suction pressure.

C. The minimum flow valve intermittently opens and closes.

D. The pump discharge pressure steadily increases as flow decreases.

9. 211000K6.04 001

Unit 1 is experiencing an ATWS.

A malfunction occurs while closing 1E21-F005A, Core Spray Injection valve.

The valve motor shorts out, resulting in a loss of its respective Motor Control Center (MCC).

Which ONE of the following completes both of these statements?

The de-energized MCC is 1R24- _____ , Reactor Bldg. MCC.

With this condition, _____ available to inject boron.

A. S011;
ONLY one SBLC pump remains

B. S011;
BOTH SBLC pumps remain

C. S012;
ONLY one SBLC pump remains

D. S012;
BOTH SBLC pumps remain

10. 212000A3.02 001

Unit 1 is at 100% RTP.

- o The "1B" RPS MG Set trips
- o The Power Source Select switch (1H11-P610) is then placed in the "ALT A" position
- o No additional operator actions are taken

Which ONE of the choices below completes the following statement?

After 5 seconds, based on these conditions, _____ of the RPS Scram Relays (K14s) are DE-ENERGIZED and the "A" RPS bus will be _____ .

A. ALL;
de-energized

B. ✔ ALL;
energized

C. ONLY HALF;
energized

D. ONLY HALF;
de-energized

11. 215003A1.06 001

Unit 1 is in Startup with IRM 1A indicating 95 on range 4. ALL other IRMs are reading between 15 and 75 on range 4.

With IRM 1A indicating 95 on range 4, annunciator(s) _____ will be in the alarm condition.

Once IRM 1A is placed on range 5, the _____ will be illuminated.

A. 603-221, IRM UPSCALE and 603-203, IRM BUS A UPSCALE TRIP OR INOP;

IRM 1A Drawer UPSC amber light on 1H11-P606

B. 603-221, IRM UPSCALE and 603-203, IRM BUS A UPSCALE TRIP OR INOP;

IRM 1A benchboard UPSC amber light on 1H11-P603

C. 603-221, IRM UPSCALE, ONLY;

IRM 1A benchboard UPSC amber light on 1H11-P603

D✓ 603-221, IRM UPSCALE, ONLY;

IRM 1A Drawer UPSC amber light on 1H11-P606

12. 215003K5.01 001

Unit 1 is in Mode 2 with a startup in progress with IRM "1G" reading 20 on Range 2.

- o The voltage at IRM "1G" detector begins to gradually decrease
- o The FINAL voltage at the detector is one (1) VDC.

Which ONE of the following completes the statement below for IRM "1G" detector?

As the voltage at IRM "1G" detector decreases, the HIGHEST indication, listed below, that an IRM Rod Block will occur at is _____ and the FINAL expected plant response is a _____ .

A. 10/125 of scale;
rod block with a half scram

B. 5/125 of scale;
rod block ONLY

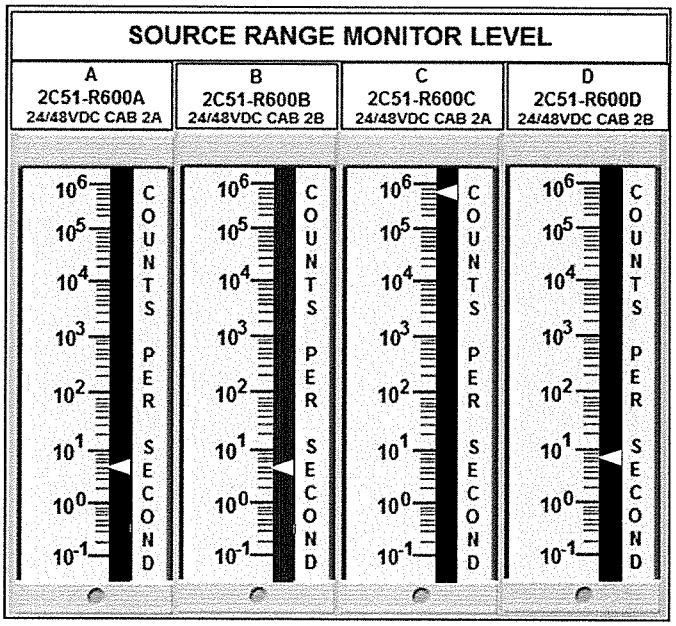
C. 5/125 of scale;
rod block with a half scram

D. 10/125 of scale;
rod block ONLY

13. 215004A3.01 001

Unit 2 is in a refueling outage.

- o Reactor Mode Switch position ..... REFUEL
- o SRM Shorting Links ..... REMOVED



A SRM detector failure results in the indication as shown in this figure.

With NO operator action, based on these conditions, what is the expected status of RPS Channel A and B?

RPS Channel A _____ expected to be tripped.
RPS Channel B _____ expected to be tripped.

A. is NOT;
is NOT

B. is NOT;
is

C. is;
is

D. is;
is NOT

14. 215005K3.01 001

Unit 2 is operating at 100% power with the "B" APRM bypassed.

The "B" and "C" PRNM Two-Out-Of Four Trip Modules (2/4 Voters) subsequently experiences a power failure and DE-ENERGIZES.

Which ONE of the choices below completes the following statements concerning the status of the RPS buses?

A half-scram _____ be generated in RPS Bus "A".

A half-scram _____ be generated in RPS Bus "B".

A. will;
will

B. will;
will NOT

C. will NOT;
will

D. will NOT;
will NOT

15. 217000K1.01 001

Unit 2 RCIC is operating in Full Flow Test Mode when a malfunction causes 2E51-F029, Torus Suction, valve to fully open.

Which ONE of the following completes both statements?

2E51-F010, CST Suction, will _____ .

2E51-F022, Test Line To CST, will _____ .

A. automatically close;
remain open

B. automatically close;
automatically close

C. remain open;
remain open

D. remain open;
automatically close

16. 218000K2.01 001

Which ONE of the following completes both statements concerning **Unit 2** ADS Logic "A"?

The NORMAL power supply to ADS Logic "A" is _____ .

_____ BACKUP power supply to ADS Logic "A".

A. 2R25-S001, 125 VDC Cabinet 2A
2R25-S002, 125 VDC Cabinet 2B, is the

B. ✔ 2R25-S001, 125 VDC Cabinet 2A
There is NO

C. 2R25-S002, 125 VDC Cabinet 2B;
2R25-S001, 125 VDC Cabinet 2A, is the

D. 2R25-S002, 125 VDC Cabinet 2B,
There is NO

17. 219000A1.09 001

Unit 2 experienced an event which resulted in the following conditions:

At 11:00,

- o Torus water level is 140 inches
- o HPCI maintaining RWL at 20 inches
- o Suppression Pool Cooling is in service

At 11:10,

- o Torus water level is 105 inches
- o HPCI maintaining RWL at 20 inches
- o Suppression Pool Cooling is in service

Which ONE of the following completes these statements?

At 11:10, Torus Air temperature will be changing _____ and

Torus Air temperature can be monitored on panel _____ .

A. approximately the same rate as at 11:00;
2H11-P650

B. approximately the same rate as at 11:00;
2H11-P602

C. at a significantly faster rate than at 11:00;
2H11-P602

D✓ at a significantly faster rate than at 11:00;
2H11-P650

18. 223002G2.4.3 001

Which ONE of the following completes the statement concerning the **Unit 2** SRV control switches?

A _____ dot has been placed above the SRV control switches to indicate that this _____ .

A. yellow;
valve is on the Post-Accident Monitoring (PAM) Instrumentation list

B. yellow;
is a Group 2 Isolation valve

C. blue;
valve is on the Post-Accident Monitoring (PAM) Instrumentation list

D. blue;
is a Group 2 Isolation valve

19. 230000K2.02 001

Unit 1 experiences a Loss of Offsite power.

- o 4160V 1G is the ONLY 4160V bus that is ENERGIZED.

Which ONE of the following RHR pumps can be used for Torus Spray?

A. RHR pump 1A

B. ✔ RHR pump 1B

C. RHR pump 1C

D. RHR pump 1D

20. 239002A4.04 001

Unit 2 is operating at 100% RTP with SRV 2L experiencing elevated leakage.

Which ONE of the following completes both statements?

Torus BULK AVERAGE temperature indication _____ be monitored on the "Primary Display" of SPDS.

The LOWEST listed Torus temperature requiring entry into the Abnormal (AB) Procedure for elevated Torus temperature is _____ .

A. can;
100°F

B. can NOT;
100°F

C. ✔ can;
96°F

D. can NOT;
96°F

21. 239002K1.05 001

The Normal pneumatic supply to the **Unit 2** Drywell is lost.

After performing section 7.3.1, Emergency Nitrogen Supply Operation, of 34SO-P70-001-2, Drywell Pneumatics System, which ONE of the following is the MAXIMUM number of SRVs that will be supplied Nitrogen from the Emergency Nitrogen Bottles?

A. two (2)

B. ✔ five (5)

C. seven (7)

D. eleven (11)

22. 245000K1.04 001

With **Unit 2** at 35% RTP, which ONE of the following completes both statements?

(Limit your response ONLY to direct valve input to RPS Logic, NOT plant integrated response.)

The MINIMUM number of Turbine Control Valves (TCV) that will DIRECTLY cause at least a RPS HALF (1/2) Scram from a TCV Fast Closure Trip is _____ .

The MINIMUM number of Turbine Stop Valves (TSV) that will DIRECTLY cause a RPS FULL Scram from a TSV Closure is _____ .

A. two (2);
three (3)

B. two (2);
two (2)

C. ✔ one (1);
three (3)

D. one (1);
two (2)

23. 256000K5.10 001

UNIT 2 is operating at 100% RTP with the SJAE dP controller in MANUAL.

Which ONE of the following completes both statements?

To INCREASE Condensate flow through the SJAE, the 2N21-F007, SJAE Bypass AOV, is throttled in the _____ direction.

This action will result in INLET pressure to the Condensate Demineralizers _____ .

A. closed;
increasing

B. ✔ closed;
decreasing

C. open;
increasing

D. open;
decreasing

24. 259001K6.01 001

Unit 2 is operating at 15% RTP with 2N21-F111, Feedwater Startup Level Control Valve, controlling Reactor Water Level (RWL), when a loss of Plant Air pressure occurs.

Which ONE of the following describes the response of 2N21-F111 when its air supply pressure decreases to 40 psig?

2N21-F111 will _____ .

A. fail OPEN

B. fail CLOSED

C. ✔ fail AS-IS

D. continue to control RWL

25. 259002K3.02 001

Unit 2 is operating with reactor power at 85%.

The Reactor Water Level Control system is in normal alignment for this power level.

Which ONE of the following statements describes the Feedwater system response to a blown fuse in the power supply to the Feedwater Master Controller?

A. Control of the 2A RFPT will transfer to the Speed Setter.

B. Control of the 2B RFPT will transfer to the Speed Setter.

C. ✔ The 2A RFP M/A Station will control RWL in automatic.

D. The 2B RFP M/A Station will control RWL in automatic.

26. 259002K3.07 001

Unit 2 is operating at 100% RTP with the following RWL indications:

- o 2C32-R606A, GEMAC, indication: +37.0"
- o 2C32-R606B, GEMAC, indication: +36.6"
- o 2C32-R606C, GEMAC, indication: +36.9"

Subsequently, the REFERENCE leg for RWL intrument 2C32-R606A developes a significant leak.

With NO operator actions, which ONE of the choices below describes the INITIAL response of BOTH the RWL indicator 2C32-R606B AND the speed of the RPFTs to this reference leg leak?

INITIALLY, BOTH, the indication on RWL instrument 2C32-R606B will _____ and the RFPTs speed will _____.

A. DECREASE
DECREASE

B. DECREASE
INCREASE

C. INCREASE
DECREASE

D. INCREASE
INCREASE

27. 261000K4.04 001

Which ONE of the following Standby Gas Treatment System components removes radioactive particulates as small as 0.3 microns or larger in size

A. Prefilter

B. ✔ HEPA Filter

C. Demister

D. Activated Charcoal Bed

28. 262001A2.01 001

Unit 2 is operating at 50% RTP with 4160 VAC 2E, 2R22-S005, powered from Startup Auxilary Transformer (SAT) 2C.

Subsequently, the Unit 2 Main Turbine trips.

Which ONE of the following completes the statements concerning the Station Service Buses?

After the Main Generator trips, the MAXIMUM number of Station Service Buses that will be energized is _____ .

At this time, 34SO-R22-001-2, 4160V AC System Operation, can be used to MANUALLY re-energize 4160V Buses _____ .

A. zero (0);
2C and 2D

B. zero (0);
2A and 2B

C. two (2);
2C and 2D

D. two (2);
2A and 2B

29. 262002A1.02 001

Unit 1 is operating at 100% RTP when 600 V Bus 1D de-energizes.

Which ONE of the choices below completes the following statement concerning the 1B RPS Motor Generator (MG) Set and the RPS Equipment Protection Circuit Breakers?

With NO additional operator actions, when power is restored to 600 V 1D,
the 1B RPS MG Set _____ AUTOMATICALLY re-start

AND

the RPS Equipment Protection Circuit Breakers 52-3B and 52-3D are expected to be in the _____ condition.

A. will NOT;
reset (closed)

B. will;
reset (closed)

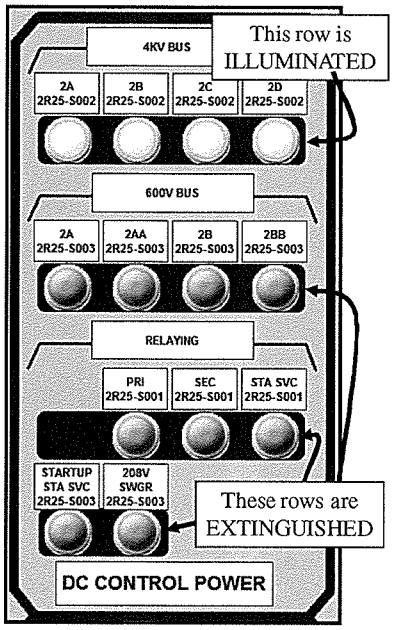
C. will NOT;
tripped (open)

D. will;
tripped (open)

30. 263000K4.02 001

Unit 2 is at 100% power when the following occurs:

o Panel 2H11-P651 indications:



IAW 34AB-R22-001-2, Loss Of DC Buses, which ONE of the following completes BOTH of the following statements?

If the NPO places the RFPT 2A Reset-Trip control switch to TRIP, RFPT 2A will _____ .

When the Main Generator output breakers (PCBs) are opened, the Start-Up supply breakers to 4160 V Station Service Buses 2A-2D, _____ automatically close.

A. trip;
will

B. trip;
will NOT

C. continue to operate;
will

D. continue to operate;
will NOT

31. 264000K1.04 001

Unit 1 and Unit 2 are experiencing a TOTAL loss of Off-Site power.

The Diesel Gen 1B Keylock control switch is in the REMOTE UNIT 1 position.

Subsequently, **Unit 2** receives a LOCA signal.

Which ONE of the following identifies the Emergency Bus being powered from, and the cooling water supply to, 1B Emergency Diesel Generator (EDG)?

1B EDG is powering 4160 V _____ Emergency Bus and is receiving cooling water from _____ .

A. 1F;
2P41-C002, Standby Diesel Service Water Pump

B. 1F;
Unit 1 Division 1 Plant Service Water

C. 2F;
2P41-C002, Standby Diesel Service Water Pump

D. 2F;
Unit 1 Division 1 Plant Service Water

32. 264000K6.08 001

Unit 2 is performing an Emergency Diesel Generator (EDG) surveillance.

The "2A" EDG is running with its mode switch in TEST, but NOT tied to its bus.

At this time, the normal breaker to 4160 VAC bus "2E" trips open.

Which ONE of the following is the status of EDG "2A" and 4160V bus "2E"?

A. EDG "2A" REMAINS in TEST mode and 4160V bus "2E" swaps to its alternate power supply.

B. EDG "2A" COMES out of TEST mode and EDG "2A" ties to 4160V bus "2E".

C. EDG "2A" COMES out of TEST mode and 4160V bus "2E" swaps to its alternate power supply.

D✔ EDG "2A" REMAINS in TEST mode and 4160V bus "2E" is de-energized.

33. 271000K4.09 001

Unit 2 is at 4% RTP with the Off Gas mode switch in "AUTO", when the Off Gas Post-Treatment radiation monitors, 2D11-K615A and 2D11-K615B, increase to just above the HIGH alarm setpoint.

Which ONE of the following is the Off Gas component that receives a signal to close?

A. 2N62-F057, Offgas Stack Inlet Valve

B. 2N62-F042, Offgas Inlet to Adsorber Valve

C. 2N62-F085, Offgas Holdup Line Drain Valve

D✔ 2N62-F043, Offgas Adsorbers Bypass Valve.

34. 272000A3.01 001

Unit 2 is operating at 15% power when an event occurs resulting in the following alarms/condition:

- o MAIN STEAM LINE RADIATION HIGH (601-425)
- o MAIN STEAM LINE RADIATION HIGH-HIGH/INOP (603-125)
- o Main Steam Line radiation levels are 6,000 mRem/hr and increasing
- o Crew suspects fuel element failure

A NPO responding to the above conditions, observes the following valves are OPEN:

- o 2B21-F022A-D & F028A-D, MSIVs
- o 2B31-F019 & 2B31-F020, Reactor Recirculation Sample Valves

Which ONE of the following identifies whether ALL automatic actions have occurred and the required action(s) IAW 34AB-B21-001-1, "Main Steam Line High Radiation or Suspected Fuel Element Failure."

All automatic actions _____ occurred and the operator is required to _____ .

A. have NOT; scram the reactor and then close the MSIVs

B. have NOT; perform a fast reactor shutdown IAW 34GO-OPS-014, "Fast Reactor Shutdown," and then close the MSIVs.

C. have; scram the reactor and then close the MSIVs

D. have; perform a fast reactor shutdown IAW 34GO-OPS-014, "Fast Reactor Shutdown," and then close the MSIVs.

35. 288000G2.1.32 001

Unit 2 is operating at 100% power.

The Reactor Building Ventilation system is in service with the following alignment:

- o 2T41-C007A, Rx Bldg Vent Exhaust Fan: Running
- o 2T41-C007B, Rx Bldg Vent Exhaust Fan: Danger Tagged out of service

- o 2T41-C001A, Rx Bldg Supply Fan: Running
- o 2T41-C001B, Rx Bldg Supply Fan: Standby

IAW 34SO-T41-005-2, Reactor Building Ventilation System which ONE of the choices below completes the following statements?

If the control switch for 2T41-C001B, Rx Bldg Supply Fan is placed in the "Run" position, 2T41-C001B, Rx Bldg Supply Fan _____ START.

If 2T41-C007A, Rx Bldg Vent Exhaust Fan trips, the running Rx Bldg Supply Fan(s) _____ TRIP automatically.

A. will;
will

B. will;
will NOT

C. will NOT;
will

D. will NOT;
will NOT

36. 290001K3.01 001

Unit 2 is operating at 100% RTP with the following conditions:

- o U2 Refueling Hatch installed
- o 2A SBGT Fan is Danger Tagged out for maintenance

Subsequently, the following occurs at the listed times:

10:00 A RWCU System break in the Unit 2 Reactor Building
10:05 2D11-K609A-D, "Rx. Bldg. Contaminated Area Radiation increase to 20 mr/hr
10:10 The Supply breaker for 2R24-S012, 600 V MCC, trips OPEN

With NO operator action, which ONE of the following predicts how the Rx. Bldg. monitored radioactive release rate and Rx. Bldg differential pressure (dP) will be affected?

At 10:08, the Rx. Bldg. Stack release rate will be _____ than at 10:04.

At 10:15, the Unit 2 Rx. Bldg. dP will be approximately _____ .

A. lower;
the same as at 10:08;

B. higher;
the same as at 10:08;

C. higher;
0.0 inches water

D✓ lower;
0.0 inches water

37. 295001AK1.01 001

Unit 2 is operating with both Recirc Pumps operating at 60% speed.

The "2A" ASD trips.

Given these current conditions, which ONE of the following completes both parts of this statement?

ACTUAL Total Core Flow equals (=) _____ ; and,

ACCURATE Total Core Flow _____ be read directly from the Total Core Flow recorder on 2H11-P603.

A. "A" jet pump flow plus (+) "B" jet pump flow;
can NOT

B. "B" jet pump flow minus (-) "A" jet pump flow
can NOT

C. "A" jet pump flow plus (+) "B" jet pump flow;
can

D. "B" jet pump flow minus (-) "A" jet pump flow;
can

38. 295002AK1.04 001

Unit 2 is operating at 14% power with RFPT 2A operating at 3600 rpm.

The following indications are observed:

- o Inlet Flow to Stack — 80 scfm and slowly rising
- o Steam Seal header pressure — 0 psig
- o Condenser Vacuum — 20.0 in.Hg vacuum and slowly heading to 0 in. Hg vacuum

Which ONE of the following identifies the required operator action IAW 34AR-650-125-2, Steam Seal Press Low, and the RFPT status when Main Condenser vacuum reached 20 in. Hg vacuum?

A. Start the mechanical vacuum pump;
The RFPT will still be in service.

B. Start the mechanical vacuum pump;
The RFPT will have tripped.

C. Throttle open 2N33-F004, Steam Seal Feed Vlv Bypass;
The RFPT will still be in service.

D. Throttle open 2N33-F004, Steam Seal Feed Vlv Bypass;
The RFPT will have tripped.

39. 295003AK1.04 001

A concurrent LOSP and LOCA occurs on **Unit 1**.

- o Reactor pressure is 50 psig
- o 1B Emergency Diesel Generator fails to start and can NOT be recovered
- o 1A RHR pump is Danger Tagged out of service

Which ONE of the following completes both statements?

Core Spray will be injecting from _____ .

RHR will be injecting from _____ .

A. BOTH Divisions (Loops);
ONLY one Division (Loop)

B. ONLY one Division (Loop);
ONLY one Division (Loop)

C. BOTH Divisions (Loops);
BOTH Divisions (Loops)

D. ONLY one Division (Loop);
BOTH Divisions (Loops)

40. 295004AK3.02 001

Unit 2 is operating at 100% Reactor Power when the following alarm occurs:

- o 125/250V BATTERY GND FAULT, 651-127

IAW 34AB-R42-001-0, Location Of Grounds and 34AR-651-127-2, which ONE of the following is the resistance value which will require isolation of loads and the reason for this isolation?

A resistance value of _____ will require isolation of loads since a _____ .

A. 22,000 OHMS,
personnel or equipment hazard could occur if a second ground develops

B✔ 8,000 OHMS,
personnel or equipment hazard could occur if a second ground develops

C. 22,000 OHMS;
single ground frequently results in spurious equipment operation

D. 8,000 OHMS;
single ground frequently results in spurious equipment operation

41. 295005G2.4.34 001

An event occurs requiring the Main Control Room to be evacuated.

NO operator actions were performed prior to leaving the Control Room.

Which ONE of the following completes both statements concerning locally tripping the **Unit 2** Main Turbine and the Turning Gear Oil Pump (TGOP) operation?

The Main Turbine will be tripped locally by depressing _____ .

After the Main Turbine reaches zero (0) rpm, without any additional operator actions, the Main Turbine bearings _____ receive adequate lubrication from the TGOP.

A. EITHER ONE of the Trip pushbuttons;
will

B. EITHER ONE of the Trip pushbuttons;
will NOT

C. BOTH Trip pushbuttons simultaneously;
will NOT

D✔ BOTH Trip pushbuttons simultaneously;
will

42. 295006G2.4.1 001

Unit 2 is operating at 70% power when a transient occurs.

Current plant conditions:

- o Reactor water level ..... +8 inches (lowest level reached)
- o Reactor pressure ..... 1080 psig (highest pressure reached)
- o Drywell pressure ..... 1.2 psig (highest pressure reached)
- o Torus water level ..... 149.5 inches (highest level reached)

Which ONE of the following completes both of these statements?

Entry conditions have been met or exceeded _____ Emergency Operating Procedure (EOP) flow chart(s).

IAW 34AB-C71-001-2, "Scram Procedure", performance of the RC-1, RC-2 and _____ placards are required IMMEDIATE actions.

A. ONLY for the Reactor Controls (RC);
RC-3

B. ONLY for the Reactor Controls (RC);
TC-1

C. for BOTH the RC and Primary Containment (PC);
RC-3

D. for BOTH the RC and Primary Containment (PC);
TC-1

43. 295007AK2.03 001

Unit 2 is at 100% power with RHR B Loop in Torus Cooling.

A transient occurs resulting in the following conditions:

- o Drywell pressure ..... 3.5 psig
- o Reactor pressure ..... 490 psig
- o Reactor level ..... -40 inches

With NO Operator actions, which ONE of the following describes how 2E11-F048B, Hx Bypass Vlv, will respond to these conditions, and the HIGHEST listed reactor pressure at which RHR will inject?

2E11-F048B will _____ and RHR will be injecting with reactor pressure at _____ .

A. automatically OPEN;
250 psig

B. remain CLOSE;
250 psig

C✔ automatically OPEN;
150 psig

D. remain CLOSE;
150 psig

44. 295016AA 1.04 001

The control room has been abandoned and 31RS-OPS-001-2, Shutdown From Outside Control Room, is being implemented.

- o 2R25-S004, 125 VDC Cabinet 2D is DE-ENERGIZED
- o 2R25-S006, 125 VDC Cabinet 2F is DE-ENERGIZED
- o 4160 VAC Emergency Bus breakers are required to be LOCALLY manually operated at the switchgear

IAW 31RS-OPS-001-2, Shutdown From Outside Control Room, _____
4160 VAC Emergency Bus breakers require disabling of the DC Undervoltage Trip Device in order to close their respective 4160 VAC pump breakers?

A. ✔ ONLY 2F

B. ONLY 2E & 2F

C. ONLY 2E & 2G

D. ALL (2E, 2F & 2G)

45. 295018AK1.01 001

Unit 2 is operating at 100% power with RBCCW pumps 2A and 2B in service.

- o 2C 600 VAC switchgear de-energizes and can NOT be restored.

Which ONE of the following completes these statements?

The Standby RBCCW pump _____ automatically start.

RBCCW flow inside the Drywell _____ the flow before the 2C 600 VAC switchgear tripped.

A. will NOT;
remains approximately the same as

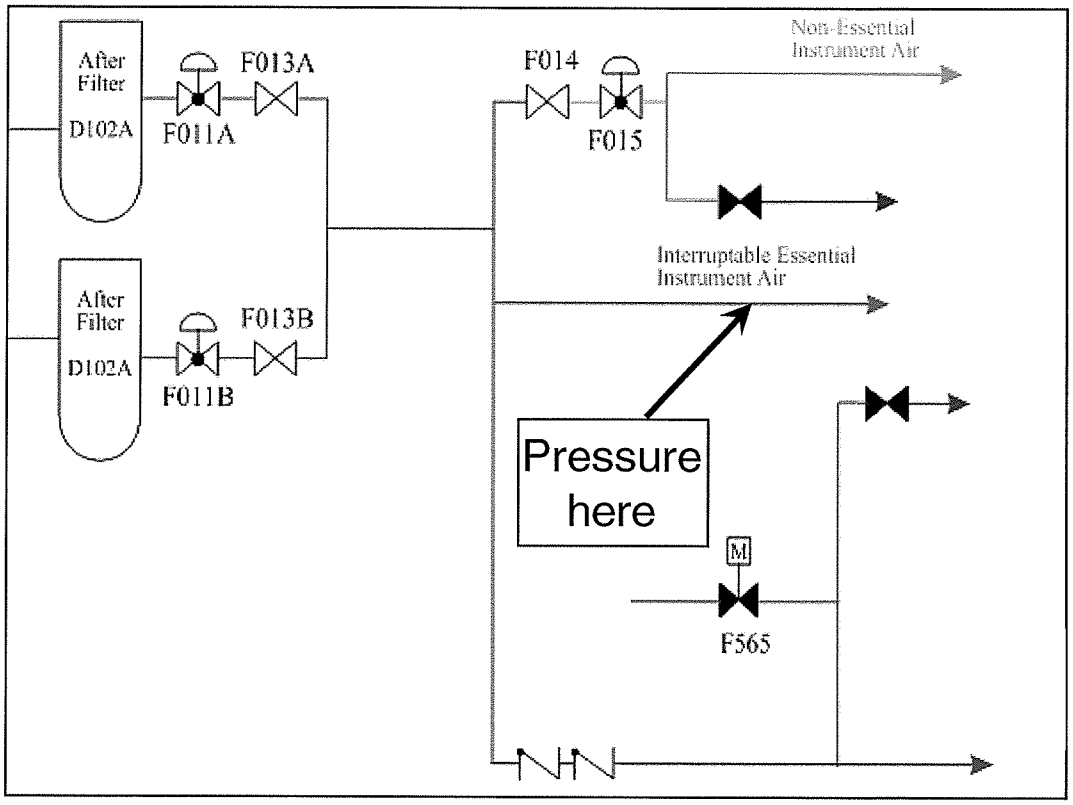
B. will;
remains approximately the same as

C. will NOT;
will be lower than

D. will;
will be lower than

46. 295019AA2.01 001

Unit 2 is operating at 100% RTP when a malfunction occurs on the Interruptible Essential Instrument Air Header causing this header to decrease to 45 psig.



If NO operator action is taken, which ONE of the following choices correctly states how the plant will respond to this instrument air pressure reduction?

The Non-Essential Instrument Air Header Isolation Valve (2P52-F015) will _____ and the Outboard MSIVs will _____ .

A. close and remain closed;
remain open

B. close and remain closed;
drift closed

C. continuously cycle open and closed;
remain open

D. continuously cycle open and closed;
drift closed

47. 295021G2.4.8 001

Unit 2 is Shutdown with the following conditions:

- o Reactor pressure is 80 psig and slowly lowering
- o 2D RHR pump is in Shutdown Cooling (SDC)

An event occurs on **Unit 2** with the following:

- o The Supply breaker to 600 V Bus 2D trips and can NOT be re-closed
- o 31EO-EOP-010-2, RC RPV Control (Non ATWS), is in progress
- o RWL is 5" increasing 1" per minute (lowest level reached -10")

Given these conditions, which ONE of the following completes both statements?

IAW 34AB-R23-001-2, "Loss of 600 Volt Emergency Bus", energizing 600 VAC bus "2D" using the 4160/600V "2CD" Transformer is _____ .

In order to return SDC to service, the Group Isolation Reset switches _____ required to be placed in the Gr. 2/5 position.

A. NOT allowed;
are NOT

B. NOT allowed;
are

C. allowed;
are NOT

D. allowed;
are

48. 295022AK3.02 001

Unit 2 is operating at 100% RTP when a High Drywell pressure scram signal is received.

Which ONE of the following describes the response of the Control Rod Drive Mechanisms (CRDM) to the High Drywell pressure scram signal?

FINAL CRDM temperatures are expected to _____ .

NO Operator actions occur.

A. significantly increase (>100°F)

B. significantly decrease (>100°F)

C. slightly increase (<10°F)

D. slightly decrease (<10°F)

49. 295023AA2.02 001

Fuel movement is in progress on **Unit 1**.

Currently a fuel bundle is on the Main Grapple.

- o The Main Grapple is in the Normal Up position

Subsequently, the Unit 1 Main Steam line plugs fail causing the Reactor Cavity and Fuel Pool water levels to decrease.

Which ONE of the following completes these statements?

IAW 34AB-G41-002-1, Decreasing Rx Well/Fuel Pool Water Level, the grappled fuel bundle can be placed _____ in-core location.

When water level drops to the Main Steam lines, the fuel seated in the Fuel Pool racks will _____ .

A. into any;
still be covered

B. ONLY in its proper;
be uncovered

C. into any;
be uncovered

D. ONLY in its proper;
still be covered

50. 295024EK2.01 001

Which ONE of the following completes both statements concerning a High Drywell pressure signal to the HPCI System?

The LOWEST listed Drywell pressure that will cause HPCI to initiate is _____ .

After HPCI starts, the Standby HPCI Pump Room Cooler will start _____ .

A. 1.9 psig;

as soon as 2E41-F001, Steam Supply valve, opens

B. 1.9 psig;

ONLY after the HPCI room temperature increases above the start setpoint

C. 2.1 psig;

as soon as 2E41-F001, Steam Supply valve, opens

D. 2.1 psig;

ONLY after the HPCI room temperature increases above the start setpoint

51. 295025EK3.02 001

IAW 34SO-B31-001-2, Reactor Recirculation System, the reason the Recirculation Pumps Trip at a high reactor pressure setpoint of _____ , is to reduce the challenge to the integrity of the Reactor Coolant Pressure Boundary during _____ .

A. 1170 psig;
an ATWS condition

B. 1150 psig,
an ATWS condition

C. 1170 psig;
a Generator Load Reject condition

D. 1150 psig,
a Generator Load Reject condition

52. 295026EA1.01 001

Unit 1 experienced a transient which resulted in the following plant conditions:

- o Reactor power 3%
- o RPV Water Level -180 inches compensated (level band -155" to -185")
- o RPV pressure 800 psig
- o Drywell pressure 1.5 psig
- o Torus temperature 125 °F

IAW 34SO-E11-010-1, Residual Heat Removal System, which ONE of the following choices completes the statements concerning opening 1E11-F024A, Full Flow Test Line Vlv and 1E11-F028A, Torus Spray or Test Vlv and placing Torus Cooling in service?

To OPEN 1E11-F024A and 1E11-F028A;

the Containment Spray Vlv Control switch _____ REQUIRED to be placed in the "MANUAL" position and

the Cnmt Spray Vlv Cntl 2/3 Core Ht Permis switch _____ REQUIRED to be placed in the "MANUAL OVERRD" position.

Reference Provided

A. is;
is

B. is;
is NOT

C. is NOT;
is NOT

D. is NOT;
is

53. 295028EK3.06 001

Unit 2 experienced a loss of Instrument Air resulted in a reactor scram.

The following conditions exist:

- o Reactor power ..... 3% (all control rods did NOT fully insert)
- o RPV Pressure..... 1110 psig, slowly increasing
- o RWL..... -110 inches, stable
- o ADS Inhibit Switches..... "INHIBIT" position
- o RHR pumps ..... ONLY 2A running
- o Drywell (DW) Pressure..... 3.0 psig, increasing at 0.5 psi/minute
- o DW Temperature .... 370°F, slowly increasing

After the above conditions have existed for ten (10) minutes, the NPO places the ADS "INHIBIT" switches to the "NORMAL" position and NONE of the ADS valves OPEN.

Based on the conditions above, the MOST likely listed reason the ADS valves did NOT open is that _____ .

A. Instrument Air to the ADS valves has been lost

B. DW Temperature is above the design criteria

C. only one RHR pump is in operation

D. RWL is too high

54. 295029EA2.03 001

Which ONE of the following completes these statements?

The method of containment water level determination changes from Torus water level instrumentation to 31EO-EOP-105-2, Primary Containment Water Level Determination, when Torus water level goes above _____ . (Select the LOWEST level that applies)

Differential pressure readings used to determine Containment water level will be read from _____ .

A. 285 inches;
locally installed pressure gauges

B. 285 inches;
Drywell to Torus dp indicators, 2T48-R635, (2H11-P654)

C. 300 inches;
locally installed pressure gauges

D. 300 inches;
Drywell to Torus dp indicators, 2T48-R635, (2H11-P654)

55. 295030EK2.03 001

An event has occurred on **Unit 1** resulting in the following conditions:

- o Torus Water Level ..... 148 inches
- o Torus Water Temperature ..... 230°F
- o Torus Pressure ..... 12 psig

Subsequently the following occurs at the listed times;

10:00 Core Spray is injecting at 3000 gpm
10:10 Torus level DECREASES to 144 inches
10:15 Core Spray flow is INCREASED to rated
10:20 Torus pressure DECREASES to 1.0 psig due to Drywell Sprays

Which ONE of the following listed times is the EARLIEST time that entry into the UNSAFE area of the Core Spray Pump NPSH Limit Graph occurs?

Reference Provided

A. 10:00

B. ✔ 10:10

C. 10:15

D. 10:20

56. 295031EA2.01 001

Which ONE of the following actuations, occurring due to low RWL, is the indication of the LOWEST RWL achieved during a transient on **Unit 2?**

A. Recirc Pump Speed Limiter #4.

B. RPS K14 Scram Relays de-energizing

C. ARI valves automatically opening.

D. Recirc Pumps tripping

57. 295033EK1.02 001

Unit 2 is in Mode 5 with solvent based painting in progress at the ATTS Panel area of the Main Control Room.

Subsequently, a fuel handling accident causes the following Area Radiation Monitors to INCREASE to 22 mr/hr:

- o 2D21-K601A, Reactor Head Laydown Area
- o 2D21-K601M, Spent Fuel Pool And New Fuel Storage

With the above conditions present, and IAW 34SO-Z41-001-1, Control Room Ventilation System, which ONE of the following is the REQUIRED MCREC mode of operation?

A. Normal Mode

B. Isolation Mode

C. Pressurization Mode

D. Purge Mode

58. 295034G2.2.39 001

UNIT 2 is operating at 100% RTP when I&C personnel report that ALL 2D11-K609A-D, Reactor Building Vent Exhaust radiation monitors, will NOT provide a trip signal, due to a calibration error.

IAW TS 3.3.6.2, Secondary Containment Isolation Instrumentation, which ONE of the following is the MINIMUM REQUIRED TS action to be completed within one hour of receiving this report?

A. restore isolation capability

B. isolate the penetration flow paths

C. declare all 4 Standby Gas Treatments inop

D. declare associated Secondary Containment Isolation Valves inop

59. 295036EA1.04 001

Unit 2 is operating at 100% RTP when a leak occurs in Secondary Containment (SC) requiring entry into 31EO-EOP-014-2, SC Secondary Containment Control/ RR Radioactivity Release.

Subsequently, a loss of Instrument Bus 2A occurs.

The Shift Supervisor directs the NPO to monitor SC water and radiation levels.

Which ONE of the choices below completes the following statements?

SC radiation levels _____ be monitored by using area radiation monitoring (ARM) instrumentation located in the Main Control Room.

Personnel _____ to determine that Max Normal SC Water level has been exceeded.

A. can NOT;
can use the Main Control Room SC sump alarms by themselves

B. can NOT;
must be dispatched LOCALLY

C. can;
can use the Main Control Room SC sump alarms by themselves

D. can;
must be dispatched LOCALLY

60. 295037EK1.01 001

During an ATWS, in order to avoid exceeding the Heat Capacity Temperature Limit (HCTL) graph, the SRO has ordered reactor pressure to be lowered to 700 psig using SRVs.

Which ONE of the following describes the reactor power response IMMEDIATELY upon opening the SRVs and why?

A. Reactor power will INCREASE due to the DECREASED reactor coolant temperature.

B. Reactor power will INCREASE due to the INCREASED water level inside the core.

C. Reactor power will DECREASE due to the DECREASED core inlet sub-cooling.

D. Reactor power will DECREASE due to the INCREASED voiding in the core.

61. 295038EA1.03 001

The following annunciator is in the alarm condition for 2D11-K605, Service Water Liquid Radiation Monitor:

601-407, Service Water Effluent Radiation High

Which ONE of the following completes these statements?

The system being monitored by this detector is _____ .

This flowpath _____ AUTOMATICALLY isolate due to this High radiation signal.

A. RHR Service Water (RHRSW)
will NOT

B. Plant Service Water (PSW)
will NOT

C. RHR Service Water (RHRSW)
will

D. Plant Service Water (PSW)
will

62. 300000K2.01 001

Which ONE of the choices below identifies the correct power supplies for the **Unit 2** Station Service Air Compressors?

	SSAC 2A	SSAC 2C
A.	600V 2D	600V 2A
B.	600V 2C	600V 2BB
C.	600V 2C	600V 2A
D.	600V 2D	600V 2BB

63. 400000G2.1.30 001

Unit 2 is operating at 100% RTP when alarm 650-248, RBCCW Surge Tk Level Low Or Excess Leakage, is received.

IAW 34AR-650-248-2, which ONE of the following completes the statement concerning the RBCCW surge tank timer indication and where the operator will reset the RBCCW surge tank timer?

The RBCCW surge tank counter will indicate _____ and once the system is repaired, the operator will reset the timer at the _____ panel.

A. 2;

2H21-P350

B. 2;

2H11-P650

C. 0;

2H11-P650

D. 0;

2H21-P350.

64. 600000AK2.04 001

The plant is operating at 30% power when a fault in the **Unit 1** Main Transformer results in the transformer exploding with a subsequent fire.

- o 651-114, Main XFMR Fault Pressure Alarm is received
- o Fire Alarm (651-160) on Unit 1 P651 panel is received

Which ONE of the following is the status of the Unit 1 Reactor and the 4160 VAC Station Service transfer logic?

The reactor _____ automatically scram ~~immediately~~ Deleted AKB 6/23/2011 after the explosion occurs AND 4160 VAC Station Service transfer logic _____ allow a transfer to the Startup Auxiliary Transformers, when needed.

A. will;
will

B. will;
will NOT

C. will NOT;
will

D. will NOT;
will NOT

65. 700000AA2.01 001

Unit 1 is operating at 100% power.
Unit 2 is in Refuel Mode.

Following a grid disturbance, the following Unit 1 conditions exist:

- o Generator H_2 pressure 55 psig
- o Generator Megawatts 930 MWe
- o Generator Megavars + 400 MVARs
- o 230 KV switchyard voltage 231 kV

Based on the requirements of 34AB-S11-001-0, Operation With Degraded Voltage, which ONE of the following choices correctly completes BOTH parts of this statement?

Based on the existing conditions, the 230 kV switchyard voltage is currently _____ than the normal MINIMUM voltage AND the Unit 1 Main Generator is operating _____ the limits of the Generator Capability Curve.

Reference Provided

A. less;
within

B. less;
outside

C. greater;
within

D. greater;
outside

66. G2.1.8 001

Unit 2 is operating at 100% RTP.

IAW 34SO-B31-001-2, Reactor Recirculation System, which ONE of the following describes the MINIMUM qualification and the coordination requirements for changing Recirc Pump "A" speed locally?

A. A qualified Systems Operator can ONLY perform the speed adjustment if a Senior Reactor Operator is present at the local ASD A FPC Cabinet.

B. A licensed Nuclear Plant Operator can ONLY perform the speed adjustment if in constant communication with the Main Control Room.

C. A qualified Systems Operator can ONLY perform the speed adjustment if a Nuclear Plant Operator is present at the local ASD A FPC Cabinet.

D. A licensed Nuclear Plant Operator can ONLY perform the speed adjustment if a Senior Reactor Operator is present at the local ASD A FPC Cabinet.

67. G2.1.20 001

During the execution of 31EO-EOP-010-2, RPV Control (Non-ATWS), which ONE of the following is the correct action when "Anticipating Emergency Depressurization"?

A. Open Safety Relief Valves to maintain cooldown rate $\leq$ 100°F per hour.

B. Open ALL ADS Safety Relief Valves to depressurize irrespective of the cooldown rate.

C. Open Main Turbine Bypass Valves to maintain cooldown rate $\leq$ 100°F per hour.

D. Open ALL Main Turbine Bypass Valves to depressurize irrespective of the cooldown rate.

68. G2.2.13 001

IAW NMP-AD-003-001, Tag Standards, which ONE of the following completes these statements?

Danger tags AND _____ tags are BOTH allowed to be hung (co-exist) on a single component.

While these tags co-exist, the _____ tag should be placed on top.

A. Caution;
Caution

B. Caution;
Danger

C. Operating Permit;
Operating Permit

D. Operating Permit;
Danger

69. G2.2.21 001

Given the following:

1E11-F017A, RHR Injection valve was declared INOPERABLE for preventative maintenance (PM).

Following the PM, operators performed the stroke test on 1E11-F017A IAW 34SV-E11-002-1, RHR Valve Operability.

The stroke test data is shown below:

COLUMN 1 MPL (TYPE)	COLUMN 2 REFERENCE TIME (SEC)		COLUMN 3 CALCULATED ALLOWABLE TIME (SEC)				COLUMN 4 OPERATING TIME (SEC)		COLUMN 5 MAXIMUM TIME LIMIT (SEC)	
	OPEN	CLOSE	OPEN MIN / MAX		CLOSE MIN / MAX		OPEN	CLOSE	OPEN	CLOSE
1E11-F017A MOV	**24.2**	N/A	**20.6**	**27.8**	N/A	N/A	**30.5**	N/A	≤34	N/A

IAW 34SV-E11-002-1, which ONE of the following describes the timing and status of 1E11-F017A?

To time this valve OPEN, the NPO will START the stopwatch when the _____ .

Based on the above data, 1E11-F017A _____ be IMMEDIATELY declared OPERABLE.

A. control switch is placed to OPEN;
can

B. red light FIRST illuminates;
can

C. control switch is placed to OPEN;
can NOT

D. red light FIRST illuminates;
can NOT;

70. G2.3.11 001

Which ONE of the following is the BASIS for restarting the Turbine Building (TB) Ventilation when executing 31EO-EOP-014-2, "SC Secondary Containment Control - RR Radioactivity Release Control"?

Restarting the TB Ventilation _____ **AND** assures a release from the TB Ventilation System is monitored prior to exiting the _____ .

A. maintains equipment operability;
Reactor Building Stack

B. preserves personnel accessibility;
Reactor Building Stack

C. maintains equipment operability;
Main Stack

D. preserves personnel accessibility;
Main Stack

71. G2.3.12 001

IAW 31GO-OPS-005-0, "Primary Containment Entry," the MAXIMUM reactor power at which radiological conditions will allow a NORMAL Primary Containment Entry to occur is _____ .

A. IRM Range 5

B. 7% RTP

C. 10% RTP

D. 15% RTP

72. G2.3.13 001

Two NPOs are required to enter a "Locked High Radiation" area room to perform a tagout. The NPOs will be accompanied by a Health Physics (HP) Technician (Tech).

IAW 62RP-RAD-016-0, Control Of High Radiation Areas, which ONE of the choices below completes the following statements?

The keys to the "Locked High Radiation" area room can be issued from _____ .

After exiting the Locked High Radiation Area, the door can be verified secure by _____ .

A. the HP Office ONLY
one of the NPOs

B. the HP Office ONLY
the HP Tech ONLY

C. either the the HP Office OR the Work Control Center;
one of the NPOs

D. either the the HP Office OR the Work Control Center;
the HP Tech ONLY

73. G2.4.16 001

Unit 2 has experienced a complete loss of offsite power (LOSP).

The following conditions exist on Unit 2:

- o ONLY 4160 VAC bus 2G is energized
- o Torus pressure is currently 11 psig and rising 1.0 psig per minute

Which ONE of the following completes these statements?

With the above conditions, actions in the _____ takes precedent over actions in any other procedure.

34AB-R22-003-2, Station Blackout procedure, will be EXITED when a MINIMUM of _____ 4160V Emergency buses are energized on Unit 2.

A. 34AB-R22-003-2, Station Blackout procedure;
two (2)

B. 34AB-R22-003-2, Station Blackout procedure;
three (3)

C. EOP procedures;
two (2)

D. EOP procedures;
three (3)

74. G2.4.4 001

Unit 2 is conducting a HPCI Pump Operability Surveillance.

- o At 14:00 Torus Bulk average water temperature is 94°F, increasing at 0.5°F/minute.

Based on the current trend, which ONE of the following is the EARLIEST listed time that entry into 31EO-EOP-012-2, PC Primary Containment, is REQUIRED?

A. 14:03;

B. ✔ 14:13;

C. 14:23;

D. 14:33;

75. G2.4.5 001

Of the procedure types listed below, which ONE would provide the DETAILED guidance for notifying state and local agencies in the event of a Fuel Handling accident that resulted in a radioactive release?

A. 34AB-J11, Irradiated Fuel Damage During Handling

B. ✔ NMP-EP, Nuclear Management Procedures for Emergency Preparedness

C. 31EO-EOP, Emergency Operating Procedures

D. NMP-RP, Nuclear Management Procedures for Radiation Protection

76. 201002G2.1.32 001

Unit 1 plant conditions are as follows:

- o Reactor power is 60%
- o Control Rod 22-47 is at position 10

Control Rod 22-47 is required to be withdrawn to position 22 for a rod pattern adjustment.

Which ONE of the following describes the Tech Spec (TS) requirement if Rod 22-47 will NOT move AND the procedural restrictions for positioning Rod 22-47 IAW 34GO-OPS-065-0, Control Rod Movement, if the rod will move?

If it is discovered that Rod 22-47 is stuck at position 10, IAW TS 3.1.3, Control Rod Operability, a verification of Shutdown Margin _____ required to allow continued operation with this rod stuck out.

If Rod 22-47 will move, <u>continuous</u> withdrawal must be stopped at position _____ .

Reference Provided

A. ✔ is;
20

B. is NOT;
20

C. is NOT;
22

D. is;
22

77. 205000G2.4.20 001

Unit 2 was at 100% RTP when a steam leak, that could NOT be immediately isolated, occurred in the Turbine Building.

The following sequence of events occur:

- o Reactor pressure decreases from 1040 psig to 100 psig over a 30 minute time span
- o The steam leak in Turbine Building is isolated
- o A Reactor pressure band of 90 psig to 135 psig is established
- o RHR Shutdown Cooling (SDC) can NOT be established due to a logic problem

IAW 31EO-EOP-010-2, RC RPV Control (Non-ATWS), (RC Chart) which ONE of the following completes both statements?

IAW EOP Caution 2, 2B21-R623B, Wide Range RWL, _____ be used to determine RWL.

With SDC NOT available, the RC Chart _____ REQUIRE entry into 31EO-EOP-107-2, "Alternate RPV Pressure Control" to control Reactor pressure in the established Reactor pressure band.

A. can;
will

B. can;
will NOT

C. can NOT;
will

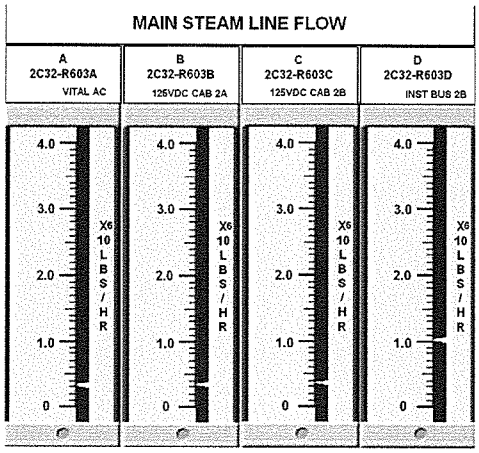
D. can NOT;
will NOT

78. 217000G2.4.45 001

A transient occurred on **Unit 2** resulting in RCIC being the ONLY high pressure system injecting. RWL is steady at -154".

Two (2) minutes later, at 11:00, the following alarms and Main Steam Line Flow indications exist:

- o 601-327, Leak Det Ambient Temp High
- o 601-321, Leak Det Diff Temp High
- o 602-302, RCIC Isol Timer Initiated



Which ONE of the following completes the statements concerning RCIC Isolation and bypassing the RCIC Isolation timer?

Based on the above indications ONLY, the EARLIEST listed time that a RCIC Automatic Isolation will have occurred is _____ .

IAW 31EO-EOP-015-2, CP-1, Alternate Level Control, bypassing the RCIC Isolation timer _____ ALLOWED.

A. 11:14;
is

B. 11:14;
is NOT

C. 11:30;
is NOT

D. 11:30;
is

79. 256000G2.1.23 001

Unit 2 was operating at 100% RTP when an event occurs resulting in the following conditions:

- o Reactor power is 6%
- o IAW 31EO-EOP-017-2, CP-3, RWL is being maintained -155" and -185" using HPCI
- o SBLC is injecting with tank level at 45%

Five (5) minutes later, the following conditions exist:

- o 7 ADS valves have been opened due to high Secondary Containment Temperatures
- o Reactor pressure is 90 psig
- o 2E11-F015A & B, RHR Injection valves, can NOT be opened
- o SBLC tank level is 42%

IAW CP-3, which ONE of the following completes the statements below concerning the PREFERRED injection system for RWL control and the required RWL band?

Based on the above conditions, to restore RWL, _____ will be used to maintain a level band of _____ .

A. 34SO-N21-007-2, Condensate and Feedwater System;
+3 inches to +50 inches

B. ✔ 34SO-N21-007-2, Condensate and Feedwater System;
-155 inches to -185 inches

C. 34SO-E41-001-2, HPCI System;
+3 inches to +50 inches

D. 34SO-E41-001-2, HPCI System;
-155 inches to -185 inches

80. 259002A2.04 001

Unit 2 is starting up with the Rx. Mode switch in RUN. The following plant conditions exist:

- o Reactor power is 9%
- o 2C32-R601A, 2A RFP M/A Station in "Auto" operating in dP Mode
- o 2N21-R609, Pump dP Controller, in "Auto", setpoint at 30 psid
- o 2N21-F111, FW Startup Level Control Valve, setpoint at 37"

A malfunction occurs in the control circuit causing 2A RFPT speed to increase to 5800 RPM.

2N21-F111 valve position, did NOT change.

All GEMACs indicate reactor water level reaching 58", with only two (2) Rx Hi Level Trip "Amber" lights illuminating.

The Shift Supervisor declares one (1) Hi Level Trip circuit INOP.

Which ONE of the following completes the statement concerning the response of 2N21-F111, and the Reactor startup requirements?

With 2A RFPT speed increasing to 5800 RPM, the above response of 2N21-F111 _____ expected.

IAW Tech Specs 3.0.4 and WITHOUT any further risk assessments, the reactor startup can be resumed _____ with the Hi Level Trip circuit still INOP.

A. was NOT;
and reactor power can be increased to 100% RTP

B. was NOT;
but reactor power is limited to less than 24% RTP

C. was;
but reactor power is limited to less than 24% RTP

D. was;
and reactor power can be increased to 100% RTP

81. 262001A2.06 001

Unit 2 is in STARTUP making preparations to pull control rods when the Normal supply breaker to 2E 4160V Emergency Bus trips open.

Which ONE of the following completes both of these statements?

The 2A Emergency Diesel Generator _____ expected to automatically start.

IAW with Tech Specs 3.4.1, "Recirculation Loops Operating", the MAXIMUM amount of time allowed to satisfy the applicable LCO action statement for loss of BOTH Recirc loops is _____ hours.

A. is NOT;
24

B. is NOT;
12

C. is;
24

D. is;
12

82. 264000G2.2.12 001

Which ONE of the following describes the surveillance requirements for the 2A Diesel Generator?

IAW TS SR 3.0.2, the specified Frequency for 34SV-R43-001-2, Diesel Generator 2A Monthly Surveillance is MET if the surveillance is performed within _____ the interval specified in TS.

IAW TS SR 3.0.3, if it is discovered that 34SV-R43-001-2 has been MISSED, then entry into the required action statement for the 2A Diesel Generator being inoperable _____ .

A. 1.25 times;
is required IMMEDIATELY

B. 1.25 times;
can be DELAYED

C. 2.0 times;
is required IMMEDIATELY

D. 2.0 times;
can be DELAYED

83. 288000A2.01 001

Unit 2 was operating at 100% RTP in Type A Containment with the Unit 2 Refueling Floor Equipment Hatch installed.

An event occurs resulting in the following conditions:

- o RWL is -25 inches (lowest reached) and rising slowly
- o Reactor pressure is 900 psig and lowering slowly
- o Drywell pressure is 5.0 psig and rising slowly

- o Unit 2 Standby Gas Treatment fans will NOT run
- o Unit 2 Reactor Building differential pressure (dP) is 0 inches water

Which ONE of the following completes these statements?

Unit 1 Reactor Building Ventilation Systems _____ have isolated.

IAW 31EO-EOP-014-2, SC/RR, the Shift Supervisor will direct restart of the **Unit 2** Reactor Building Ventilation IAW _____ .

A. should;
34SO-T41-005-2, Reactor Building Ventilation System, AND 31EO-EOP-100-2, Miscellaneous Emergency Overrides

B. should;
34SO-T41-005-2, Reactor Building Ventilation System, ONLY

C. should NOT;
34SO-T41-005-2, Reactor Building Ventilation System, ONLY

D. should NOT;
34SO-T41-005-2, Reactor Building Ventilation System, AND 31EO-EOP-100-2, Miscellaneous Emergency Overrides

84. 295001G2.4.41 001

Unit 2 has just entered Mode 4 with RPV coolant temperature 210°F. Both Recirc pumps are secured. Type A Secondary Containment exists and NO work has been started on any reactor systems.

At 1000 a fuse blows causing 2E11-F008, SDC Suction valve, to close.

At 1010 Reactor Coolant temperature is 213°F INCREASING 0.5°F/minute. Maintenance reports the fuse will be replaced in 10 minutes.

At 1020 the fuse is replaced and SDC restored, reactor coolant temperature is 218°F and slowly LOWERING.

Which ONE of the choices below completes the following statements?

IAW NMP-EP-110, Emergency Classification Determination, the HIGHEST Emergency Classification required to be declared due to this event is _____ .

IAW NMP-EP-111, Emergency Notifications, State and Local Agencies must be notified within _____ of the emergency declaration.

Reference Provided

A. an Alert;
1 hour

B. an Alert;
15 minutes

C. a Notification of Unusual Event;
1 hour

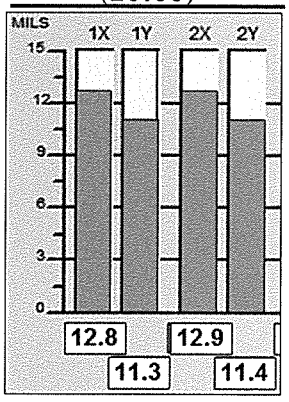
D. a Notification of Unusual Event;
15 minutes

85. 295005G2.1.23 001

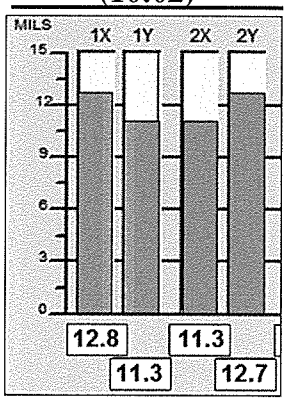
Unit 2 is operating at 400 GMWe. The following DEHC Mark VI vibration displays were taken for Main Turbine bearings #1 and #2 at the following times.

Time:

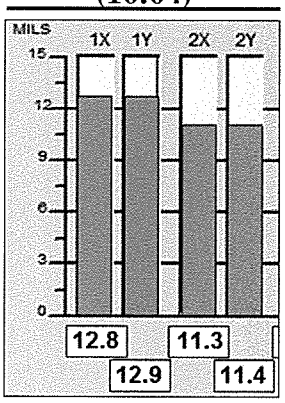
(10:00)



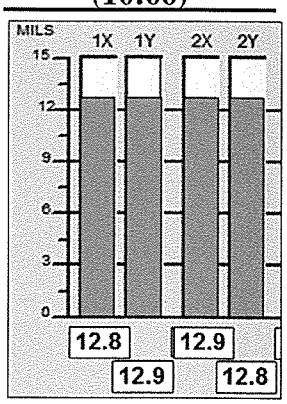
(10:02)



(10:04)



(10:06)



Subsequently, the Unit 2 Main Turbine automatically trips.

A local Systems Operator reports that part of a turbine blade has been expelled from the Unit 2 Main Turbine and caused visible damage to the Unit 2 Reactor Building wall.

Based strictly on the above indications, which ONE of the following completes the statements below?

IAW 34SO-N30-001-2, Main Turbine Operation, the FIRST Unit 2 Main Turbine High Vibration trip signal was received _____ 10:03.

IAW NMP-EP-110, Emergency Classification Determination and Initial Actions, an emergency declaration _____ required.

A. prior to;
is NOT

B. after;
is NOT

C. prior to;
is

D. after;
is

86. 295009G2.4.6 001

An ATWS is in progress on **Unit 2** with the following:

- o Reactor power is 4%
- o SLC is injecting (current tank level, 30%)
- o Reactor pressure is 840 psig
- o Suppression Pool level is 165 inches
- o Suppression Pool temperature is 122°F
- o Reactor water level is -186" and slowly lowering
- o All available Table 13 systems are injecting

Which ONE of the following is the NEXT REQUIRED EOP action based on these conditions?

A. Place all available loops of RHR in Torus Cooling IAW 34SO-E11-010-2.

B. Terminate and Prevent injection IAW 31EO-EOP-113-2.

C. Lower reactor pressure and inject with Condensate Booster pumps IAW 34GO-OPS-013-2.

D. Exit the EOPs and enter Severe Accident Guidelines (SAGs).

87. 295018AA2.03 001

Unit 2 is starting up at 2% RTP, with the CRD and RWCU Systems maintaining RWL.

- o RWCU dump flow is 50 gpm.

Subsequently:

- o RWCU dump flow is raised to 75 gpm
- o 2P41-F316A and 2P41-F316D, Turbine Bldg. PSW Isolation valves, inadvertently close.

RBCCW suction temperature is 102°F and increasing and the reactor is manually scrammed.

Which ONE of the following identifies the cause of the RBCCW System response AND the reporting requirements IAW REG-0025, One, Four, and Eight Hour Reporting Requirements of 10 CFR 50.72?

A. Loss of cooling medium to the RBCCW Hx;
4 Hour report is required

B. Loss of cooling medium to the RBCCW Hx;
1 Hour report is required

C. Excessive RWCU dump flow ONLY;
4 Hour report is required

D. Excessive RWCU dump flow ONLY;
1 Hour report is required

88. 295020G2.4.2 001

Unit 1 was operating at 100% RTP when the MSIVs inadvertently closed. The following conditions exist after the closure AND PRIOR to entering any EOP flowcharts:

o IRMs	Fully inserted
o Reactor power	40/125 IRM Range 4
o Control rods	50 rods NOT Full In
o Reactor pressure	controlled by LLS
o RWL	9" and steady (lowest level reached 0.0")
o NO Boron has been injected	

IAW 31EO-EOP-011-1, RCA RPV Control (ATWS), which ONE of the following completes the statement concerning reactor pressure entry condition AND the procedure for inserting control rods?

The Entry condition for reactor pressure _____ EXCEEDED.

The Shift Supervisor is REQUIRED to enter _____ to insert control rods.

A. was;
34AB-C11-005-1, Control Rod Insertion Methods

B. was NOT;
34AB-C11-005-1, Control Rod Insertion Methods

C. was NOT;
31EO-EOP-103-1, Control Rod Insertion Methods

D. was;
31EO-EOP-103-1, Control Rod Insertion Methods

89. 295021G2.1.23 001

Unit 2 is in Mode 4, five (5) days after shutdown. The following plant conditions exist:

- o 2A RHR Pump is operating in Shutdown Cooling (SDC)
- o Reactor Level is 47" and stable
- o Reactor Coolant Temperature is 130°F and stable
- o Both Reactor Recirculation pumps are off

Subsequently, a loss of 2A RPS Bus occurs. Maintenance estimates that 2A RPS Bus can be recovered in four (4) hours.

Which ONE of the following completes the statements concerning the SDC Suction valves and the reactor coolant temperature and pressure monitoring requirements?

The loss of 2A RPS Bus resulted in _____ closing.

IAW 34AB-E11-001-2, Loss Of Shutdown Cooling, reactor coolant temperature and pressure are required to be monitored once every _____ .

A. ONLY one SDC Suction Valve
hour

B. ONLY one SDC Suction Valve
15 minutes

C. BOTH SDC Suction Valves
15 minutes

D. BOTH SDC Suction Valves
hour

90. 295026EA2.01 001

Unit 1 scrammed on low reactor water level due to a loss of the Condensate system.

Current plant conditions are:

- o Control rods ..... Fully inserted
- o Reactor Water Level ..... -135 inches and stable
- o Reactor Pressure ..... 780 psig and stable
- o Torus Level ..... 120 inches and slowly increasing

Which ONE of the following choices answers both of these statements IAW 31EO-EOP-012-1, Primary Containment Control EOP Flowchart?

Of the listed temperatures and based on the above conditions, the LOWEST Torus Temperature at which the plant will be in the UNSAFE region of the Heat Capacity Temperature Limit is _____ .

With the plant in the UNSAFE region, the Shift Supervisor will order _____ .

Reference provided

A. 180°F;
a reactor pressure band that places the plant in the SAFE region of HCTL Graph, without exceeding the cooldown rate limit, IAW 31EO-EOP-010-1, RC RPV Control (NON-ATWS) RC/P path

B. 165°F;
Emergency Depressurizing the RPV IAW 31EO-EOP-015-1, CP-1 Alternate Level Control, Steam Cooling, & Emergency RPV Depressurization

C. 165°F;
a reactor pressure band that places the plant in the SAFE region of HCTL Graph, without exceeding the cooldown rate limit, IAW 31EO-EOP-010-1, RC RPV Control (NON-ATWS) RC/P path

D. 180°F;
Emergency Depressurizing the RPV IAW 31EO-EOP-015-1, CP-1 Alternate Level Control, Steam Cooling, & Emergency RPV Depressurization

91. 295031G2.2.25 001

Which ONE of the following completes the statement concerning the TS Bases for the RPV Water Level Low (Level 3) function?

IAW B3.3.1.1, RPS Instrumentation, the RPV Water Level Low (Level 3) trip function ensures that _____ ; and,

IAW B3.3.5.1, ECCS Instrumentation, the RPV Water Level Low (Level 3) function _____ used to prevent a spurious initiation of ADS due to spurious RPV Water Level Low Low Low (Level 1) signals.

A. the heat energy generated in the fuel is substantially reduced before the fuel is uncovered;

is ALSO

B. the heat energy generated in the fuel is substantially reduced before the fuel is uncovered;

is NOT

C. enough time is available for the ECCS to start and reflood the reactor core before the Peak Cladding Temperature exceeds 2200°F;

is ALSO

D. enough time is available for the ECCS to start and reflood the reactor core before the Peak Cladding Temperature exceeds 2200°F;

is NOT

92. 295034EA2.02 001

Unit 2 is operating at 100% RTP when the following alarms are received:
(These are the ONLY alarms received)

601-420, Rx Bldg Pot Contam Area Vent Radn Hi-Hi
601-426, Rx Bldg Pot Contam Area Radiation High
601-306, Rx Bldg Radiation High

34AB-T22-003-2, Secondary Containment Control, is entered.

Which ONE of the following completes the statement below?

The cause for these radiation alarms is due to a _____ in Secondary Containment and _____ .

A. RWCU line leak;

34AB-T22-003-2 is performed CONCURRENTLY with 31EO-EOP-014-2, SC/RR

B. RWCU line leak;

34AB-T22-003-2 is exited and 31EO-EOP-014-2, SC/RR is entered

C. dropped irradiated fuel bundle;

34AB-T22-003-2 is performed CONCURRENTLY with 31EO-EOP-014-2, SC/RR

D. dropped irradiated fuel bundle;

34AB-T22-003-2 is exited and 31EO-EOP-014-2, SC/RR is entered

93. 295038EA2.03 001

Unit 1 is operating at 100% power when the following events occur:

10:00 RCIC Steam line break occurs in the Rx. Bldg. with 1E51-F007 & F008, Isolation Valves, failing to close
10:01 Manual scram inserted and very few rods insert into the core
10:05 Attempts to start SLC pumps are unsuccessful
10:10 Drywell Radiation Monitors indicate 1,000 R/hr
10:15 Reactor Water Level is -165" and steady
10:20 Drywell pressure is 2.6 psig and slowly rising
10:25 Projected Dose at the Site Boundary is 1050 mrem TEDE and 3000 mrem CDE (thyroid)

Which ONE of the following is the EARLIEST listed time that sufficient plant conditions exist to provide enough information to declare a GENERAL Emergency, without basing the declaration on ED judgment?

Reference Provided

A. 10:10

B. ✔ 10:15

C. 10:20

D. 10:25

94. G2.1.44 001

Unit 1 is in REFUEL with core reload in progress.

The Control Room informs the Refueling SRO that the individual on the headset with them has to be relieved.

IAW 34FH-OPS-001-0, Fuel Movement Operation, which ONE of the choices below completes the following statements?

The individual who relieves the person in the Main Control Room _____ REQUIRED to have a NRC License.

The fuel movement prerequisites must be completed _____ .

A. is;
ONLY once during the refueling outage (prior to the initial fuel movement)

B. is NOT;
ONLY once during the refueling outage (prior to the initial fuel movement)

C. is;
at EACH shift change (12 hour shift) during fuel movement

D. is NOT;
at EACH shift change (12 hour shift) during fuel movement

95. G2.2.23 001

With **Unit 2** at 100%, considering the following sequence of events:

10:00	12/18/10	2A SLC Pump declared INOP
14:00	12/20/10	2B SLC Pump declared INOP
18:00	12/20/10	2A SLC Pump declared OPERABLE

IAW Tech Spec 1.3, Completion Times and LCO 3.1.7, Standby Liquid Control (SLC) System, which ONE of the following is the LATEST time to complete Required Action 3.1.7.B.1, WITHOUT being required to enter Condition 3.1.7.D?

Reference Provided

A. 10:00 12/25/10

B. 10:00 12/26/10

C. 14:00 12/27/10

D. 14:00 12/28/10

96. G2.2.5 001

A proposed plant modification must ALWAYS have prior approval from the NRC if it involves any _____ .

A. system that requires a 50.59 screening

B. change to any system included in Tech Specs

C. design basis limit for Primary Containment being altered

D. change to the Technical Requirements Manual (TRM) Bases

97. G2.3.12S 001

Unit 1 is in Hot Shutdown Mode to inspect the Drywell for leakage. Upon Drywell entry, it is identified that the INNER airlock door seal is no longer intact. A Required Action Statement (RAS) is written for the INNER airlock door.

IAW Tech Spec 3.6.1.2, "Primary Containment Airlock," which ONE of the following completes both statements?

While Maintenance is actively repairing the INNER Airlock door,
the OUTER Airlock door _____ .

If Unit 1 enters Cold Shutdown Mode, during repair activities,
the INNER Airlock door RAS _____ .

A. MUST be immediately closed after each entry and exit;
MUST remain active

B. CAN be left open while Maintenance workers are in the airlock;
MUST remain active

C. MUST be immediately closed after each entry and exit;
CAN be replaced with a Tracking RAS

D. CAN be left open while Maintenance workers are in the airlock;
CAN be replaced with a Tracking RAS

98. G2.3.15 001

Unit 2 is operating at 85% RTP when an event occurs requiring the Drywell to be vented using 2T48-F319 and 2T48-F320, Drywell Vent valves.

Drywell pressure is being maintained between 0.5 psig and 1.0 psig.

Which ONE of the following completes the statements concerning 2T48-F319 and 2T48-F320 and the TS Bases for 2D11-K621A & B, Drywell Radiation Monitors?

If 2D11-K621A & B, Drywell Radiation Monitors increase to 145 R/hr, 2T48-F319 and 2T48-F320 will _____ .

IAW TS Bases 3.3.6.1, the Drywell Radiation - High function, _____ .

A. close;

is NOT assumed in the U2 FSAR accident or transient analysis because the MSIV leakage path is MORE limiting.

B. close;

is assumed in the U2 FSAR accident or transient analysis because the MSIV leakage path is LESS limiting.

C. remain open;

is NOT assumed in the U2 FSAR accident or transient analysis because the MSIV leakage path is MORE limiting.

D. remain open;

is assumed in the U2 FSAR accident or transient analysis because the MSIV leakage path is LESS limiting.

99. G2.4.28 001

Security has just notified the control room that armed intruders have just penetrated the Protected Area and are headed towards the Service Building.

- o Both Units are manually scrammed
- o An Emergency has been declared IAW NMP-EP-110, Emergency Classification Determination

IAW 34AB-Y22-004-0, Credible Imminent Threat Of Attack On The Plant, which ONE of the following completes both statements?

A page announcement will be made to direct all TSC Emergency Responders to _____ .

An aggressive cooldown (60°F/hr to 100°F/hr) _____ required to be initiated.

A. report to their Emergency Response Facility immediately;
is

B. report to their Emergency Response Facility immediately;
is NOT

C. cease all activities and take cover in their immediate vicinity;
is NOT

D. cease all activities and take cover in their immediate vicinity;
is

100. G2.4.50 001

Unit 2 was operating at 100% RTP when a dual RFPT trip occurred resulting in the following conditions and alarms (partial list):

- o All Control Rods are Full In
- o Recirc pumps are operating at 61% speed

- o Recirc A (602-134) & Recirc B (602-234) Flow Limit alarms are ILLUMINATED
- o Reactor Vessel Water Level High/Low (603-141) is ILLUMINATED
- o Reactor Vessel Level 2 Div I Trip (603-205) is ILLUMINATED
- o Reactor Vessel Level 2 Div II Trip (603-206) is ILLUMINATED

Two (2) minutes later, the following alarms are as indicated:

- o Reactor Vessel Level 2 Div I Trip (603-205) is CLEAR
- o Reactor Vessel Level 2 Div II Trip (603-206) is CLEAR

Which ONE of the following completes both statements below?

IAW 602-134 & 602-234, the Recirc pumps are REQUIRED to be reduced to a FINAL speed of _____ .

Reactor water level control will be directed from _____ .

A. 33%;
31EO-EOP-015-2, CP-1 Alternate Level Control

B. 22%;
31EO-EOP-015-2, CP-1 Alternate Level Control

C. 33%;
31EO-EOP-010-2, "RC" (Non-ATWS) flow chart, RC/L path

D. 22%;
31EO-EOP-010-2, "RC" (Non-ATWS) flow chart, RC/L path

End of test