

U.S. Nuclear Regulatory Commission**Site-Specific RO Written Examination****Applicant Information**Name: **E. I. HATCH 2013-301 RO NRC EXAM MASTER EXAM**Date: September 19th, 2013

Facility/Unit: Plant E. I. Hatch

Region: I ☐ II ☒ III ☐ IV ☐Reactor Type: W ☐ CE ☐ BW ☐ GE ☒

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. Examination papers will be collected 6 hours after the examination begins.

Applicant Certification

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

Applicant's Signature**Results**

Examination Value _____ Points

Applicant's Score _____ Points

Applicant's Grade _____ Percent

ILT-08 RO NRC EXAM

1. 201003A2.09 001

UNIT 1 Reactor Startup is in progress with control rod 22-43 at position 12.

- o Reactor Pressure is 780 psig

A malfunction in the CRD system results in the following:

- o Charging Water Pressure is 890 psig
- o CRD ACCUMULATOR PRESS LOW OR LEVEL HIGH, (603-148)
- o HCU 22-43 local Accumulator pressure is 910 psig
- o Highest CRDM temperature is 240°F

IAW 34AB-C11-001, Loss of CRD System, the next REQUIRED action, and the BASES for the action, is to _____.

- A✓ immediately scram the reactor IAW 34AB-C71-001-1, Scram Procedure, because withdrawn control rods may fail to completely scram at lower reactor pressures
- B. immediately scram the reactor IAW 34AB-C71-001-1, Scram Procedure, because withdrawn control rods may experience slower scram times due to over heating
- C. restore charging water header pressure to ≥ 940 psig within 20 minutes because withdrawn control rods may fail to completely scram at lower reactor pressures
- D. restore charging water header pressure to ≥ 940 psig within 20 minutes because withdrawn control rods may experience slower scram times due to over heating

ILT-08 RO NRC EXAM

2. 203000K6.02 001

UNIT 2 is operating at RTP.

At 12:55 125V DC CABINET 2D, 2R25-S004 is deenergized and the following annunciators are actuated:

- o LOSS OF OFF SITE POWER, (652-102)
- o 4160V BUS 2E OR 600V BUS 2C DC OFF, (652-115)
- o BATTERY VOLTS LOW OR FUSE TROUBLE, (652-119)
- o BATTERY CHARGER MALFUNCTION, (652-120)

At 13:00 a LOCA on **UNIT 2** occurs.

At 13:02 ONLY the _____ RHR pumps will have automatically started and be available for LPCI injection.

- A. A and B
- B. A and D
- C✓ B and C
- D. C and D

ILT-08 RO NRC EXAM

3. 204000K1.15 001

UNIT 2 is at RTP with 2G31-C001A, "A" RWCU Pump in service.

At 12:00 the following annunciator illuminates:

o RWCU SYS LEAK, (602-421)

The above annunciator actuates when RWCU System differential flow exceeds the setpoint of _____ gpm.

At 12:01, the "A" RWCU Pump will _____ .

- A✓ 56;
have tripped
- B. 56;
continue operating
- C. 60;
have tripped
- D. 60;
continue operating

ILT-08 RO NRC EXAM

4. 205000K5.02 001

Unit 2 is shutdown with the "A" loop of RHR in Shutdown Cooling (SDC).

RWCU is in service controlling reactor water level.

The following occurs:

<u>Time</u>	<u>Event</u>
-------------	--------------

10:00	2G31-F033, RWCU Dump valve, fails open and cannot be closed
-------	---

10:35	RWL is two (2) inches AND 2G31-F033 is isolated
-------	---

10:40	An operator restores RWL to normal
-------	------------------------------------

At 10:40, with NO additional operator action, 2E11-F008, RHR SDC Suction valve, will _____ and the RHR pump will _____ .

A. have traveled close;
have tripped

B. have traveled close;
still be operating

C. remain open;
have tripped

D. remain open;
still be operating

ILT-08 RO NRC EXAM

5. 205000K5.03 001

Unit 1 is in Mode 4 with Shutdown Cooling in service.

The following conditions exist:

- o Recirculation Pumps.....Secured
- o RHR B Pump flow.....5500 gpm
- o All other RHR Pumps.....Standby

IAW 34SO-E11-010-1, "Residual Heat Removal System", which ONE of the following identifies the MINIMUM corrected reactor water level that must be maintained by the OATC?

- A. +32"
- B. +34"
- C. +42"
- D✓ +54"

ILT-08 RO NRC EXAM

6. 206000A1.08 001

Unit 2 is shutdown with HPCI operating in Pressure Control mode.

An event occurs causing CST level to start decreasing.

The leak is isolated with current CST level stable at 20 inches.

Five (5) minutes after CST level stabilizes at 20 inches, 2E41-F004, CST Suction valve, will _____ and HPCI will be operating _____ .

- A. have traveled closed;
in Pressure Control mode
- B. ☒ have traveled closed;
on Minimum Flow
- C. still be open;
in Pressure Control mode
- D. still be open;
on Minimum Flow

ILT-08 RO NRC EXAM

7. 209001K3.01 001

Following a Loss of Coolant Accident (LOCA) on **Unit 1** AND a loss of all RHR pumps.

Both Core Spray pumps and RHR Service Water (RHRSW) pump "1D" are operating to maintain reactor water level. The following plant conditions currently exist:

- o RPV level -65 inches and steady
- o Core Spray pump 1A flow 2100 gpm
- o Core Spray pump 1B flow 4200 gpm
- o RHRSW pump 1D flow 4000 gpm

Subsequently, "1E" 4160 VAC bus de-energizes.

Which ONE of the choices below completes the following statement?

After "1E" 4160 VAC bus de-energizes, RPV water level will start decreasing at a rate equivalent to a loss of approximately _____ gpm of injection flow.

- A✓ 2100
- B. 4200
- C. 6100
- D. 8200

ILT-08 RO NRC EXAM

8. 209001K3.03 001

Unit 2 was operating at 100% RTP when the following alarms are received:

- o 601-107, Core Spray Sys II Logic Power Failure, alarm, ILLUMINATED
- o 601-310, Core Spray Sys I Logic Power Failure, alarm, ILLUMINATED

Subsequently, a break inside the Drywell results in the following:

- o Drywell pressure 1.9 psig slowly rising
- o RWL -108 inches and steady
- o RHR pumps Running on minimum flow

Which ONE of the choices below completes the following statements?

The Emergency Diesel Generators _____ automatically start.

The Core Spray pumps _____ be manually started.

A. will NOT;
can NOT

B. ☒ will NOT;
can

C. will;
can NOT

D. will;
can

ILT-08 RO NRC EXAM

9. 211000K2.02 001

Unit 2 is at 100% power when a loss of a 600 VAC Motor Control Center (MCC) occurs.

The following equipment indications exist:

- o 2E11-F009, "RHR SDC Suction Vlv" Indication is available
- o 2E11-F015B, "RHR Inboard Injection Vlv" Indication is available

- o 2E21-F015B, "Core Spray Test Vlv" Indication is NOT available
- o RPS Alternate Power Available Light Indication is NOT available

With these indications,

If SBLC injection is required, _____ SLC pump will START and _____ SBLC squib valve(s) will fire.

- A✓ ONLY the "2A";
ONLY ONE

- B. ONLY the "2A";
BOTH

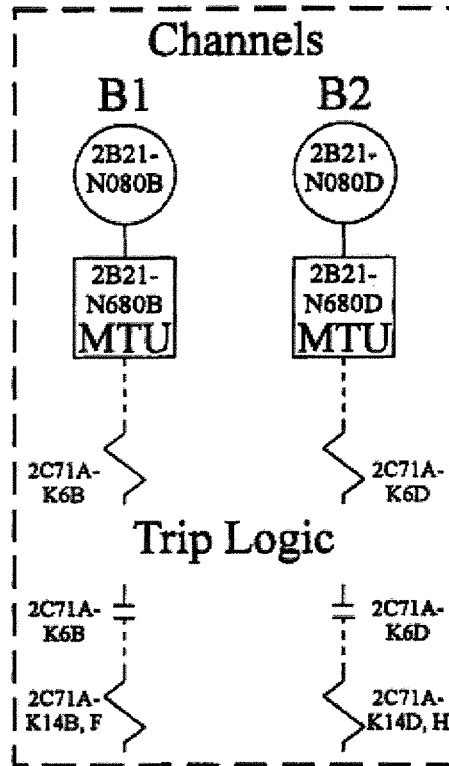
- C. ONLY the "2B";
ONLY ONE

- D. ONLY the "2B"
BOTH

10. 212000A3.02 001

Given the following plant conditions on **Unit 2**:

- o Reactor Water Level Narrow Range, 2B21-N080B, has failed downscale.



Which ONE of the following describes the Reactor Protection System (RPS) Response?

The 2C71A-K14B relay will be _____.

The solenoids for the Backup Scram Valves will be _____.

- A. Deenergized;
Energized
- B. ✓ Deenergized;
Deenergized
- C. Energized;
Energized
- D. Energized;
Deenergized

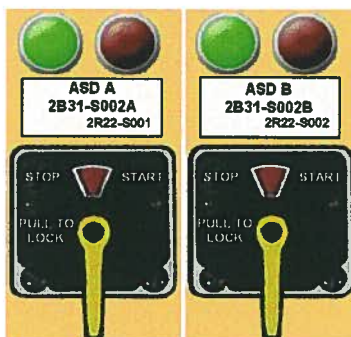
ILT-08 RO NRC EXAM

11. 212000A4.15 001

UNIT 2 is operating at 90% RTP when a transient occurs resulting in the following conditions:

- o Reactor Pressure is currently 930 psig (highest reached 1100 psig)
- o RWL is currently +37 inches (lowest reached -65 inches)

The following indications exist on 2H11-P602 panel:



NOTE: All green lights above are ILLUMINATED
All red lights above are EXTINGUISHED

With the above conditions,

The ASD A and B Input Breakers _____.

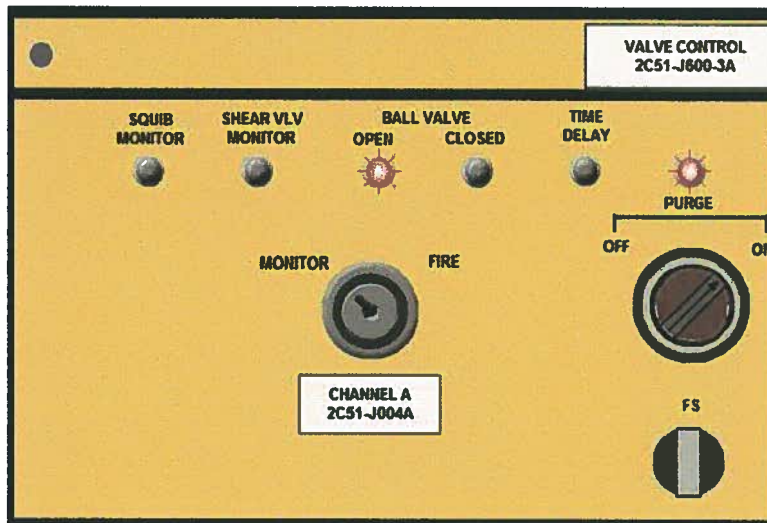
The risk of thermal stratification will be REDUCED by _____.

- A. responded as designed;
resetting the reactor scram
- B. responded as designed;
maximizing CRD flow
- C. did NOT respond as designed;
resetting the reactor scram
- D. did NOT respond as designed;
maximizing CRD flow

12. 215001A4.03 001

Unit 2 is operating at 100% RTP with the "A" Channel Transversing In-Core Probe (TIP) inserted in the core.

- o Steam is being discharged into Unit 2 Reactor Building
- o The steam is confirmed to be coming from the TIP room
- o A manual scram is inserted
- o RWL lowers to -20" before being restored to +9 inches
- o Five (5) minutes after a manual withdrawal command was initiated, the status of the "A" Channel TIP is indicated below:



Five (5) minutes after the manual withdrawal command was initiated, the EXPECTED location of the "A" TIP is in the _____ position, and

Based on the above conditions, the "A" TIP Shear valve _____ to be fired IAW 34AB-C71-001-2, Scram Procedure.

- A. In Shield;
is REQUIRED
- B. In Shield;
is NOT REQUIRED
- C. Indexer (Parked);
is REQUIRED
- D. Indexer (Parked);
is NOT REQUIRED

13. 215002G2.4.4 001

Unit 2 operating at 62% of RTP and performing a rod pattern adjustment.

The current step is to withdraw Control Rod (CR) 42-39 from position 28 to position 30.

After releasing the rod movement control switch the following indications exist:

- o 603-202, RBM UPSCALE OR INOPERATIVE
- o 603-238, ROD OUT BLOCK
- o Rod Withdraw Permissive light is EXTINGUISHED
- o CR 42-39 settles at position 34

With the above plant conditions, the operator is REQUIRED to enter _____.

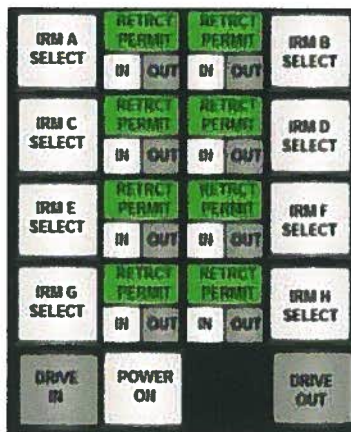
- A. 34AB-C71-001-2, Scram Procedure, and scram the reactor
- B. 34AB-C11-005-2, Control Rod Insertion Methods, and drive in CR 42-39 to position 02
- C. 34GO-OPS-065-0, Control Rod Movement, and immediately return CR 42-39 to its correct position
- D✓ 34AB-C11-004-2, Mispositioned Control Rods, and recover CR 42-39 per reactor engineering recommendations

14. 215003K4.05 001

Unit 2 is starting up with the following indications observed at 2H11-P603:

The following lights are ILLUMINATED:

- IRM A thru H - IN
- IRM A thru H - RETRACT PERMIT
- IRM A thru H - SELECT
- POWER ON



- o All Source Range Monitors (SRM) and Intermediate Range Monitors (IRM) were selected and driven in following a scram 3 days ago.

The "Drive Out" button is depressed for 15 seconds and then released with NO change occurring in these indications.

Based on the above conditions the MINIMUM action(s) required to withdraw the IRMs is to _____ .

- A. depress the "Drive Out" button an additional time
- B. ✓ depress the "Drive In" button, then depress the "Drive Out" button
- C. clear the "Retract Permit" light, then depress the "Drive Out" button
- D. depress the "Power On" button twice, then depress the "Drive Out" button

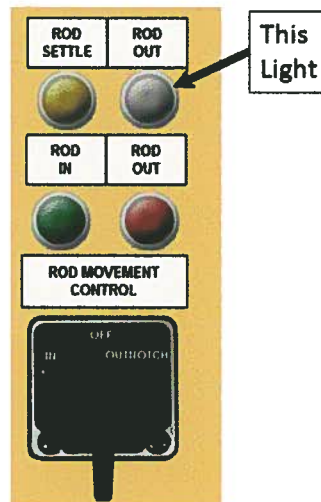
15. 215004K1.02 001

A Unit 2 reactor startup is in progress with the following indications:

- o All IRMs are indicating between 20/125 - 60/125 on Range 6

HIGHEST indicating SRMs:

- o SRM A 1.5×10^5 cps
- o SRM B 8.0×10^4 cps



With the above indications, the Reactor Manual Control "ROD OUT" light will be _____ due to _____ .

- A. EXTINGUISHED;
SRM A ONLY
- B. ☒ EXTINGUISHED;
BOTH SRM A and SRM B
- C. ILLUMINATED;
SRM A ONLY
- D. ILLUMINATED;
BOTH SRM A and SRM B

ILT-08 RO NRC EXAM

16. 215005A4.06 001

Which one of the following completes the statement below regarding the Power Range Neutron Monitoring System Operability?

IAW 34SV-C51-003-1, LPRM Operational Status, each APRM must have a MINIMUM of _____ Operable LPRMs, with AT LEAST _____ Operable LPRMs per axial level to be considered operable.

A. 14;

1

B. 14;

3

C. 17;

1

D✓ 17;

3

ILT-08 RO NRC EXAM

17. 217000K5.06 001

34SV-E51-002-2, RCIC Pump Operability Surveillance, is in progress on **Unit 2**.

The MINIMUM RCIC turbine speed required for prolonged operation which ensures adequate oil pressure for proper turbine governor operation is _____ rpm.

During RCIC pump operation, the Torus water temperature will increase at a rate of approximately _____ °F/hr.

- A. 3000;
3
- B. 3000;
30
- C. ✓ 2000;
3
- D. 2000;
30

18. 218000K3.01 001

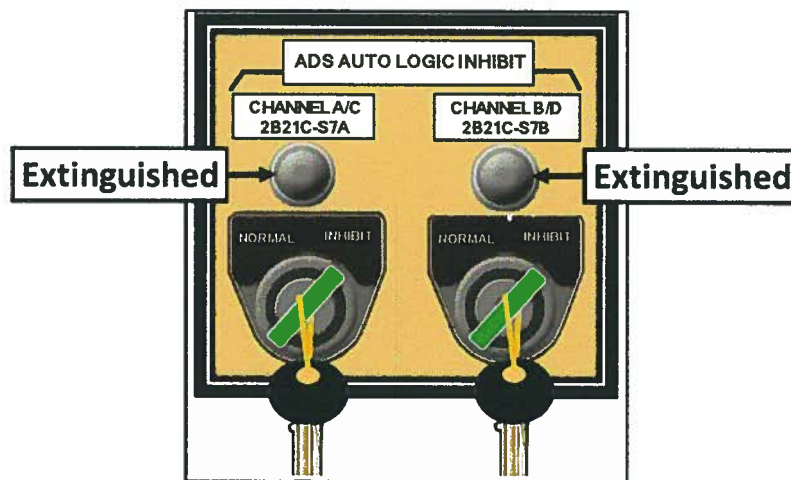
Unit 2 was at 100% RTP when the following occurred concurrently:

- o Loss of Coolant Accident (LOCA)
- o A complete Loss of Off Site Power (LOSP)

At 0800, the following conditions exist:

- o Reactor water level -95", DECREASING 2" per minute
- o Reactor pressure 900 psig, DECREASING 25 psig per minute
- o Drywell pressure 4.0 psig, slowly INCREASING

The following ADS panel indications concurrently exist:



Based on the above conditions and with NO additional operator actions, which ONE of the choices below completes the following statement?

At 0820, ONLY _____ will be injecting into the RPV.

- A. HPCI
- B. ✓ Core Spray and RHR
- C. HPCI and the Cond. Booster Pumps
- D. Core Spray, RHR and the Cond. Booster Pumps

19. 223001A3.05 001

Unit 2 experiences a transient from 100% RTP with SPDS out of service.

The following conditions occur:

- o HPCI Equipment Room Temp High is 155°F
- o RWL is +37 inches (lowest RWL reached +9 inches)
- o Drywell Pressure is 1.9 psig

Based on the above conditions, the _____ valves will AUTOMATICALLY isolate, and the associated valves can be verified isolated by monitoring indications on _____ .

- A✓ PCIV Group II;
2H11-P601 and P700 panels
- B. PCIV Group II;
ONLY 2H11-P601 panel
- C. PCIV Group III;
2H11-P601 and P700 panels
- D. PCIV Group III;
ONLY 2H11-P601 panel

ILT-08 RO NRC EXAM

20. 223002A2.11 001

Unit 2 Main Control Room has been evacuated.

Local SBLC injection is required due to an ATWS condition.

When initiating SBLC from outside the Control Room, _____ .

- A. 2G31-F001, RWCU Inboard Isolation, must be closed from the valve breaker on 2R24-S022, 250V D.C. MCC 2B-ESS DIV 1
- B. 2G31-F001, RWCU Inboard Isolation, will automatically close when a SBLC pump is started
- C✓ 2G31-F004, RWCU Outboard Isolation, must be closed from the valve breaker on 2R24-S022, 250V D.C. MCC 2B-ESS DIV 1
- D. 2G31-F004, RWCU Outboard Isolation, will automatically close when a SBLC pump is started

ILT-08 RO NRC EXAM

21. 226001K6.04 001

Unit 2 is operating at 100% RTP when the following annunciator is received:

- o 601-333, JOCKEY PUMP SYS A DISCH PRESS LOW
- o Jockey Pump System A discharge pressure is 45 psig

Based on the above conditions, a Core Spray Jockey Pump _____ receive an automatic start signal.

If this condition is NOT corrected, the potential exist to drain _____ of RHR Drywell Spray piping.

- A. will;
BOTH divisions
- B. ☒ will;
ONLY one (1) division
- C. will NOT;
BOTH divisions
- D. will NOT;
ONLY one (1) division

22. 233000K4.06 001

Unit 2 is in a refueling outage when a rupture of the Fuel Pool Cooling and Cleanup (FPCC) return line to the fuel pool occurs.

Which ONE of the following identifies the FPCC pump low suction pressure trip setpoint and a design feature which will minimize the inventory loss from the Fuel Pool?

- A. 8 psig;
The Anti-Siphon check valves on the return lines re-position
- B. 8 psig;
The Diffusers on the return lines become uncovered
- C. 18 psig;
The Anti-Siphon check valves on the return lines re-position
- D. 18 psig;
The Diffusers on the return lines become uncovered

ILT-08 RO NRC EXAM

23. 239001K5.05 001

Unit 2 is at 5% RTP with the Reactor Mode switch in STARTUP when the following annunciator is received:

- o 603-214, MAIN STEAM LINE FLOW A HIGH

The MINIMUM listed value that will cause 603-214, MAIN STEAM LINE FLOW A HIGH, alarm to be received is _____ .

The Main Steam Line High Flow isolation signal _____ bypassed in STARTUP.

- A. 170 psid;
is
- B.✓ 170 psid;
is NOT
- C. 137 psid;
is
- D. 137 psid;
is NOT

ILT-08 RO NRC EXAM

24. 239002K2.01 001

Which ONE of the following combinations are the power supplies to the **Unit 2** SRV solenoids?

- A✓ 2R25-S001, 125V DC CABINET 2A and 2R25-S002, 125V DC CABINET 2B
- B. 2R25-S002, 125V DC CABINET 2B and 2R25-S003, 125V DC CABINET 2C
- C. 2R25-S003, 125V DC CABINET 2C and 2R25-S004, 125V DC CABINET 2D
- D. 2R25-S004, 125V DC CABINET 2D and 2R25-S005, 125V DC CABINET 2E

25. 241000K3.03 001

Unit 2 is operating at 15% RTP with the Main Turbine in "Chest Warming".

Subsequently, throttle pressure transmitters malfunction causing all Main Turbine Bypass Valves to fully open.

When the Main Turbine Bypass Valves open, indicated Reactor Water Level will INITIALLY _____.

Selecting the "Close Valves" button on the Turbine HMI screen _____ CLOSE the Main Turbine Bypass valves.

- A. decrease;
will NOT
- B. decrease;
will
- C. ☒ increase;
will NOT
- D. increase;
will

ILT-08 RO NRC EXAM

26. 245000K4.10 001

Which ONE of the choices below completes the following statement?

During a main turbine trip, all extraction non-return (ENR) check valves supplying steam to the feedwater heaters will _____ and the 2N11-F004A&B, 2nd Stage MSR Reheat Steam Supply Valves, will _____ .

- A. remain open;
remain open
- B. remain open;
automatically close
- C. ☒ automatically close;
remain open
- D. automatically close;
automatically close

27. 259002A4.08 001

Unit 2 is at 50% power, performing a Startup.

- o Reactor Feed Pump Turbine (RFPT) "2B" is in service in automatic control

Due to intermittent problems with the "2A" RFPT M/A station, 2C32-R601A, Maintenance has taken 2C32-R601A to the maintenance shop for repair.

The Shift Supervisor directs placing the "2A" RFPT in service IAW 34SO-N21-007-2, "Condensate and Feedwater System", section 7.3.7, "RFPT Alternate Startup."

The reason that the "2A" RFPT speed will initially be stopped at 1000 RPM is to _____.

In this mode of operation, the Speed Setter switch can raise the "2A" RFPT speed to a MAXIMUM value of _____.

- A✓ allow oil temperature to increase;
5800 rpm
- B. allow oil temperature to increase;
3500 rpm
- C. verify proper operation of the trip circuit;
5800 rpm
- D. verify proper operation of the trip circuit;
3500 rpm

28. 261000A2.07 001

An electrical fault on **Unit 2** results in 2R25-S036, ESSENTIAL CABINET 2A, de-energizing.

The effect the loss of this bus will have on the **Unit 2** SBTG System is that 2T46- F001A, SBTG Filter Inlet & 2T46-F002A, SBTG Fan 2A Disch Dampers will fail _____ .

With regards to SBTG system the crew will enter _____ .

A✓ Open;

34AB-R25-002-2, Loss Of Instrument Buses, and manually start 2B SBTG fan

B. Open;

34AB-T22-003-2, Secondary Containment Control, and confirm automatic start of 2B SBTG System

C. Closed;

34AB-R25-002-2, Loss Of Instrument Buses, and manually start 2B SBTG fan

D. Closed;

34AB-T22-003-2, Secondary Containment Control, and confirm automatic start of 2B SBTG System

ILT-08 RO NRC EXAM

29. 261000K1.03 001

IAW 31EO-EOP-012-2, Primary Containment Control (PC Flow Chart), the MAXIMUM listed Suppression Pool Water Level that ALLOWS venting of the Suppression Chamber using the Standby Gas Treatment System is _____.

- A. 190 inches
- B. 210 inches
- C✓ 290 inches
- D. 340 inches

30. 262001K6.03 001

Unit 2 is operating at 100% RTP.

- o 4160 VAC 2E, 2R22-S005, is powered from Startup Auxiliary Transformer (SAT) 2C

Subsequently, GENERATOR PROTECTION CIRCUIT ENERGIZED, (651-206), annunciator is received.

Generator amps MUST be below a MAXIMUM of _____ in 2 minutes, or a Main Generator trip will occur.

If the Main Generator trips and with NO operator actions, the MAXIMUM number of Station Service Buses that will be ENERGIZED is _____ .

- A. 6,466 amps;
Four (4)
- B. 6,466 amps;
Zero (0)
- C. 20,232 amps;
Four (4)
- D✓ 20,232 amps;
Zero (0)

31. 262002G2.4.4 001

Unit 2 is operating at 90% RTP.

At 10:00, a loss of electrical power results in the following conditions: (this is a partial list)

- o Reactor power begins increasing at 0.2% per minute
- o Loss of rod position information system (RPIS)
- o Loss of RWL and RPV pressure recorders on 2H11-P603
- o Main Condenser vacuum is 27.5 in. Hg vac, lowering at 0.2 in. Hg vac per minute

At 10:02, maintenance is dispatched to investigate the electrical power loss.

At 10:04, with the above plant conditions, entry into _____, is REQUIRED.

- A. 34AB-R25-001-2, Loss of Vital AC, and 34AB-C71-001-2, SCRAM Procedure
- B. 34AB-R25-002-2, Loss of Instrument Buses, and 34AB-C71-001-2, SCRAM Procedure
- C✓ 34AB-R25-001-2, Loss of Vital AC, and 34AB-N21-001-2, Loss of Feedwater Heating
- D. 34AB-R25-002-2, Loss of Instrument Buses, and 34AB-N21-001-2, Loss of Feedwater Heating

ILT-08 RO NRC EXAM

32. 263000A3.01 001

The **Unit 2** Station Service Battery Charger amps can be monitored on Panel _____ .

If 600 VAC 2C, 2R23-S003, deenergizes, the associated 600 VAC supply breakers to the 125/250 VDC Station Service Battery Chargers _____ AUTOMATICALLY open.

- A. 2H11-P651;
will
- B. 2H11-P651;
will NOT
- C✓ 2H11-P655;
will
- D. 2H11-P655;
will NOT

33. 264000G2.2.42 001

Unit 2 is in MODE 2 with EDG 2A semi-annual surveillance in progress. The EDG 2A mode switch is in "TEST" and is paralleled to the bus.

The following conditions occur:

- o EDG 2A Lube Oil Temperature increases and peaks at 235°F
- o EDG 2A Jacket Coolant Temperature increases and peaks at 200°F
- o EDG 2A trips

EDG 2A received a trip signal from _____ .

IAW TS _____ REQUIRED to be operable for the current plant mode.

- A. Lube Oil Temperature;
ONLY one Unit 2 EDG is
- B. ☒ Lube Oil Temperature;
BOTH Unit 2 EDGs are
- C. Jacket Coolant Temperature;
ONLY one Unit 2 EDG is
- D. Jacket Coolant Temperature;
BOTH Unit 2 EDGs are

34. 268000A1.02 001

Unit 2 Radwaste is performing a discharge to the canal.

The Radwaste discharge to the canal _____ if dilution flow drops to 9,500 gpm AND if a specific discharge is terminated, _____ permissible with the existing permit.

- A. will automatically terminate;
NO restarts are
- B. ☒ will automatically terminate;
ONLY one (1) restart is
- C. must be manually terminated;
NO restarts are
- D. must be manually terminated;
ONLY one (1) restart is

35. 286000K2.02 001

An earthquake occurs resulting in the following plant conditions:

- o Fire header piping ruptures - lowest header pressure reached was 87 psig
- o 1E 4160 VAC Bus DEENERGIZES (cannot be restored)
- o 2F 4160 VAC Bus DEENERGIZES (cannot be restored)

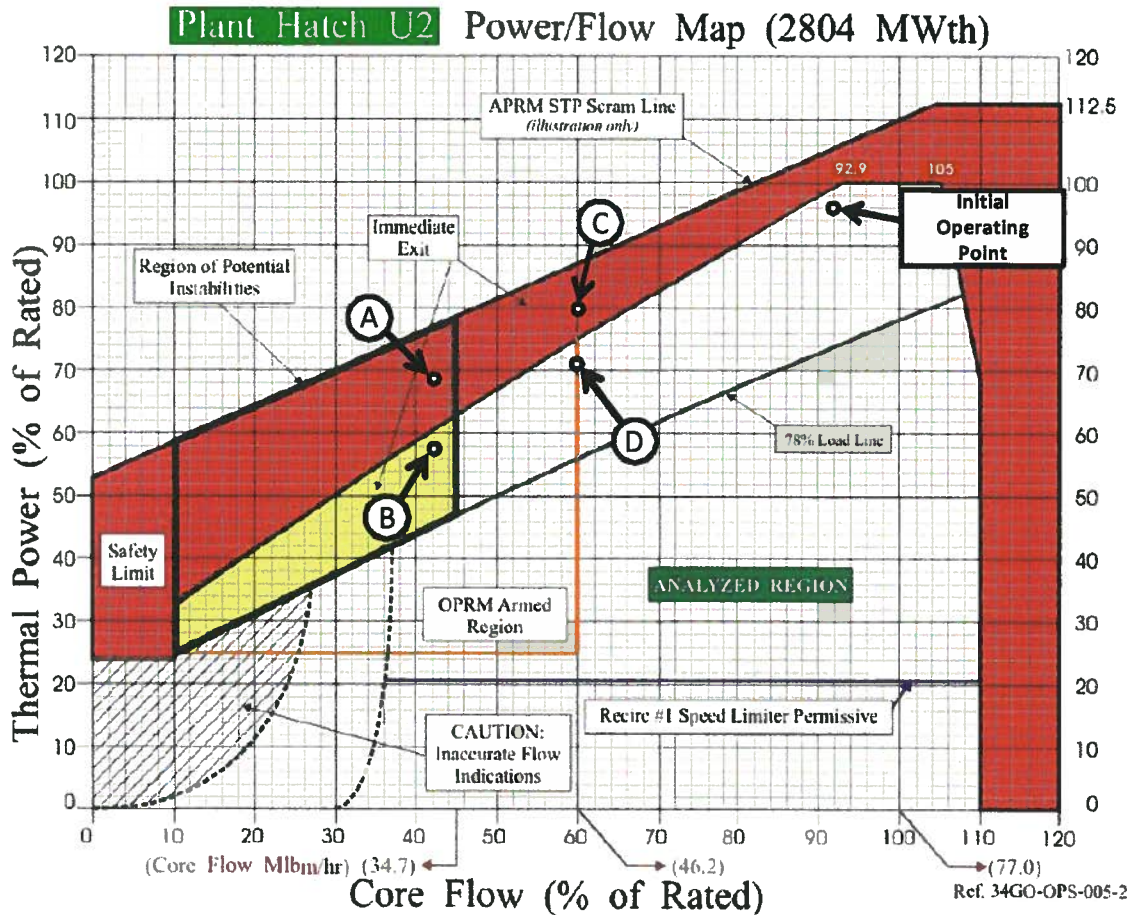
Assuming that this is the LOWEST pressure achieved, which ONE of the following predicts how the fire pumps respond?

- A. ONLY the electric fire pump starts
- B✓ ONLY the "A" and "B" diesel fire pumps start
- C. ONLY the electric fire pump and the "A" diesel fire pump starts
- D. BOTH the "A" and "B" diesel fire pumps and the electric fire pump starts

36. 295001AK2.06 001

Unit 2 is operating at 96% RTP with 92% Core Flow when a malfunction occurs resulting in the following conditions:

- o The "2A" Condensate Booster pump (CBP) trips
- o The "2A" Reactor Feedwater pump trips
- o +24 inches is the lowest Reactor Water Level during the transient



After the plant stabilizes and with NO operator action, the plant will be operating at approximately _____ on the Power To Flow Map above.

- A✓ Point A
- B. Point B
- C. Point C
- D. Point D

37. 295003AK1.02 001

Unit 2 RHR Loop "A" is in Suppression Pool Cooling mode.

At 12:00, A LOSS OF OFF SITE POWER occurs on Unit 2.

At 12:10, Plant conditions are:

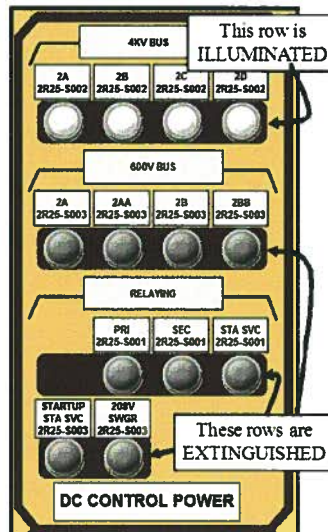
- o Emergency buses ENERGIZED
- o Reactor water level: -80 inches (stable)
- o RPV pressure: 980 PSIG
- o Drywell pressure: 1.9 PSIG (stable)

At 12:15, and with NO operator action, _____ .

- A. ALL RHR and RHRSW pumps will be off
- B✓ ALL RHR pumps will be running and ALL RHRSW pumps will be off
- C. ONLY the RHR and RHRSW pumps which were running prior to 12:00 will be running
- D. ONLY the RHR pumps which were running prior to 12:00 will be running and ALL RHRSW pumps will be off

38. 295004G2.1.7 001

Unit 2 is operating at 100% RTP when the following panel indications occur:



Subsequently,

- o Unit 2 Reactor is manually scrammed
- o Main turbine is manually tripped
- o Main Generator output breakers are opened
- o 4160 VAC Station Service Buses 2A-2D DEENERGIZED when the Main Generator output breakers were opened

For the above conditions:

4160 VAC Station Service Buses, 2A-2D, _____ respond as expected.

If needed for RWL control, _____ can be used for injection.

- A. did;
RCIC
- B. ✓ did;
HPCI
- C. did NOT;
RCIC
- D. did NOT;
HPCI

39. 295005AK3.02 001

Unit 2 is operating at the end of the current fuel cycle.

The function of the End Of Cycle Recirc Pump Trip (EOC-RPT) on a Main Turbine trip, is to provide additional margin to the _____.

The _____ used for determining the thermal power at which the EOC-RPT function is activated.

- A. Average Planar Linear Heat Generation Rate (APLHGR) Thermal limit;
APRMs are
- B. Average Planar Linear Heat Generation Rate (APLHGR) Thermal limit;
Main Turbine First Stage Pressure is
- C. Minimum Critical Power Ratio (MCPR) Safety limit;
APRMs are
- ☒ D. Minimum Critical Power Ratio (MCPR) Safety limit;
Main Turbine First Stage Pressure is

40. 295006AA1.01 001

Unit 1 is in a refueling outage.

- o Reactor Mode Switch position REFUEL
- o SRM Shorting Links INSTALLED

Subsequently, the following occurs:

- o 1C IRM fails upscale.

What is the expected status of the 1H11-P603 panel WHITE RPS Scram Group A and B lights?

RPS Scram Group A WHITE lights are expected to be _____ .

RPS Scram Group B WHITE lights are expected to be _____ .

- A. EXTINGUISHED;
EXTINGUISHED
- B. ☒ EXTINGUISHED;
ILLUMINATED
- C. ILLUMINATED;
EXTINGUISHED
- D. ILLUMINATED;
ILLUMINATED

ILT-08 RO NRC EXAM

41. 295009AK1.02 001

Unit 1 is at 35% RTP with the 1A RFPT in service, when a malfunction results in a reduction in Feedwater flow and a lowering RWL.

Speed Limiter #1 will FIRST be activated when _____ for at least 15 seconds and is designed to maintain _____ .

- A. RWL reduces to +20 inches;
NPSH for the Recirc Pumps
- B. RWL reduces to +20 inches;
Plant availability ONLY
- C✓ Total feedwater flow reduces to less than 20%;
NPSH for the Recirc Pumps
- D. Total feedwater flow reduces to less than 20%;
Plant availability ONLY

ILT-08 RO NRC EXAM

42. 295010AA2.06 001

Unit 2 was operating at 100% RTP when a leak occurred inside the drywell.

At 9:55, the reactor is shutdown.

At 10:00, the following conditions exist:

- o Bulk Average Drywell Temperature is 140°F, increasing at 5°F per minute
- o Drywell Pressure is 1.0 psig, increasing at 0.5 psig per minute

Given that the leak remains constant, the Primary Containment temperature and pressure rate of increase at 10:05, will be _____ the rate at 10:00.

At 10:05, IAW 34AB-T23-002-2, Small Pipe Break Inside Primary Containment, RPV water level corrections _____ REQUIRED to be performed.

- A. higher than;
are NOT
- B. ☒ higher than;
are
- C. the same as;
are NOT
- D. the same as;
are

43. 295012AK3.O1 001

Unit 2 is at 100% RTP when Drywell (DW) Temperature starts slowly increasing.

The following DW cooling fans are in STANDBY (ALL other DW cooling fans are operating with their control switches in RUN):

- o 2T47-B008B
- o 2T47-B009B

With the current DW cooling fan alignment, 2T47-B008B _____ be MANUALLY started to provide additional DW cooling.

Exceeding the Primary Containment Design Temperature of _____ may result in the degradation of the Primary Containment structure under accident loads.

- A. CAN;
281°F
- B. CAN;
340°F
- C. CAN NOT;
281°F
- D✓ CAN NOT;
340°F

ILT-08 RO NRC EXAM

44. 295013G2.4.18 001

Unit 1 is operating at 75% with the following conditions:

- o Safety Relief Valve (SRV) "G" is leaking
- o Torus temperature 102°F, and increasing slowly

The LOWEST Torus temperature which REQUIRES placing the Rx Mode Switch in Shutdown occurs at a Torus temperature of _____ .

The EOP bases for placing the Rx Mode Switch in Shutdown at this Torus temperature is _____ .

- A. 111°F;
to ensure the MINIMUM NPSH is maintained for RCIC and ECCS pumps taking a suction from the Torus
- B. ☒ 111°F;
because this value EXCEEDS the MAXIMUM allowed by Unit 1 Technical Specifications
- C. 121°F;
to ensure the MINIMUM NPSH is maintained for RCIC and ECCS pumps taking a suction from the Torus
- D. 121°F;
because this value EXCEEDS the MAXIMUM allowed by Unit 1 Technical Specifications

ILT-08 RO NRC EXAM

45. 295016AA2.07 001

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

Which ONE of the choices below completes the following statements?

Torus pressure can be determined using _____ .

IAW EOPs, if Unit 2 Torus pressure is determined to be 10.5 psig, _____ REQUIRED to be initiated from outside the Control Room.

- A. SPDS in the TSC;
BOTH Torus and Drywell Sprays are
- B. ☒ SPDS in the TSC;
ONLY Torus Spray is
- C. a permanently mounted gauge on the 87' level of the Reactor Building;
BOTH Torus and Drywell Sprays are
- D. a permanently mounted gauge on the 87' level of the Reactor Building;
ONLY Torus Spray is

ILT-08 RO NRC EXAM

46. 295017AA1.05 001

Unit 2 is operating at 65% RTP, currently shutting down due to suspected fuel leakers.

Subsequently, a steam leak occurs in the Turbine Building resulting in the following:

- o 10:00 - A Valid Group 1 Isolation signal is generated
NO Group 1 Isolation valves change position (Automatically nor Manually)
- o 10:12 - Offsite radioactivity release rate increases to 0.75 mR/hr

Which ONE of the choices below completes both statements?

At 10:12, the Offsite radioactivity release rate _____ above the entry condition of 31EO-EOP-014-2, RR - RADIOACTIVITY RELEASE CONTROL, EOP flowchart.

At 10:15, the PRIMARY Display on SPDS for the Group 1 Status Indicator box will have _____ BACKGROUND.

- A✓ is;
a RED
- B. is;
an ORANGE
- C. is NOT;
a RED
- D. is NOT;
an ORANGE

ILT-08 RO NRC EXAM

47. 295018AK3.06 001

Unit 2 is operating at 5% power with PSW/RBCCW Hx dP adjusted to 12 psid.

Subsequently, two (2) RBCCW pumps fail and will NOT run.

NOTE: 2P41-F491, PSW Outlet Valve From RBCCW Hx

With the two (2) RBCCW pumps failed, annunciator, HX PSW/RBCCW DIFF PRESS LOW, (650-238), _____ be ILLUMINATED.

To RETURN the PSW/RBCCW Hx dP to 12 psid, the SO will throttle 2P41-F491 in the _____ direction.

- A. will;
CLOSE
- B. will;
OPEN
- C. will NOT;
CLOSE
- D✓ will NOT;
OPEN

48. 295019AA2.02 001

Unit 1 is operating at 100% power.

- o ALL Nitrogen backup system valves to the Non-Interruptible Essential Air Header have been DANGER TAGGED in the closed position

Subsequently, the following occurs:

- o Unit 1 experiences a loss of all Unit 1 Station Service Air Compressors
- o The air cross-tie valve between Unit 1 and Unit 2 CANNOT be opened due to a bent stem.

Based on the current plant conditions, which ONE of the following identifies the FINAL MSIV position?

- A. The Inboard and Outboard MSIVs will remain OPEN.
- B. The Inboard and Outboard MSIVs will eventually drift CLOSED.
- C✓ The Inboard MSIVs will remain OPEN;
The Outboard MSIVs will eventually drift CLOSED.
- D. The Inboard MSIVs will eventually drift CLOSED;
The Outboard MSIVs will remain OPEN.

49. 295021G2.2.40 001

Unit 2 is shutdown with the following conditons:

- o Rx pressure 134 psig
- o 2A Rx Recirculation pump Running
- o 2B Rx Recirculation pump Off

Which ONE of the choices below completes BOTH the following statement?

IAW Tech Spec 3.4.7, "Residual Heat Removal (RHR) Shutdown Cooling System - Hot Shutdown" the MINIMUM number of RHR Shutdown Cooling (SDC) subsystems REQUIRED to be operable, (without requiring entry into a Required Action Statement) (RAS), is _____ .

Also, IAW with Tech Spec 3.4.7 and with current plant conditions, _____ RHR SDC subsystem is required to be in operation.

- A. one;
one
- B. one;
neither
- C. two;
one
- D✓ two;
neither

50. 295023AA2.03 001

Unit 2 is in a Forced Refueling outage due to several fuel leakers in the core.

The Refueling crew is removing a failed fuel bundle from the Unit 2 reactor to the Unit 1 Fuel Prep Machine (FPM).

The Bridge Operator is currently traveling in the Transfer Canal with one of the failed bundles in the normal Full Up position, when the Refueling Bridge becomes stuck in the Transfer Canal.

Maintenance is in the process of determining why the Refueling Bridge will NOT move.

Subsequently, the **Unit 2** Main Steam line plugs fail causing the Reactor Cavity and Fuel Pool water levels to decrease.

- o Releases from the exposed failed bundle results in increasing Radioactive Airborne contamination levels on the Refuel Floor.
- o Radiation levels on the Refuel Floor reach 1200 mr/hr

IAW 34AB-G41-002-2, Decreasing Rx Well/Fuel Pool Water Level, Health Physics is directed to establish a manned control point _____ of the Unit 2 Reactor Building.

When water level drops to the Main Steam lines, the fuel seated in the FUEL POOL RACKS will _____ .

- A. on the 203' elevation;
still be covered
- B. on the 203' elevation;
be uncovered
- C✓ outside;
still be covered
- D. outside;
be uncovered

51. 295024EA2.06 001

A steam line break inside the Drywell has occurred on **Unit 1**.

- o Drywell pressure is 15.5 psig and slowly increasing
- o Torus pressure is 14.1 psig and slowly increasing
- o Subsequently Drywell Sprays are placed in service at 4,300 gpm flow

The Torus water temperature will heat up _____ .

At this Drywell Spray flow rate, a uniform Drywell spray pattern _____ .

- A✓ uniformly throughout the Torus due to the design of the downcomers;
will NOT be guaranteed
- B. uniformly throughout the Torus due to the design of the downcomers;
will be guaranteed
- C. directly under the leak due to the energy being added directly to the Torus water in that area;
will NOT be guaranteed
- D. directly under the leak due to the energy being added directly to the Torus water in that area;
will be guaranteed

52. 295025G2.1.27 001

Which ONE of the choices below completes the following statements?

IAW TS 3.4.3, Safety/Relief Valves (S/RVs), the SRV Safety function requires a MINIMUM of _____ SRVs to be operable.

If reactor pressure peaks at 1300 psig, the Reactor Coolant System Safety Limit pressure _____ have been exceeded.

- A. 10;
will
- B. ☒ 10;
will NOT
- C. 5;
will
- D. 5;
will NOT

53. 295026EK3.04 001

An ATWS is in progress on **Unit 2** with 31EO-EOP-011-2, RCA RPV Control (ATWS), flowchart in progress.

Which ONE of the choices below completes the following statements?

IAW EOP definitions the reason SBLC is injected before exceeding the BIIT Curve (Graph 5) is to ensure that Hot Shutdown Boron Weight is injected before exceeding the _____ .

At 8% RTP, the HIGHEST listed Torus temperature at which operation on the BIIT Curve (Graph 5) will continue to be in the "SAFE" area is _____ .

Reference Provided

- A. Primary Containment Pressure Limit;
130°F
- B. Primary Containment Pressure Limit;
140°F;
- C. ✓ Heat Capacity Temperature Limit;
130°F
- D. Heat Capacity Temperature Limit;
140°F;

54. 295028EA1.03 001

Unit 2 was at 100% power when a small leak occurred inside the Drywell (DW).

The following conditions now exist:

- o Drywell Pressure: 2.2 psig
- o HIGHEST Drywell Temperature Point: 240°F

Which ONE of the choices below completes the following statement?

IAW 31EO-EOP-100-2, "Miscellaneous Emergency Overrides", the "2A" DW Chiller
_____.

- A. is NOT allowed to be restarted, because this DW temperature is above the allowed winding temperature for restart of the DW Cooling Fan Motors
- B. is NOT allowed to be restarted, because at this DW temperature the potential for a rupture in the DW coolers exist
- C✓ is allowed to be restarted. The operator must first place the LOCA override switch to "BYPASS" and then reset the 86 Lockout relay at the DW Chiller breaker
- D. is allowed to be restarted. The operator must first reset the 86 Lockout relay at the DW Chiller breaker and then place the LOCA override switch to "BYPASS"

55. 295030EK1.02 001

Unit 2 is operating at 100% power when a Loss of Coolant Accident occurs.

- o The High Pressure Coolant Injection system is being used to control RPV water level
- o The "2A" RHR pump is placed in Suppression Pool Cooling
- o "2A" RHR pump flow 7,000 gpm
- o Torus Level 135 inches
- o Torus Temperature 225°F
- o Torus Pressure 8 psig

Which ONE of the following choices completes this statement?

RHR pump 2A operation is in the _____ region of the RHR NPSH Limit graph and _____.

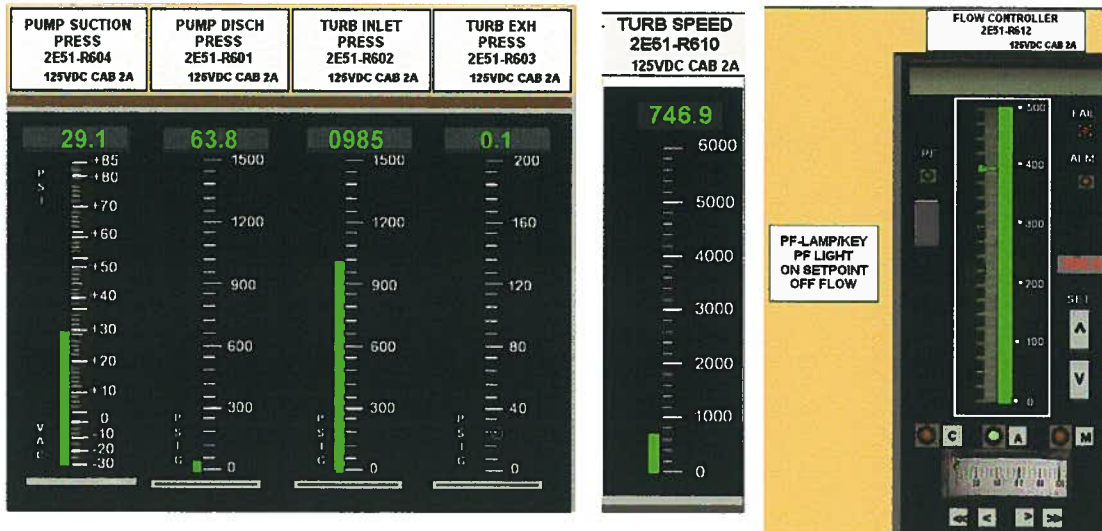
Reference Provided

- A. safe;
flow must be maintained at or below its current flow rate
- B. safe;
flow is required to be increased to maximize suppression pool cooling
- C. unsafe;
reducing flow will NOT restore operation to the safe area of the graph
- D✓ unsafe;
reducing flow to 5,000 gpm will restore operation to the safe area of the graph

56. 295031EA1.05 001

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

- o All normal Feedwater is lost
- o RWL is -50 inches



Based on the above indications, the RCIC flow controller should be _____.

- A. left in Automatic, and RCIC injection flow will start increasing reactor vessel level
- B. left in Automatic, but RCIC should be tripped because it is pumping 500 gpm through a feedwater line break
- C. ✓ placed in Manual, and the controller output should be increased until discharge pressure is greater than 985 psig
- D. placed in Manual, but the controller output should be decreased until RCIC flow is 400 gpm.

57. 295035EA1.01 001

Unit 2 is operating at 100% RTP when a Feedwater transient results in a full Secondary Containment isolation. The following Unit 2 indications currently exist:

- o SBGT 2A running
- o SBGT 2B running
- o 2T46-R604A, Rx Bldg. dP -0.75 inches H₂O
- o 2T46-R604B, Rx Bldg. dP -0.70 inches H₂O

Which ONE of the choices below completes the following statements?

IAW 34SO-T46-001-2 "Standby Gas Treatment System", the operator is REQUIRED to _____ to limit the release of radioactive material.

IAW 31EO-EOP-014-2, SC - Secondary Containment Control, RR - Radioactivity Release Control flowchart, an entry condition _____ exist.

- A. place one SBGT in standby;
does
- B. ✓ place one SBGT in standby;
does NOT
- C. operate both SBGTs;
does
- D. operate both SBGTs;
does NOT

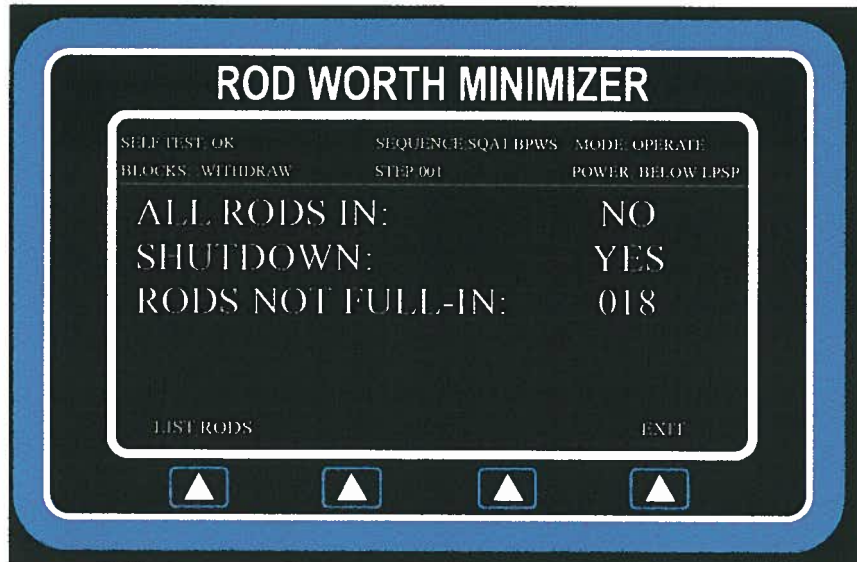
58. 295037EK2.12 001

Unit 1 was operating at 100% power when a reactor scram occurred.

IMMEDIATELY following the scram, the APRMs indicate reactor power is at 5%.

o Standby Liquid Control (SBLC) has NOT been injected.

10 minutes LATER Rod Worth Minimizer (RWM) displays the following:



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

IAW 31EO-EOP-103-1, "Control Rod Insertion Methods," RWM _____ REQUIRED to be bypassed to insert control rods.

With the current control rod configuration, the reactor _____ remain subcritical under ALL conditions, without boron injection.

- A. is;
will
- B. is;
will NOT
- C. is NOT;
will
- D. is NOT;
will NOT

ILT-08 RO NRC EXAM

59. 295038EK1.01 001

A core damaging event occurs on **Unit 1** which results in the release of radioactive IODINE to the public.

The part of the human body which is the most significantly impacted by the release of radioactive IODINE is the _____ .

The NPO will determine the Projected Offsite dose to the public using _____

- A. skin;
73EP-EIP-015-0, Offsite Dose Assessment
- B. skin;
73EP-EIP-018-0, Prompt Offsite Dose Assessment
- C. thyroid;
73EP-EIP-015-0, Offsite Dose Assessment
- D✓ thyroid;
73EP-EIP-018-0, Prompt Offsite Dose Assessment

ILT-08 RO NRC EXAM

60. 300000A2.O1 001

Unit 2 is operating at 15% RTP with Air Dryer, 2P52-D101B, DANGER Tagged out of service.

Subsequently, a malfunction with Air Dryer, 2P52-D101A, results in downstream air pressure slowly decreasing and stabilizing at 40 psig.

When the air pressure downstream of 2P52-D101A reaches 40 psig, _____ will have automatically CLOSED.

IAW 34AB-P51-001-2, Loss Of Instrument And Service Air System Or Water Intrusion Into The Service Air System, RWL will be controlled using the _____ .

A. 2P52-F015, Non-Essential Inst. Air Isolation Valve;

2N21-F111, S/U Level Control Valve

B✓ 2P52-F015, Non-Essential Inst. Air Isolation Valve;

2N21-F110, S/U Level Control Bypass Valve

C. 2P52-F565, Rx Bldg Inst N₂ To Non-Int Air El. 185 Isol Valve;

2N21-F111, S/U Level Control Valve

D. 2P52-F565, Rx Bldg Inst N₂ To Non-Int Air El. 185 Isol Valve;

2N21-F110, S/U Level Control Bypass Valve

61. 300000K1.03 001

Unit 2 is shutting down for a refueling outage.

- o Instrument Air has been aligned to the Drywell (DW)
- o At 10:00 a pneumatics header line breaks inside the DW causing an air flow rate of 50 SCFM

Which ONE of the following choices completes this statement?

The DW pneumatics header isolation valves associated with the broken header _____ automatically isolate _____ .

- A. will;
immediately
- B. ☒ will;
following a 10 minute delay
- C. will NOT;
because the Instrument Air flow is less than the DW Pneumatics isolation setpoint
- D. will NOT;
because the flow element is upstream of where the Instrument Air ties into the DW Pneumatics header

62. 400000A1.01 001

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

Subsequently, the following occurs:

- o 600VAC 2D Bus supply breaker trips due to a bus fault
- o Maintenance has NOT identified the location of the fault

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

Ten (10) minutes after the bus fault, RBCCW flow to the Drywell will be _____ before the 600VAC 2D Bus supply breaker tripped.

The operator will monitor RBCCW flow to the Drywell at Panel _____ .

- A. significantly lower than;
2H11-P602
- B. significantly lower than;
2H11-P650
- C. approximately the same as;
2H11-P602
- D✓ approximately the same as;
2H11-P650

63. 500000EK2.07 001

Unit 2 has experienced an accident that results in these Primary Containment parameters:

- o Drywell (DW) Hydrogen concentration 8%
- o DW Oxygen concentration 7%
- o DW pressure 24 psig and slowly increasing
- o Torus level 155 inches

With the above conditions and IAW 31EO-PCG-001-2, "Primary Containment Gas Control" chart:

The operator is required to vent the _____ the containment atmosphere using the _____ .

- A. DW to reduce the flammability of;
CAD Loop System two (2) inch valves
- B. DW to reduce the flammability of;
EMERGENCY Vent System eighteen (18) inch valves
- C✓ Torus to reduce the flammability and scrub;
CAD Loop System two (2) inch valves
- D. Torus to reduce the flammability and scrub;
EMERGENCY Vent System eighteen (18) inch valves

ILT-08 RO NRC EXAM

64. 600000AK1.01 001

An electrical fire is reported on **Unit 1** in the "1F" 4160 VAC bus.

The fire suppression that is available in this room is _____ .

- A. automatically actuated Carbon Dioxide agent
- B. automatically actuated Halon agent
- C. ☒ manually actuated Carbon Dioxide agent
- D. manually actuated Halon agent

65. 700000AK2.03 001

BOTH units are operating at 100% power when a grid disturbance occurs.

The following indications occur on 1S40-R600, 230 KV voltmeter, on panel 1H11-P653:

Time	1S40-R600
10:00	236 kV
10:05	236 kV
10:10	232 kV
10:15	224 kV

The NCC has notified the control room crews that 230 KV Bus voltage cannot be maintained above the normal minimum voltage.

IAW 34AB-S11-001-0, Operation With Degraded System Voltage, which ONE of the following is the EARLIEST time 230 kV Bus voltage is BELOW the normal minimum voltage AND a REQUIRED action for this voltage?

- A. 10:10;
Transfer Station Service Buses to their alternate supply.
- B. ☒ 10:10;
Initiate a one hour Required Action Statement
- C. 10:15;
Transfer Station Service Buses to their alternate supply
- D. 10:15;
Initiate a one hour Required Action Statement

66. G2.1.1 001

IAW NMP-OS-007, Conduct of Operations, EXCLUDING shift turnover walkdowns:

The Operator at the Controls (OATC) is required to walkdown the front Control Room panels a MINIMUM of every _____.

The walkdowns _____ required to be documented in the Unit Control Log.

- A✓ two (2) hours;
are
- B. two (2) hours;
are NOT
- C. one (1) hour;
are
- D. one (1) hour;
are NOT

67. 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 Nuclear Plant Operator In Training (NPOIT) can perform the LOCAL speed adjustment if _____ .

- A. a licensed Nuclear Plant Operator is present at the local ASD A Cabinet and communication with the Control Room is NOT required
- B. a licensed Nuclear Plant Operator is present at the local ASD A Cabinet and notifies the Control Room only after the speed adjustment has been made
- C. an active Senior Reactor Operator is present at the local ASD A Cabinet and notifies the Control Room only after the speed adjustment has been made
- D✓ an active Senior Reactor Operator is present at the local ASD A Cabinet and in constant communication with the Main Control Room

ILT-08 RO NRC EXAM

68. G2.1.20 001

IAW NMP-OS-007-001, Conduct of Operations Standards and Expectations, under normal, stable plant conditions, performing ARP steps out of order _____ .

- A. IS allowed with NO other NPO concurrence required
- B. IS allowed but ONLY after the concurrence of an additional NPO
- C✓ IS NOT allowed since ARP steps are to be performed in the sequence they are written
- D. IS NOT allowed since ALL procedures are to be performed in the sequence they are written

69. G2.2.21 001

Unit 1 is in day 20 of a 27 day planned Refueling outage.

Motor replacement is complete for 1E11-F007B, RHR Minimum Flow valve, and the operability surveillance is in progress.

IAW 34SV-E11-002-1, RHR Valve Operability,

To time 1E11-F007B OPEN, the NPO will START the stopwatch when the _____ .

When 1E11-F007B has traveled OPEN, the valve stem position indication _____
REQUIRED to be confirmed LOCALLY.

- A. ☒ control switch is placed to OPEN;
is
- B. control switch is placed to OPEN;
is NOT
- C. red light FIRST illuminates;
is
- D. red light FIRST illuminates;
is NOT;

70. G2.2.22 001

Unit 2 is operating at 90% power.

At 10:00:

- o Drywell (DW) pressure is 1.0 psig.
- o DW pressure begins going up at 0.05 psig/minute

IAW Tech Spec Limiting Condition for Operation (LCO) 3.6.1.4, Drywell Pressure, which ONE of the choices below completes the following statements?

With the above trend, the EARLIEST listed time that an entry into a Required Action Statement (RAS) for DW pressure is _____ .

DW pressure is required to be restored to within limit NO later than _____ from entering the RAS.

- A. 10:04;
15 minutes
- B. 10:04;
1 hour
- C. 10:16;
15 minutes
- D✓ 10:16;
1 hour

71. G2.2.36 001

Unit 2 is operating at 100% RTP in Type "A" Secondary Containment.

The following equipment has been inoperable for one day (RAS written):

- o SBT 2A - breaker will NOT reset

Which ONE of the following maintenance activities, if it resulted in tripping the feeder breaker to the MCC, would REQUIRE entry into an additional Tech Spec RAS for the SBT System?

Troubleshooting on the feeder breaker to _____ .

- A. Reactor Bldg MCC-2D, 2R24-S014
- B. Reactor Bldg MCC-2A, 2R24-S013
- C. ✓ Reactor Bldg MCC-2B, 2R24-S012
- D. Reactor Bldg MCC-2C, 2R24-S011

72. G2.3.11 001

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

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

- A. equipment operability ONLY;
Main Stack
- B. equipment operability ONLY;
Reactor Building Stack
- C. control of RB temperature and pressure;
Main Stack
- D✓ control of RB temperature and pressure;
Reactor Building Stack

73. G2.3.13 001

Unit 1 is shutting down for a refueling outage.

- o A normal "Initial" Drywell (DW) entry at power is required.

Which ONE of the choices below completes the following statement IAW 31GO-OPS-005-0, "Primary Containment Entry."

Before a normal "Initial" DW entry is allowed, Oxygen (O₂) concentration must be at least _____ and reactor power must be less than or equal to _____.

- A. 19.5%;
15%
- B✓ 19.5%;
10%
- C. 23.5%;
15%
- D. 23.5%;
10%

74. 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 2E is energized
- o Drywell pressure is currently 1.0 psig and rising 0.1 psig per minute
- o RWL is -5 inches slowly increasing

- o 34AB-R22-003-2, Station Blackout, in progress
- o 31EO-EOP-010-2, RC Flow Chart, in progress

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)

75. G2.4.5 001

A Fuel Handling accident on **Unit 1** results in a radioactive release.

The type of procedure that will provide the DETAILED guidance for notifying state and local agencies of the Fuel Handling accident release is _____ .

If a conflict exists between a Fleet procedure and a Site procedure, the governing guidance will come from the _____ procedure.

- A. NMP-EP, Nuclear Management Procedures for Emergency Preparedness;
Site
- B. ☒ NMP-EP, Nuclear Management Procedures for Emergency Preparedness;
Fleet
- C. NMP-RP, Nuclear Management Procedures for Radiation Protection;
Site
- D. NMP-RP, Nuclear Management Procedures for Radiation Protection;
Fleet

ILT-08 RO NRC EXAM

Answers

#	ID	0
1	201003A2.09 1	A
2	203000K6.02 1	C
3	204000K1.15 1	A
4	205000K5.02 1	A
5	205000K5.03 1	D
6	206000A1.08 1	B
7	209001K3.01 1	A
8	209001K3.03 1	B
9	211000K2.02 1	A
10	212000A3.02 1	B
11	212000A4.15 1	A
12	215001A4.03 1	A
13	215002G2.4.4 1	D
14	215003K4.05 1	B
15	215004K1.02 1	B
16	215005A4.06 1	D
17	217000K5.06 1	C
18	218000K3.01 1	B
19	223001A3.05 1	A
20	223002A2.11 1	C
21	226001K6.04 1	B
22	233000K4.06 1	A
23	239001K5.05 1	B
24	239002K2.01 1	A
25	241000K3.03 1	C
26	245000K4.10 1	C
27	259002A4.08 1	A
28	261000A2.07 1	A
29	261000K1.03 1	C
30	262001K6.03 1	D
31	262002G2.4.4 1	C
32	263000A3.01 1	C
33	264000G2.2.42 1	B
34	268000A1.02 1	B
35	286000K2.02 1	B
36	295001AK2.06 1	A
37	295003AK1.02 1	B
38	295004G2.1.7 1	B
39	295005AK3.02 1	D
40	295006AA1.01 1	B
41	295009AK1.02 1	C
42	295010AA2.06 1	B
43	295012AK3.O1 1	D
44	295013G2.4.18 1	B
45	295016AA2.07 1	B
46	295017AA1.05 1	A
47	295018AK3.06 1	D

Answers

#	ID	0
48	295019AA2.02 1	C
49	295021G2.2.40 1	D
50	295023AA2.03 1	C
51	295024EA2.06 1	A
52	295025G2.1.27 1	B
53	295026EK3.04 1	C
54	295028EA1.03 1	C
55	295030EK1.02 1	D
56	295031EA1.05 1	C
57	295035EA1.01 1	B
58	295037EK2.12 1	A
59	295038EK1.01 1	D
60	300000A2.O1 1	B
61	300000K1.03 1	B
62	400000A1.01 1	D
63	500000EK2.07 1	C
64	600000AK1.01 1	C
65	700000AK2.03 1	B
66	G2.1.1 1	A
67	G2.1.8 1	D
68	G2.1.20 1	C
69	G2.2.21 1	A
70	G2.2.22 1	D
71	G2.2.36 1	C
72	G2.3.11 1	D
73	G2.3.13 1	B
74	G2.4.16 1	A
75	G2.4.5 1	B
SECTION 1 (75 items)		75.00

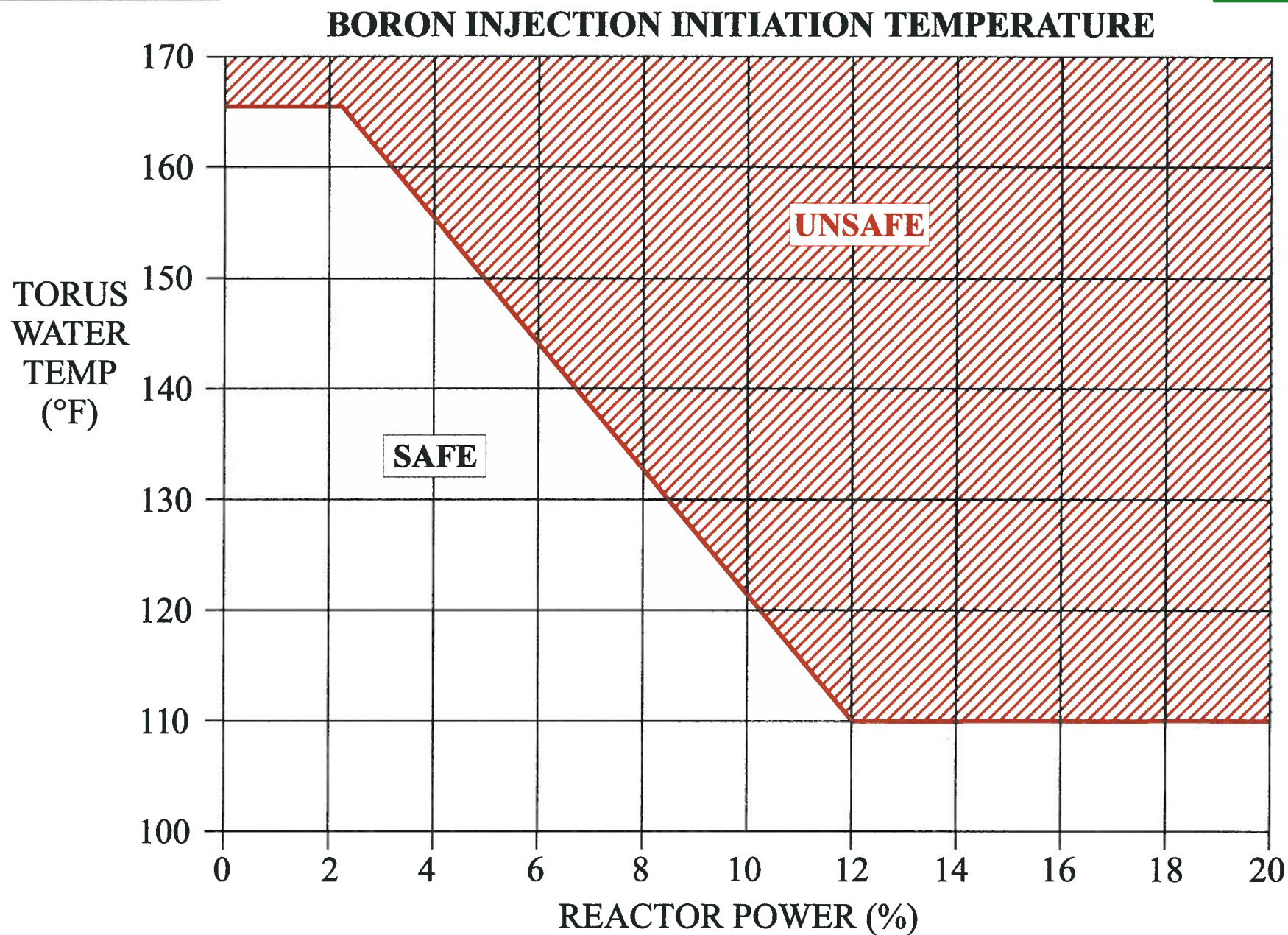
NRC RO REFERENCES

RO EXAM

- 1. Unit 2 EOP Graph 5, BIIT Curve***
- 2. Unit 2 EOP Graph 12A, RHR NPSH Limit, (Torus Water Level At or Above 146") & Unit 2 EOP Graph 12B, RHR NPSH Limit, (Torus Water Level Below 146")***

GRAPH 5

UNIT 2

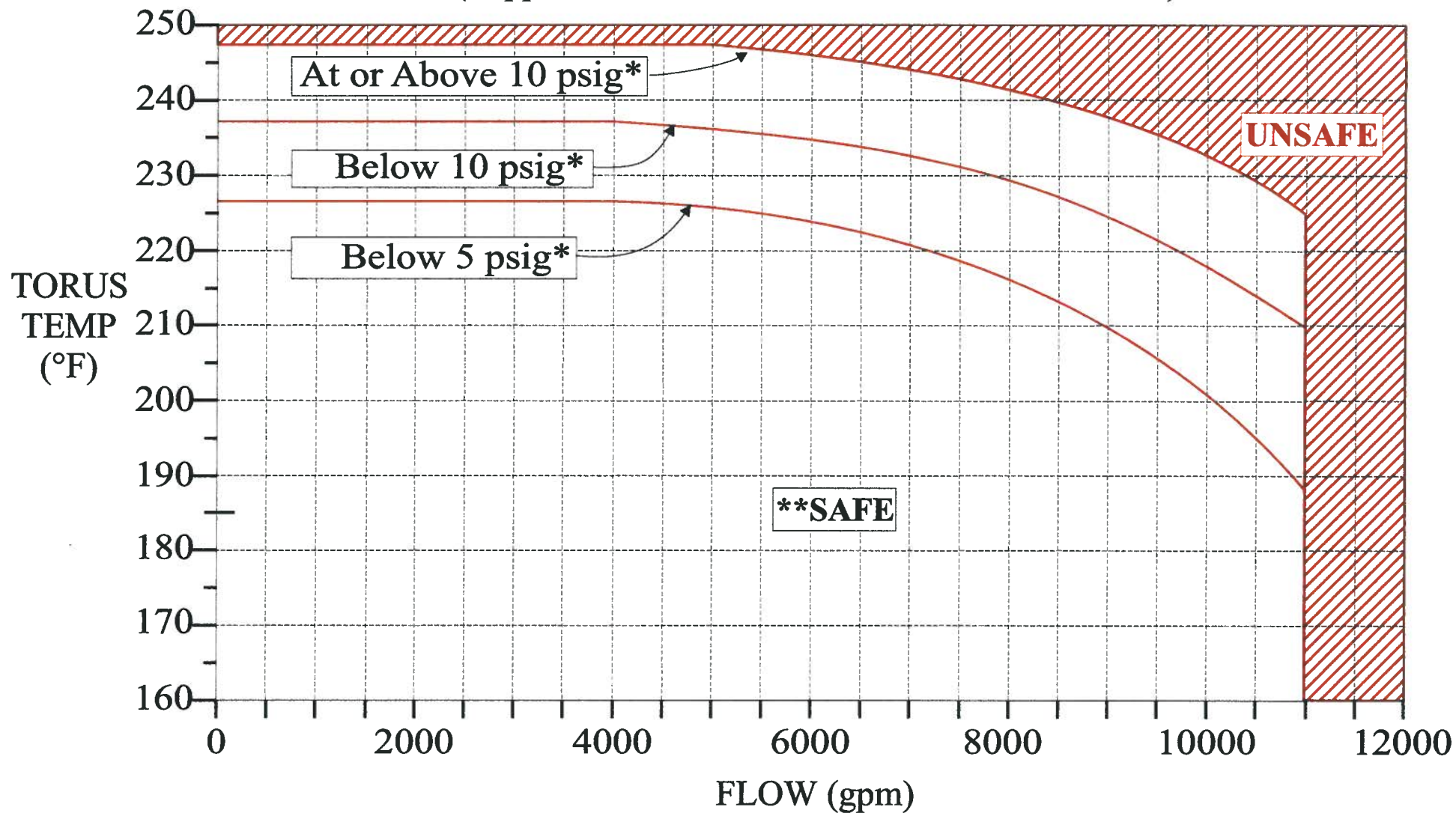


NOTE: May use SPDS Emergency Displays in place of this Graph.

GRAPH 12A

UNIT 2

RHR Pump NPSH Limit
(Suppression Pool Water Level At or Above 146")



NOTE: May use SPDS Emergency Displays in place of this Graph.

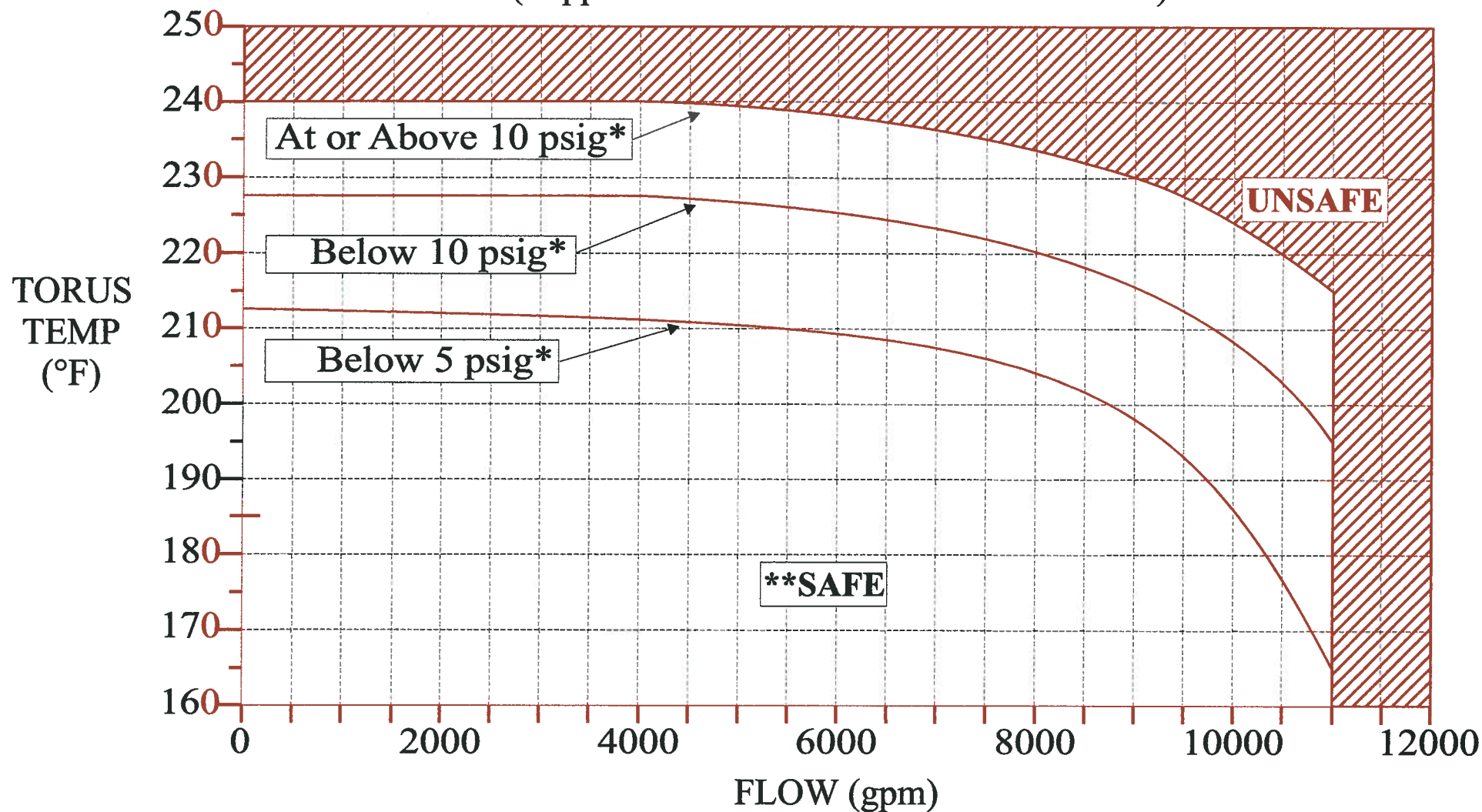
* Suppression Chamber Pressure.

** Safe operating region is below the applicable pressure line.

GRAPH 12B

UNIT 2

RHR Pump NPSH Limit
(Suppression Pool Water Level Below 146")



NOTE: May use SPDS Emergency Displays in place of this Graph.

* Suppression Chamber Pressure.

** Safe operating region is below the applicable pressure line.

HATCH 2013-301 ILT-08 RO NRC EXAM

Answers

#	ID	Points	0
1	201003A2.09 1	1.00	A
2	203000K6.02 1	1.00	C
3	204000K1.15 1	1.00	A
4	205000K5.02 1	1.00	A
5	205000K5.03 1	1.00	D
6	206000A1.08 1	1.00	B
7	209001K3.01 1	1.00	A
8	209001K3.03 1	1.00	B
9	211000K2.02 1	1.00	A
10	212000A3.02 1	1.00	B
11	212000A4.15 1	1.00	A
12	215001A4.03 1	1.00	A
13	215002G2.4.4 1	1.00	D
14	215003K4.05 1	1.00	B
15	215004K1.02 1	1.00	B
16	215005A4.06 1	1.00	D
17	217000K5.06 1	1.00	C
18	218000K3.01 1	1.00	B
19	223001A3.05 1	1.00	A
20	223002A2.11 1	1.00	C
21	226001K6.04 1	1.00	B
22	233000K4.06 1	1.00	A
23	239001K5.05 1	1.00	B
24	239002K2.01 1	1.00	A
25	241000K3.03 1	1.00	C
26	245000K4.10 1	1.00	C
27	259002A4.08 1	1.00	A
28	261000A2.07 1	1.00	A
29	261000K1.03 1	1.00	C
30	262001K6.03 1	1.00	D
31	262002G2.4.4 1	1.00	C
32	263000A3.01 1	1.00	C
33	264000G2.2.42 1	1.00	B
34	268000A1.02 1	1.00	B
35	286000K2.02 1	1.00	B
36	295001AK2.06 1	1.00	A
37	295003AK1.02 1	1.00	B
38	295004G2.1.7 1	1.00	B
39	295005AK3.02 1	1.00	D
40	295006AA1.01 1	1.00	B
41	295009AK1.02 1	1.00	C
42	295010AA2.06 1	1.00	B
43	295012AK3.01 1	1.00	D
44	295013G2.4.18 1	1.00	B
45	295016AA2.07 1	1.00	B
46	295017AA1.05 1	1.00	A
47	295018AK3.06 1	1.00	D

#	ID	Points	0
48	295019AA2.02 1	1.00	C
49	295021G2.2.40 1	1.00	D
50	295023AA2.03 1	1.00	C
51	295024EA2.06 1	1.00	A
52	295025G2.1.27 1	1.00	B
53	295026EK3.04 1	1.00	C
54	295028EA1.03 1	1.00	C
55	295030EK1.02 1	1.00	D
56	295031EA1.05 1	1.00	C
57	295035EA1.01 1	1.00	B
58	295037EK2.12 1	1.00	A
59	295038EK1.01 1	1.00	D
60	300000A2.O1 1	1.00	B
61	300000K1.03 1	1.00	B
62	400000A1.01 1	1.00	D
63	500000EK2.07 1	1.00	C
64	600000AK1.01 1	1.00	C
65	700000AK2.03 1	1.00	B
66	G2.1.1 1	1.00	A
67	G2.1.8 1	1.00	D
68	G2.1.20 1	1.00	C
69	G2.2.21 1	1.00	A
70	G2.2.22 1	1.00	D
71	G2.2.36 1	1.00	C
72	G2.3.11 1	1.00	D
73	G2.3.13 1	1.00	B
74	G2.4.16 1	1.00	A
75	G2.4.5 1	1.00	B
SECTION 1 (75 items)		75.00	