Draft Submittal
(Pink Paper)

1. Senior Reactor Operator Written Exam

TURKEY POINT
EXAM 2002-301

50-250, 50-251/2002-301
OCTOBER 7 - 11 & 15, 2002

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Written
Initial Submittal

1. 001AG2.4.11 2

Given the following conditions:

-Reactor Power is at 70% power and increasing slowly.
-Pressurizer Pressure is slowly increasing.
-Pressurizer Level is slowly increasing.
-RCS Tavg is increasing.
-Containment parameters are normal.

Which ONE of the following lists the event that is ocurring and the procedure required to mitigate that event.

A. A steam leak is in progress; 3-ONOP-100 "Fast Load Reduction."

B. A Control bank D continious rod withdrawl; 3-ONOP-28.1 "RCC Misalignment."

C. A Turbine runback is in progress; 3-ONOP-089 "Turbine Runback."

D. A Control bank D continious rod withdrawl; 3-ONOP-28.0 "Reactor Control System Malfunction."

LP-6902207 3/4-ONOP-28, 28.1,28.2,28.3 Rod Control system malfunctions, enabling objective # 2, and 4.
Modified from a Kewaunee bank question.

A. Incorrect, a steam leak would cause power to increase, Tavg to lower, pressureizer level and pressure to lower.

B. Incorrect, this is the correct event, but the correct procedure is 3-ONOP-28.0 "Reactor Control System Malfunction" is the correct procedure.

C. Incorrect, a turbine runback would cause power to decrease, Tavg to rise pressureizer level and pressure to rise, 3-ONOP-089 "Turbine Runback" is the correct procedure to enter for a turbine runback

D. Correct a control bank D continious rod withdrawl would cause these symptoms and 3-ONOP-28.0 "Reactor Control System Malfunction" is the correct procedure.

Distractor A changed from a 'turbine runback' to a 'steam leak' to make in more plausible (Chief Examiner comment).

Answer: D

2. 001K4.20 2

-A Plant startup has just been completed on Unit 3.
-The Turbine has been conected to the grid.
-Reactor Power is being increased to 25%.
-At approximately 20% power on the NI's Annunciator B 5/1 INTERM RANGE HI FLUX ROD STOP Illuminates.

Which ONE of the following is the probable reason for the B 5/1 annunciator alarming?

A. A failure of P-10 to automatically block the power range and intermediate range at power trips and blocks.

B. A failure of P-7 to automatically block the at power trips and blocks.

C. Failure of the operating crew to manually block P-10, the power range and intermediate range at power trips and blocks.

D. Failure of the operating crew to manually block P-7, the at power trips and blocks.

LP6902163 Reactor Protection and Safeguards Actuation System enabling objective # 3.

A. Incorrect, P-10 must be manually blocked.

B. Incorrect, P-7 is the low power permissive and has no effect on rod stops but does operate automatically.

C. Correct, P-10 must be manually blocked.

D. Incorrect P-7 does not block this, and is automatically actuated.

Added P-10 to distractor C and P-7 to distractor D. (Chief Examiner comment)

Answer: C

3. 003A2.02 1

The following events occurred while operating at 100% power:
- Annunciator F 1/1, RCP MOTOR/SHAFT HI VIB, alarmed.
- Recorder 369 indicated shaft vibration had increased to 15 mils on the B RCP.
- Recorder 369 indicated motor vibration was stable at 2 mils on the B RCP.
- An operator was dispatched to check the vibration indication in the cable spreading room and continue to monitor.

The decision was made to perform a rapid shutdown of the reactor and secure the B RCP. Reactor power is currectly 10% and decreasing.

The operator in the cable spreading room reports that the DANGER alarm for RCP vibration has just alarmed.

Which ONE of the following describes the actions to be taken in accordance with ONOP-041.1, REACTOR COOLANT PUMP OFF-NORMAL?

A. Immediately trip the reactor, verify reactor trip using the EOP network and then stop the B RCP and select MANUAL on pressurizer spray valve FCV-3-455A.

B. Immediately trip the B RCP, select MANUAL on pressurizer spray valve FCV-3-455A, and continue with the rapid shutdown.

C. Cross check the B RCP parameters. If other RCP parameters are within limits, continue B RCP operation. Continue with the rapid shutdown.

D. Immediately trip the B RCP and then trip reactor. Verify the reactor is tripped using the EOP network and select MANUAL on pressurizer spray valve FCV-3-455A.

Enabling Objective #3 and Performance Objective #10 from 3/4-ONOP-041.1 Lesson Plan.
Modified from TP questions 1.1.25.5.3.6,M; 1.1.26.20.5.9,M; 1.1.25.5.3.2,M; and 1.1.25.5.3.2,M

Reactor coolant pump trip criteria is met for the ONOP-041.1 fold out page as evidenced by the DANGER alarm in the cable spreading room, requiring the reactor to be tripped and the RCP secured.

DISTRACTOR ANALYSIS:
A: Correct
B: Incorrect, Reactor power is below the P-10 setpoint therefore the RCP could be secured without tripping the reactor, this is not IAW ONOP-041.1
C: Incorrect, This is correct if the RCP vibration is not at the RCP trip limits of ONOP-041.1 fold out page as indicated by the DANGER alarm.
D: Incorrect, incorrect sequence IAW the ONOP-041.1.

Answer: A
4. 003AK1.02 1

Unit 4 has experienced a dropped rod event and T_{avg} has stabilized 4 ^{o}F below T_{ref}.

Which ONE of the following methods is used to restore T_{avg} to within 3 ^{o}F of T_{ref} in accordance with ONOP-028.3, Dropped RCC.

A. Withdraw control rods in manual.

B. Dilute the RCS.

C. Reduce turbine load.

D. Increase turbine load.

Question Source: Turkey Point question bank Q# 1.1.25.7.4.17,M
Enabling Objective: EO#4

Distractor Analysis:
A: Incorrect, Caution prior to step 3 in ONOP-028.3 states not to use control rods for reactor power increase and temperature adjustment.
B: Incorrect, Caution prior to step 3 in ONOP-028.3 states not to dilute until shutdown margin calculation performed.
C: Correct, Step 3 RNO in ONOP-028.3 states reduce turbine load in order for power mismatch to decrease the Tavg/Tref temperature difference.
D: Incorrect, Turbine load increase would increase the power mismatch causing a larger temperature difference.

Answer: C

5. 004K1.10 1

-RCS is in solid plant condition.
-RHR is in service.
-Maintenance workers have broken the air line on HCV-142 "RHR HX OUTLET TO CVCS."

Which ONE of the following describes the correct initial response on the CVCS and RCS to this event.

A. Charging Flow rises, RCS pressure rises.

B. Letdown Flow rises, RCS pressure falls.

C. Charging Flow falls, RCS pressure falls.

D. Letdown Flow falls, RCS pressure rises.

LP-6902113 Chemical and Volume Control System, enabling objective # 6.

A. Incorrect, Initially charging flow will not change.

B. Incorrect, letdown flow will fall and RCS pressure will rise.

C. Incorrect charging flow will not fall initialy and RCS pressure will rise.

D. Correct, letdown flow will fall, and RCS pressure will rise.

Answer: D

6. 004K3.08 1

-Unit 3 is at 100% power operating normally.
-Pressurizer level, charging flow control, and letdown are in automatic.

Which ONE of the following describes the system correct response if the controlling pressurizer level channel failed low. (Assume no operator response)

A. Total seal injection flow decreases, charging flow increases and letdown flow remains the same.

B. Charging flow increases, letdown increases, and total seal injection flow remains the same.

C. Total seal injection flow increases, charging flow decreases and letdown flow decreases.

D. Charging flow decreases, letdown flow decreases, and total seal injection flow remains the same.

LP-6902113 Chemical and Volume Control System, enabling objective # 6.

A. Correct, if the controlling pressurizer level transmitter fail low, a signal will be sent to increase charging flow, this will cause a decrease in seal injection flow, letdown will not change.

B. Incorrect, Charging flow will increase, but letdown will remain the same and seal injection will decrease.

C. Incorrect, total seal injection will decrease, charging flow will increase, and letdown will remain the same.

D. Incorrect, charging flow will increase, letdown will remain the same and seal injection will decrease.

Answer: A

7. 005AA1.05 1

-Unit 3 was at 98% Power.
-Bank D rods were in auto at 219 steps on the group demand counter.
-A transient occurs on Unit 3 that required automatic rod insertion.
-The Unit is now at 91% Power.
-Bank D rods indicate 180 steps on the group demand counter.
-Control rod H8 indicates 210 steps on IRPI.

Which ONE of the following describes the actions to be taken IAW 3-ONOP-028 "Rod Control System Malfunction" for these conditions ?

A. Place Rods in manual; align remaining Bank Delta Rods to within 18 steps; maintain T_{ave} equal to T_{ref} using boration or dilution only.

B. Place Rods in manual; do not withdraw any control banks until the RCC has been realigned; maintain T_{ave} equal to T_{ref} by adjusting turbine load, or by boration/dilution.

C. Place rods in individual bank select "D" and adjust Bank D rods to within 12 steps of rod H8, maintain T_{ave} equal to T_{ref} by boration/dilution, or adjusting turbine load.

D. Place rods in individual bank select "D" and adjust Bank D rods to within 18 steps of rod H8, maintain T_{ave} equal to T_{ref} by adjusting turbine load only.

New question developed from Lesson Plan 6902207, enabling objective # 4.

A. Incorrect, according to the procedure ONOP-028, rods should be place in manual, but the remaining bank D rods should not be withdrawn unitl the RCC has been realined, and Tave should be controlled using Boration/dilution or Turbine load control.

B. Correct, Rods should be placed in manual, control banks are not to be withdrawn, and tave should be maintainrd equal to Tref by using Boration/dilution or Turbine load control.

C. Incorrect, rods should be placed in manual, not individual bank select, bank D rods should not be withdrawn until the RCC can be realigned.

D. Incorrect, rods should be placed in manual, not individual bank select, bank D rods should not be withdrawn until the RCC can be realigned, and Tave can be controlled by boration/dilution or adjusting turbine load.

Answer: B

8. 006K4.14 2

During the recirculation phase of ECCS operation following a Large Break LOCA on Unit 3, adequate RHR flow can not be verified.

Which ONE of the following actions should be taken?

One HHSI pump is used with suction taken from the:

A. same suction source as the RHR pumps, from the normal loop C hot leg suction.

B. discharge of the RHR pump. The RHR pump will take suction from the normal loop C hot leg suction.

C. same suction source as the RHR pump, from the containment recirculation sumps.

D. discharge of the RHR pump. The RHR pumps will take its suction from the containment recirculation sumps.

Question Source: Turkey Point 2000 NRC Exam
Enabling Objective EO#5 of Lesson Plan LP6902121

Distractor Analysis:

A: Incorrect, The suction of the RHR pumps are not used as the suction source for the HHSI pumps and the suction of the RHR pumps will be the sump.
B: Incorrect, Suction of the RHR pumps will be the sump.
C: Incorrect, The suction of the RHR pumps are not used as the suction source for the HHSI pumps.
D: Correct, SD-021, Emergency Core Cooling Systems, and ES-1.3 steps 17-23.

Distractors A and C wording changed to clarify plausibility of the distractors (Chief Examiner comment).

Answer: D

9. 007EK3.01 1

Unit 3 is at 100% power. Annunciator C 4/1, SG A FEED>STEAM, has just alarmed. The Operator determines that the 3A feedwater control valve, FCV-3478, has failed full open.

The reactor operator's efforts to control the valve in manual are unsuccessful as evidenced by the following annuciators alarming in rapid succession:

- C 6/1, SG A LEVEL DEVIATION
- C 2/1, SG NARROW RANGE HI LEVEL

Which ONE of the following describes the correct operator response to this situation?

A. After the reactor automatically trips, isolate AFW to the 3A steam generator and transition to E-0, REACTOR TRIP OR SAFETY INJECTION.

B. Close the 3A feedwater isolation valve, MOV-3-1407, and throttle open the 3A blowdown flow control valve, FCV-3-6278A, to minimize the rate of steam generator level increase.

C. Trip the reactor manually prior to the steam generator level reaching 80% narrow range. Perform the IMMEDIATE operator actions of E-0.

D. Close the 3A MSIV, POV-3-2604, and MSIV bypass valve, MOV-3-1400, to prevent carryover to the main turbine. Trip the reactor and perform the IMMEDIATE actions of E-0.

Enabling Objective EO#6 from Conduct of Operations Admin procedure lesson plan. Question used on Turkey Point 1997 NRC Exam.

Conduct of Operations procedure 0-ADM-200 steps 3.7.4, 5.1.9 and 5.6.11.5 state that "If plant conditions are beyond the control of the operators and a trip setpoint is being appraoched, the operator should initiate a manual reactor trip prior to the automatic trip setpoint being reached.

DISTRACTOR ANALYSIS:
A. Incorrect, Operators should not wait until the automatic trip has occurred.
B. Incorrect, Closing the feedwater isolation valve at 100% reactor power would cause loss of level in the S/G resulting in an automatic trip of the reactor.
C. Correct, Turbine trips at 80% S/G level which will result in a reactor trip.
D. Incorrect, Closing the MSIV at 100% reactor power will result in a reactor trip.

Answer: C

10. 008AK2.01 1

-Unit 3 is at 100% power.
-The suply breaker to MCC-3C has tripped.
-A malfunction occurs that causes PCV-456 to open.
-The RCO placed the PORV control switch to close, but the valve failed to close.

Which ONE of the following action(s) would mitigate this event?

A. Close MOV-3-536, continue to monitor RCS pressure.

B. Trip the reactor and enter 3-EOP-E-0, MOV-3-536 has lost power and will not operate.

C. Close MOV-3-535, continue to monitor RCS pressure.

D. Trip the reactor and enter 3-EOP-E-0, MOV-3-535 has lost power and will not operate.

LP 6902204 enabling obbjective # 1 and 4.
LP 6902109 enabling objective # 5.

A. Incorrect, PCV-456 is open, its block valve is MOV-3-535.

B. Incorrect, MOV-3-536 has lost its power supply, however it is not the valve that is open.

C. Correct, Closing MOV-3-535 would mitigate the event, and it is still powered.

D. Inorrect, MOV-3-535 still has power,and should be closed to mitigate the event.

Answer: C

11. 009EA1.12 1

-Unit 3 is experiencing RCS Leakage.
-Reactor Power is at 8% just after a start-up.
-RCS Tavg is 543 degrees F, and slowly lowering.
-Pressurizer Pressure is 1825 psig, and slowly lowering.
-All steam generator pressures are at 985 psig and stable.
-Containment Pressure is at 5 psig and rising slowly.

Which ONE of the following AUTOMATIC actions should have occured?

A. Reactor trip based on OP delta T.

B. Reactor Trip and Safety Injection based on containment pressure.

C. Reactor Trip based on RCS Pressure.

D. Reactor Trip and Safety Injection based on High Steam flow with low Tave.

Modified from 1994 Farley NRC exam.
SD-063/(SYS.049,063), Reactor Protection and Safeguards System components, enabling objective # 6.

A. Incorrect, power is two low for OP delta T to reach its setpoint at this pressure.

B. Correct, The setpoint for containment pressure is 4 psig the unit should have had a reactor trip and SI.

C. Incorrect, when less that P-7 (10%) pressurizer low pressure will not trip the reactor.

D. Incorrect, Although Tave is at 543 degrees F, at this power level and the steam pressure that is listed, steam flow would not be enough to cause a Reactor Trip and SI.

Answer: B

12. 010K3.03 1

Unit 4 is at 20% power when the following events occur:

- PT-4-444 (Pressurizer Pressure Control Channel) fails high.
- Unit 4 RCO attempts manual closure of the failed PORV using manual control of PC-4-444J (master pressurizer pressure controller) but is unsuccessful.
- Unit 4 RCO attempts to close both PORV block valves MOV-4-535 (for PCV-4-456) and MOV-4-536 (for PCV-4-455C)
- MOV-4-535 fails to close due to breaker failure.
- MOV-4-536 successfully closes when RCS pressure is 2050 psig.

No other operator actions are taken.

Which ONE of the following describes the consequences of the actions taken by the Unit 4 RCO?

A. A Loss of coolant accident will result due to the events above.

B. Reactor trip and safety injection will result from the events above.

C. Closing the block valve MOV-4-536 stopped the pressure decrease and allowing the plant to maintain on line.

D. The reactor should have been tripped at the time MOV-4-536 closed. However, pressure will recover quickly.

Enabling Objective EO #3 from ONOP-041.5, Pressurizer Pressure Control Malfunction Lesson Plan
Question source is Turkey Point 1998 NRC Exam

DISTRACTOR ANALYSIS:
A: Incorrect, If MOV-4-536 failed to close a LOCA would result, but not correct because MOV-4-536 isolated the open PORV.
B: Correct
C: Incorrect, MOV-4-536 isolated the open PORV, but not correct because open spray valves will cause a reactor trip.
D: Incorrect, The reactor trip ODI setpoint is 2000 psig, but not correct because open spray valves will cause a reactor trip.

Answer: B

13. 011A3.03 2

-Unit 4 is at 8% power starting up after a refueling outage.
-The controlling pressurizer level channel fails high.

Which ONE of the following describes the response of the plant if no operator actions are taken?

A. Backup heaters energize, Pressurizer level increases, Letdown remains in service, a reactor trip will occur on High Pressurizer Pressure.

B. Charging flow goes to minimum, Pressurizer level decreases, Letdown isolates, a reacctor trip occurs on High Pressurizer Pressure.

C. Backup heaters energize, Pressurizer level increases, Letdown remains in service, a reactor trip will occur on High Pressurizer Level.

D. Charging flow goes to minimum, Pressurizer level decreases, Letdown isolates, a reacctor trip occurs on High Pressurizer Level.

Modified from a bank question 1.1.24.9.6.33,M
LP-6900254 enabling objective # 2.

A. Incorrect, charging flow will go to minimum if pressurizer level is high, letdown will isolate.

B. Correct, charging flow will go to minimum, pressurizer level will decrease, letdown will isolate, and a reactor trip will occur on High Pressurizer pressure.(needs to be verified by utility.)

C. Incorrect, charging flow goes to minimum and letdown will isolate, and < P-7 a reactor trip from high level will not occur.

D. Incorrect, a reactor trip will not occur due to pressurizer level < P-7.
Distractors A and C changed from 'Charging flow goes to maximum' to 'Backup heaters energized' to make distractors more plausible (Chief Examiner comment).

Answer: B

14. 011EK3.05 1

-A Large Break LOCA has Occured on Unit 3.
-Safety injection is in progress.

Which ONE of the following describes the location and basis for injecting borated water into the RCS?

A. Water is injected into the Hot and Cold legs simultaneously to prevent boron percipitation.

B. Water is injected into the Cold legs to quickly recover the exposed fuel rods and limit possible core damage.

C. Water is injected into the Hot and Cold legs simultaneously to increase total flow rate.

D. Water is injected into the Hot legs to prepare for transfer to reciculation flow prior to RWSTdepletion.

Modified Question from 1992 North Anna Exam.
Turkey Point LP-6902121 ECCS, enabling objective # 3.

A. Incorrect, Water is injected to the Hot and Cold legs only during Hot leg recirculation.

B. Correct, Water is injected into the cold legs during the injection phase of a LBLOCA to quickly recover the exposed fuel rods and limit possible core damage.

C. Incorrect, Water is not injected to hot and cold legs during the injection phase of a LBLOCA.

D. Incorrect, Water is not injected to the hot legs during the injection phase of a LBLOCA.

Answer: B

15. 012K5.01 1

Which ONE of the following Reactor Protection System trips provides protection against DNB accidents?

A. Power Range high nuclear power high.

B. Steam generator low level - Steam flow/Feedwater flow.

C. Overtemperature delta T.

D. Overpower delta T.

Question source: Braidwood 2000 NRC Exam

DISTRACTOR ANALYSIS:
A: Incorrect, Protects against power excursions.
B: Incorrect, Protects against sudden loss of heat sink.
C: Correct
D: Incorrect, Protection from power density.

Answer: C

16. 013K5.01 1

Unit 3 is in Mode 1 and Unit 4 is in Mode 4. The '4A' EDG has been declared inoperable.

Which ONE of the following identifies the minimum HHSI pumps that are required to be operable to ensure Safety Train availability in accordance with Technical Specifications without relying on an action statement?

A. Both the '3A' and '3B' HHSI pumps, and either the '4A' or '4B' HHSI pump.

B. Both the '3A' and '3B' HHSI pumps.

C. All 4 HHSI pumps.

D. Both the '3A' and '3B' HHSI pumps, and the '4B' HHSI pump.

Question source: Turkey Point requal test bank 69025250101-ORQ; ORQ#101

Distractor analysis:
A: Incorrect, 4A HHSI pump is not an option since it's EDG is not operable, although inoperability of the EDG does not make the associated HHSI pump inoperable.
B: Incorrect, Must have the two HHSI pumps from the Unit in Mode 1, 2, or 3 and one from the other Unit capable of being powered from an operable EDG.
C: Incorrect, All 4 HHSI pumps are available by TS definition although 4A EDG is inoperable however, only three HHSI pumps are required to be available.
D: Correct, TS 3.5.2 requires three HHSI pumps to be available for the configuration of a Unit in Mode 1, 2, or 3 and the other Unit in Mode 4, 5, or 6. The HHSI pumps required are two from the Mode 1, 2, or 3 Unit and one from the Mode 4, 5, or 6 Unit. Each HHSI pump capable of being powered from its associated OPERABLE EDG.

Answer: D

17. 014K4.03 1

Unit 3 is performing a reactor shutdown and control bank 'D' is being inserted.

Which ONE of the following describes the location of a rod within control bank 'D' when it is inserted far enough to cause the rod bottom light to come on?

The rod is less than:
A. 35 steps from the bottom of the core.

B. 12.5 inches from the bottom of the core.

C. 12.5 steps from the bottom of the core.

D. 20 inches from the bottom of the core.

Question Source: Turkey Point question bank Q#1.1.24.6.6.6,M
Enabling Objective EO#2 of Lesson Plan LP6902106

Distractor Analysis:
A: Incorrect, 35 steps on control bank 'D' is the rod bottom bypass bistable setpoint.
B: Correct, 12.5 inches corresponds to 20 steps which is the rod bottom relay de-energization setpoint energizing the local and remote rod bottom lamps.
C: Incorrect, not 12.5 steps it is 12.5 inches.
D: Incorrect, not 20 inches it is 20 steps.

Answer: B

18. 015/017AA1.02 1

-Unit 3 is at 100% power.
-Annunciator B-2/5 "RCP OIL RESERSIOR HI/LO LEVEL" is in alarm.
-"B" RCP Bearing Temperatures have remained constant.
-CCW Surge Tank Level has lowered over the last 4 hours.
-3-ONOP-41.1 "REACTOR COOLANT PUMP OFF-NORMAL" has been entered.

Which ONE of the following describes the correct response to mitigate this event?

A. Continue to monitor motor bearing temperatures and record every 15 minutes IAW 3-ONOP-041.1 Attachment 2.

B. Trip the Reactor, Enter the ERG's and verify the reactor tripped, Trip the "B" RCP, isolate the seal leakoff valve.

C. Shut down the Reactor, secure the "B" RCP, isolate CCW to the oil coolers 30 minutes after securing the RCP.

D. Adjust seal injection on the "B" RCP to be between 6-13 gpm, verify seal leakoff greater than 1 gpm.

SD-008/(SYS.041B) Reactor Coolant Pumps. Enabling Objectives # 5.

A. Incorrect, this would be the correct action if the oil level was low.

B. Incorrect, this is the action that would be taken if a seal leak had occured.

C. Correct, If oil level in the RCP rises, 3-ARP-097.CR directs the operator to isolate CCW to oil coolers 30 minutes after stopping the RCP.

D. Incorrect, this would be the correct action if the seal leakoff temperatures were rising.

Answer: C

19. 015/017AK1.01 1

-Unit 4 was operating at 100% power.
-Offsite power was lost.
-The MSIV's closed due to a loss of Instument Air.
-A Natural Circ cooldown is in progress in accordance with 4-EOP-ES-0.2 using all 3 S/G PORV's.
-The "A" S/G PORV fails open and is manually closed by the BOP operator just prior to the Safety injection setpoint.

Which ONE of the following describes the effect this transient will have on the Natural Circulation flow in the RCS Loops PRIOR to the "A" PORV being closed?

A. "A" RCS loop flow will decrease, B and C loop flows will increase.

B. "B" and "C" loop flows will increase, the A" loop flow will reamain the same.

C. "A" RCS loop flow will increase, "B" and "C" loop flows will reamain the same.

D. "B" and "C" loop flows will decrease, the "A" loop flow will increase.

LP 6902324 Enabling Objective # 2.

A. Incorrect, A loop flow will increase, B and C loop flow will decrease.

B. Incorrect, B and C loop flow will decrease, and A loop flow will increase.

C. Incorrect, A loop flow will increase, B and C loop flow will decrease.

D. Correct, A loop flow will increase, B and C loop flow will decrease.

Answer: D

20. 015K6.01 1

The following indications are noted on ERDADS:

- N-41 power	99.85%
- N-42 power	99.95%
- N-43 power	99.75%
- N-44 power	99.65%
- Average power	99.80%

A loss of power occure on 120V vital panel 3P07.

Which ONE of the following describes the expected ERDADS Average power indication?

A. 99.75%

B. 74.81%

C. 99.85%

D. 74.89%

Question Source: Turkey Point 1998 NRC exam.

Loss of the Vital 120V AC instrument bus 3P07 results in lossing power range N-42 indication this takes the signal away from ERDADS leaving it with just 3 power range signals to average to get average reactor power.

Distractor Analysis:
A: Correct, (99.85+99.75+99.65)/3 = 99.75
B: Incorrect, If input to ERDADS was 0% for the failed channel and averaged between 4 inputs (99.85+0.0+99.75+99.65)/4 = 74.81
C: Incorrect, If 3P07 loss cause N-44 to fail (99.85+99.95+99.75)/3 = 99.85
D: Incorrect, If 3P07 loss cause N-44 to fail and input to ERDADS was 0% for the failed channel and averaged between 4 inputs (99.85+99.95+99.75+0.0)/4 = 74.89

Answer: A

21. 016A4.02 1

Which ONE of the following descibes how Operators monitor Main Turbine shaft deflection?

A. Shaft eccentricity is displayed locally to a speed of 600 RPM and automatically shifts to display shaft vibration on a recorder on Vertical Panel A above 600 RPM.

B. Recorder on Vertical Panel A displays shaft eccentricity to a speed of 600 RPM and automatically shifts to display shaft vibration above 600 RPM.

C. Recorder on Vertical Panel B displays shaft eccentricity to a speed of 600 RPM and automatically shifts to display shaft vibration above 600 RPM.

D. Recorder on Vertical Panel A displays shaft eccentricity to a speed of 600 RPM and is manually shifted to display shaft vibration above 600 RPM.

Enabling Objective: EO#2 of Lesson Plan LP 6902132

Distractor Analysis:
A: Incorrect, Shaft eccentricity is not displayed locally.
B: Correct, Turbine supervisory circuit automatically swaps from shaft eccentricity to vibration at 600 RPM, the result is displayed or R-341 recorder on VPA.
C: Incorrect, Recorder is located on VPA vice VPB.
D: Incorrect, Turbine supervisory circuit automatically swaps from shaft eccentricity to vibration at 600 RPM, not manually.

Answer: B

22. 017K6.01 1

Unit 4 has experienced a reactor trip and SI due to a LOCA. The operators have transitioned to E-1, "Loss of Reactor or Secondary Coolant."

The following plant conditions exist:

- Core Exit Thermocouples (CET) are all reading between 750 and 950 ^{O}F, except for three that are greater than 1200 ^{O}F.
- RCS subcooling indicates superheat.
- No RCPs are running.
- RVLMS is reading 55% level in the plenum.

The STA declares a RED PATH on the CORE COOLING and states that FR-C.1, "Response to Inadequate Core Cooling," must be implemented.

Which ONE of the following describes your response to the STA's declaration and why?

A. Agree with the STA; three CETs indicating above 1200 ^{O}F warrents the RED PATH.

B. Disagree with the STA; at least five CETs must indicate greater than 1200 ^{O}F to warrent a RED PATH.

C. Agree with the STA; with no RCPs running and CETs indicating greater than 700 ^{O}F warrents the RED PATH.

D. Disagree with the STA; sufficient inventory is available to provide core cooling as evidenced by RVLMS indicating the core is covered.

Question source: Turkey Point requal exam bank 69023530302-ORQ; ORQ#446

Distractor analysis:
A: Incorrect, STA is not correct at least 5 CETs must indicate >1200 ^{O}F.
B: Correct, The 3 CETs indicating >1200 ^{O}F may be malfunctioning, 5 CETs are required to provide a representative sample to evaluate core cooling.
C: Incorrect, CETs above 700 ^{O}F is a YELLOW PATH per F-0, CSF STATUS TREES.
D: Incorrect, Core coverage does is not indicative of adequate core cooling and is not used to determine PATH conditions for Core Cooling.

Answer: B

23. 022A1.03 1

Unit 3 is at 100% steady state power when a large break Loss of Coolant Accident (LOCA) occurs.

At 24 hours after event initiation, which ONE of the following describes the number of Emergency Containment Coolers (ECCs) which must be in operation to support containment environmental qualification assumptions?

A. 0 ECCs required.

B. 1 ECCs required.

C. 2 ECCs required.

D. 3 ECCs required.

Question Source: Turkey Point 1998 NRC Exam
Enabling Objectives EO2 and EO4 of EOP-E-1 Lesson Plan LP6902327

Step 33 of E-1 requires 2 ECCs to be operating to ensure containment environment qualifications.

Answer: C

24. 022AA2.04 1

The following conditions exist on Unit 3:

- Pressurizer Level is 35%.
- Combined RCP seal return flow is 9 gpm.
- 3-ONOP-41.3, "Excessive Reactor Coolant Leakage," is in progress due to identified leakage of 6 gpm.
- Letdown Flow is isolated.

Assume:
T_{ave} is constant
42 gallons/% PZR level

A loss of all charging pumps is preventing makeup to the RCS.

With no operator action which ONE of the following is the longest time the crew will have until they are procedurally required to initiate a reactor trip?

A. 58 minutes.

B. 64 minutes.

C. 107 minutes.

D. 161 minutes.

Modified from Braidwood Bank Question.
LP 6902234 enabling objective # 3.

A. Incorrect, this answer is based on tripping the reactor at 14% pressurizer level.

B. Correct, this answer is based on tripping the reactor at 12% pressurizer level IAW 3-ONOP-047.1 (35-12=23; 23 x 42 = 966; 966/15= 64.4 minutes.

C. Incorrect, this answer is based on a leak rate of 9 gpm. (966/9 =107)

D. Incorrect, this answer is based on a leak rate of 6 gpm. (966/6= 161)

Answer: B

25. 022K1.01 1

A manual Phase 'A' Containment Isolation has been initiated on Unit 3.

Which ONE of the following describes the automatic actions that occur in the Containment Cooling system?

A. CCW inlet and outlet valves to the Containment Cooling Units and Control Rod Drive Coolers shut, Normal Containment Cooling fans and CRDM Cooling fans stop.

B. Service Water inlet and outlet valves to the Containment Cooling Units and Control Rod Drive Coolers shut, Normal Containment Cooling fans and CRDM Cooling fans stop.

C. CCW inlet and outlet valves to the Containment Cooling Units and Control Rod Drive Coolers shut, Normal Containment Cooling fans stop, two ECCs are started and their associated outlet CCW isolation valves open.

D. Service Water inlet and outlet valves to the Containment Cooling Units and Control Rod Drive Coolers shut, Normal Containment Cooling fans stop, two ECCs are started and their associated outlet CCW isolation valves open.

Enabling Objective: EO#5 and EO#6 of Lesson Plan LP6902129

Distractor Analysis:
A: Correct, Phase 'A' signal secures the normal containment cooler fans and the CRDM cooler fan and isolates the CCW supply and return line to the containment.
B: Incorrect, Service water is not used to cool the containment cooling units.
C: Incorrect, EECs are not started as a result of Phase A only with an SI signal.
D: Incorrect, Service water is not used to cool the containment cooling units ans EECs are not started as a result of Phase A only with an SI signal.

Answer: A

26. 025AK2.02 1

Unit 3 is in Mode 5, drained down to just below mid nozzle.

The following indications are observed:
- RHR flow as indicated on FI-605 is fluctuating.
- The running RHR pump amps are fluctuating.

The SNPO reports that the noise level of the running RHR pump has increased significantly from the last observation.

Which ONE of the following describes the actions to be taken in accordance with ONOP-050, Loss of RHR?

A. Start the standby RHR pump and when running, stop the affected RHR pump.

B. Stop the affected RHR pump and initiate makeup to the RCS. Start the standby RHR pump.

C. Adjust HCV-758, RHR Heat Exchanger Outlet Flow Valve, to reduce RHR flow to between 1000 and 1500 gpm.

D. Adjust FCV-605, RHR Heat Exchanger Bypass Flow Valve, to reduce RHR flow to between 1000 and 1500 gpm.

Enabling Objective EO-2 from 3/4-ONOP-050, ONOP-050 steps 6 and 12.
TP bank question 1.1.25.10.4.18,M

RHR pump cavitation requires that the RHR flow be reduced to stop the cavitation.

DISTRACTOR ANALYSIS:
A: Incorrect, This does not reduce the flow as required by ONOP-050 to reduce flow, it swaps pumps in an effort to remove the cavitating pump.
B: Incorrect, This does not reduce the flow as required by ONOP-050 to reduce flow, it provides makeup to correct a possible cause of the cavitation.
C: Incorrect, Adjustment of 758 will not reduce flow since 605 auto adjusts to maintain the set flow.
D: Correct, 605 reduces the total flow of the RHR system.

Answer: D

27. 026A4.05 1

Unit 3 has experienced a faulted Steam Generator. The crew has entered 3-EOP-E-1, Loss of Reactor or Secondary Coolant, from 3-EOP-E-2, Faulted Steam Generator Isolation, step 7.

Which ONE of the following describes the reseting of the containment spray signal in accordance with 3-EOP-E-1?

A. Containment spray signal can be reset at anytime, regardless of containment pressure and temperature.

B. Containment pressure must be less than 14 psig, regardless of containment temperature, to reset the containment spray signal.

C. Containment pressure must be less than 14 psig AND containment temperature must be less than 122 ^{o}F to reset the containment spray signal.

D. Containment temperature must be less than 122 ^{o}F, regardless of containment pressure, to reset the containment spray signal.

Enabling Objective: EO#2 of Containment spray system lesson plan LP6902125 and EO#2 of EOP-E-1 lesson plan LP6902327

Distractor Analysis:
A: Incorrect, In order to secure containment spray signal for transfer to cold leg recirculation, ES-1.3, the resets are used regardless of containment conditions.
B: Incorrect, 14 psig is correct but, temperature must also be less than 122^{o}F.
C: Correct, Step 12 of E-1.
D: Incorrect, 122^{o}F is correct but, pressure must also be less than 14 psig.

Answer: C

28. 027AA2.17 1

-Unit 4 is stable at 100% Power.
-Control Rods are in Manual.
-All other controls are operating properly in automatic.
-PT-444 fails to 2500 psig.

Which ONE of the following correctly describes the initial plant response.

A. Back up heaters energize; RCS pressure increases; OT delta T setpoint increases.

B. Back up heaters denergize; RCS pressure increases; OT delta T setpoint decreases.

C. PCV-455 opens; RCS pressure decreases; OT delta T setpoint decreases.

D. PCV-456 opens; RCS pressure decreases; OT delta T setpoint decreases.

Modified from Bank questions (combination of several).
SD-009 (SYS.041C) Pressurizer and Relief System Enabling Objective# 6.
SD-063 (SYS. 049,063) Reactor Protection and Safeguards Actuation System enabling objective # 6.

A. Incorrect, backup heater would denergize, RCS pressure will decrease and the OT delta T setpoint would decrese.

B. Incorrect, Backup heaters would denergize, but RCS pressure will decrease.

C. Correct, PCV-455 will open, this will cause pressure to decrease, and the OT delta T setpoint will decrease.

D. Incorrect, PCV-456 will not open from this failure.

Answer: C

29. 027AK2.03 1

-Unit 4 is operating at 90% power with all controls in Automatic.
-PT-444 begins to drift down.

Which one of the following describes the effect this will have on PC-444A output, and the system response as a result of this failure?

A. PC-444A output will increase, pressurizer heaters output will increase, and actual RCS pressure will increase.

B. PC-444A output will increase, pressurizer heater output will lower, spray valves will open, and actual RCS pressure will decrease.

C. PC-444A output will decrease, pressuizer heater output will increase,and actual RCS pressure will increase.

D. PC-444A output will decrease, pressurizer heater output will lower, spray valves will open, and actual RCS pressure will decrease.

LP 6902109 enabling objective # 6.

A. Correct, as PT-444 drifts down the master controller will attempt to raise pressure to return it to setpoint, output will increase, heaters will energize and actual RCS pressure will rise.

B. Incorrect, heater output will rise in an attempt to raise RCS pressure.

C. Incorrect, controller output will increase.

D. Incorrect, controller output will increase.

Answer: A

30. 028A1.01 1

Unit 3 has experienced a design basis LOCA.
The Hydrogen Recombiner has arrived on site, has been installed and is ready for operation.

Which ONE of the following conditions would prevent the Hydrogen Recombiner from being placed in service?

A. Containment hydrogen concentration is 6%.

B. Containment temperature is 160 ^{o}F.

C. The PACV system has not been aligned for operation.

D. A hurricane Watch has been issued for Dade County.

Question source: Turkey point requal test bank 69023380401-ORQ; ORQ#583

Distractor Analysis:
A: Correct, E-1, Step 27 directs the Hydrogen Recombiner to be installed and placed in service per ONOP-094.3. The CAUTION before Step 5.9 in ONOP-094.3 states that the recombiner is not to be used if hydrogen concentration exceeds 5% by volume.
B: Incorrect, Recombiner is not to be placed in service with containment temperatures above 180 ^{o}F.
C: Incorrect, Recombiner is not designed to be operated in conjunction with the PACV system.
D: Incorrect, Recombiner is required to be disconnected for hurricane Warning.

Answer: A

31. 029AG2.4.34 1

-An ATWS has occured on Unit 3.
-3-EOP-FR-S.1 has been entered.
-A manual trip of the reactor did not occur and control rods are being inserted manually.
-The turbine was tripped in the Main Control Room, all turbine stop valves are closed.
-Turbine speed still indicates 1800 rpm.
-Main Generator Output Breaker positon is not available.

Which ONE of the following describes the correct action to be taken in response to turbine speed?

A. Close the Main Steam Isolation and bypass valves.

B. Locally trip the Mid and East GCB's from the switchyard.

C. Locally close the MSR main steam supply valves on the turbine deck.

D. Locally Trip the turbine at the front standard.

LP-6902346 Response to Nuclear Generation/ ATWS -Loss of Core Shutdown, Enabling Objective # 4.

A. Incorrect, The main turbine is tripped, it is still rotating at 1800 rpm due to the output breakers still being closed.

B. Correct, this will open the Generator Output Breakers and stop the generator from being motorized.

C. Incorrect, this would not stop the turbine from rotating, the generator is motorized.

D. Incorrect, this would not stop the turbine from rotating, the generator is motorized

Answer: B

32. 029K3.02 1

A containment entry is planned for Unit 4. The work leader states that the work inside containment will take approximately 90 minutes to complete. The No. 3 containment purge exhaust fan is out of service for maintenance. The No. 4 containment purge exhaust fan is started and immediately trips.

Which ONE of the following is correct concerning the containment entry?

A. Containment entry is not affected.

B. Containment entry may proceed provided the normal containment ventilation is in service.

C. Containment entry must be postponed until the containment purge system is available.

D. Containment entry may proceed provided the containment purge supply and exhaust isolation valves are sealed closed to the maximum extent practicable.

Distractor analysis:
A: Incorrect, ADM-009 states that if work inside containmnet is expected to exceed 60 minutes, a containment purge should be performed.
B: Incorrect, ADM-009 states that if work inside containmnet is expected to exceed 60 minutes, a containment purge should be performed. Normal containment ventilation is not addressed as an alternative to the purge system on containment entries.
C: Correct, Without the purge exhaust fans available the entry requirements of ADM-009 can not be satisfied therefore, containment entry must be postponed.
D: Incorrect, This is the normal status of the containment purge isolation valves when not a purge is not in affect. Still the criteria of ADM-009 is not met.

Answer: C

33. 032AA1.01 1

Operators are performing 3-OSP-049.1, Reactor Protection System Logic Test, Section 7.1, while in Mode 3.

Nuclear Instrument system detector N-32 suddenly fails due to a power source problem.

Which ONE of the following describes the required operator response?

A. Restore N-32 to an operable status within 48 hours.

B. Restore N-32 to an operable status within 1 hour.

C. Open the reactor trip breaker (s) within 1 hour.

D. Open the reactor trip breaker (s) within 48 hours.

Question source: Turkey Point requal question bank 69025230301-ORQ; ORQ#465

Distractor Analysis:
A: Correct, Technical specification 3.3.1, ACTION 9
B: Incorrect, If the N-32 channel can not be returned to service within 48 hours then reactor trip breakers are required to be open within the next hour.
C: Incorrect, If the N-32 channel can not be returned to service within 48 hours then reactor trip breakers are required to be open within the next hour.
D: Incorrect, If the N-32 channel can not be returned to service within 48 hours then reactor trip breakers are required to be open within the next hour.

Answer: A

34. 035A4.01 1

Unit 3 is performing a reactor startup per GOP-301, Hot Standby to Power Operation.
Reactor power is currently 15%.
Steam Generator (S/G) levels are being controlled manually on the Feedwater Bypass valves between 50% and 60%.

Which ONE of the following describes the process of transfering Steam Generator level control to automatic in accordance with GOP-301?

A. Open/verify open Feedwater Isolation valves. Slowly open the Main Feedwater Control valves while simultaneously closing the Feedwater Bypass valves. Stabilize levels at program, match feedwater flow with steam flow, and transfer one S/G FW control at a time to AUTO.

B. Slowly open Feedwater Isolation valves while simultaneously closing the Feedwater Bypass valves. Stabilize levels at program, match feedwater flow with steam flow, and transfer one S/G FW control at a time to AUTO.

C. Open/verify open Feedwater Isolation valves. Slowly open the Main Feedwater Control valves to approximately 15% feedwater flow then close the Feedwater Bypass valves. Stabilize levels at program, match feedwater flow with steam flow, and transfer one S/G FW control at a time to AUTO.

D. Open/verify open the Main Feedwater Control valves. Slowly open Feedwater Isolation valves while simultaneously closing the Feedwater Bypass valves. Stabilize levels at program, match feedwater flow with steam flow, and transfer one S/G FW control at a time to AUTO.

Enabling Objectives: EO#2 and EO#6 of Lesson Plan LP 6902122

Distractor analysis:
A: Correct, GOP-301 step 5.71.
B: Incorrect, Do not transfer to AUTO without first slowly opening the Main Feedwater Control valves.
C: Incorrect, Do not open the Main Feedwater Control valves prior to closing the Feedwater Bypass valves.
D: Incorrect, Feedwater Isolation valves are opened first and the Main Feedwater Control valves are slowly opened.

Answer: A

35. 036AA1.02 1

Unit 3 is in Mode 6 and Core Alterations are in progress.
The fuel transfer carriage is at the containment upender.
The reactor cavity is full and a containment purge is in progress.
Containment Personnel Airlock doors are closed.

The following events occur:
- The power supply to PRMS R-11 monitor fails.
- Annunciator H-1/3, SFP HI LEVEL, alarms shortly after the R-11 power failure.

Which ONE of the following describes the required operator actions in response to the above events?

A. Initiate containment evacuation and isolate instrument air to containment.

B. Locally open the instrument air bleed valve, CV-2826, and increase CCW flow to the SFP heat exchanger.

C. Move the fuel transfer carriage to the spent fuel pit and close the fuel transfer tube gate valve, 3-12-031.

D. Obtain NPS authorization to bypass R-11 from VPB and reestablish containment purge.

Question Source: Turkey Point requal test bank questions Q#69022400401-ORQ;ORQ#611 & Q#69022400402-ORQ;ORQ#612

Disrtactor Analysis:
A: Incorrect, Actions for R-11 being in alarm associated with an accident involving spent fuel inside containment.
B: Incorrect, Actions if level increase is being caused by SFP heatup.
C: Correct, The loss of power to R-11 causes the containment purge to automatically secure thus causing containment pressure to increase slightly causing the SFP level to increase to the alarm setpoint requiring the fuel transfer tube gate valve to be closed (annunciator H-1/3 actions).
D: Incorrect, The NPS can authorize containment purge initiation in an emergency, this is not an emergency situation and R-11 must be in operation for containment purge operation, R-11 is bypassed for testing and surveillance activities.

Answer: C

36. 038EG2.1.7 1

-Unit 3 has experienced a SGTR.
-3-EOP-E-3 Steam Generator Tube Rupture has been entered.
-At the step for identifing the ruptured steam generator, the crew has determined that all 3 steam generators are ruptured.

Which ONE of the following action(s) is correct in accordance with 3-EOP-E-3 Steam Generator Tube Rupture?

A. Immediately transition to 3-EOP-ECA-3.1 SGTR with Loss of Reactor Coolant- Subcooled Recovery Desired.

B. Pick one SG to be available for cooldown. Isolate the remaining two SGs and transition to 3-EOP-ECA-3.1 when directed.

C. Isolate all three SGs per 3-EOP-E-3. The caution prior to step 3 does not apply if all SGs are ruptured.

D. Isolate the SGs with the highest level first, then cool down with the least ruptured SG and remain in 3-EOP-E-3.

LP 6902339 E-3, Steam GeneratorTube Rupture, Enabling Objective # 3.
Question from Farley Exam bank (slightly modified to fit TP).

A. Incorrect, the procedure directs the crew to isolate SGs first prior to directing a transition from E-3.

B. Correct, the note prior to step 3 reminds the operator that one SG must remain available for cooldown. The others should be isolated and transition is directed to EC-3.1 at step 7.

C. Incorrect, One SG must remain available to allow a plant cooldown to be conducted.

D. Incorrect, E-3 directs a transition to EC-3.1 if all the ruptured SGs cannot be isolated.

Answer: B

37. 039K5.05 2

Which ONE of the follow helps prevent challanges to RCS vessel integrity during normal plant operations?

A. Atmospheric steam dump Lo Tavg interlock.

B. Main steam line isolation.

C. Condenser steam dump Lo Tavg interlock.

D. Steam Generator flow restrictors.

Ref: TP Lesson plan 6902118, enabling objective 3

Distractor analysis:

Answer A is incorrect because the atmospheric dumps have no interlock
Answers B and D are incorrect because the stem of the question states "normal" operation. These features are for mitgation during accident conditions.
Answer C is correct because the Lo Tavg interlock requires manual intervention to enable just two dumps to be used manually for controlled RCS cooldown.

Notes
Reworded stem to emphasis the basis for RCS cooldown limits and methods designed into the Main Steam system to prevent challenges to these limits. (In response to Chief Examiner comments)

Answer: C

38. 045A1.05 1

Unit 4 is operating at 100% power when the Main Turbine trips.

Which ONE of the following decribes the initial trend of the primary plant parameters?

A. Rx pressure decreases, Th decreases, Tc increases

B. Rx pressure increases, Th increases, Tc decreases

C. Rx pressure decreases, Th decreases, Tc decreases

D. Rx pressure increases, Th increases, Tc increases

Haven't been able to find a lesson plan that covers this. It's probably buried somewhere in their GFES material.
RLM

Answer: D

39. 051AG2.1.08 1

-Unit 3 is at 100% power.
-Annuciator E 5/3 "Condenser Low Vacuum" comes in.
-Condenser Vacuum is 25" hg, decreasing at a noticable rate.

Which ONE of the following would be the required action to have the Unit 3 NPO perfrom immediately?

A. Cut in make-up water to the Boot Seal.

B. Close Steam Generator Feed pump Seal water drain tank valve CV-2210.

C. Place the second bank of Steam Jet Air Ejectors in service.

D. Place the Hogging Jet in service.

Bank Question 1.1.34.22.1.1.M.
3-ONOP-014.

A. Incorrect, this is not an immediate action.

B. Incorrect, this is not an immediate action.

C. Incorrect, this is not an immediate action.

D. Correct, IAW 3-ONOP-014 this is the immediate action to be taken.

Answer: D

40. 055EK3.02 2

- ECA-0.0, "Loss of All AC Power," has been entered due to a Loss of All AC on Unit 3.
- The crew is at step 3 of ECA-0.0 "Check If RCS Is Isolated."

Which ONE of the following describes the correct sequence for RCS Isolation, and the reason for that sequence?

A. PORV's, Letdown Isolation Valves, Excess Letdown Isolation valves; because this is the most likely sequence for valves opening.

B. Letdown Isolation Valves, PORV's, Excess Letdown Isolation Valves; because this is the most likely sequence for valves opening.

C. PORV's, Letdown Isolation Valves, Excess Letdown Isolation valves; isolation order is based on capacity of the outflow lines.

D. Letdown Isolation Valves, PORV's, Excess Letdown Isolation Valves; isolation order is based on capacity of the outflow lines.

LP6902348 EOP-ECA-0.0 Loss of All AC, enabling objective # 5.
BD-EOP-ECA-0.0

A. Incorrect, this is the correct sequence but not the correct reason.

B. Incorrect, this is not the correct sequence, and not the correct reason.

C. Correct, this is the correct sequence,and reason IAW ECA 0.0 and the Background document.

D. Incorrect, this is not the correct order.
Question Cog Level changed from C/A to M (Chief Examiner comment).

Answer: C

41. 055K3.01 1

Unit 4 is operating at 100% power
Annunciator E-5/3, Condenser Lo Vacuum, alarms
Vacuum as indicated on PI-1612 is decreasing

Which ONE of the following is the MOST probable cause of the decreasing vacuum?

A. High gland seal steam pressure

B. Empty SJAE loop seal

C. Leaking MSR relief valves

D. High gland steam condenser pressure

REF: TP LP 6902122, enabling objective 2
System description SD 130, TURBINE, TURBINE OIL AND GLAND SEAL SYSTEMS
ONOP-14 Main Condenser Loss of Vacuum

Distractor analysis:

A is incorrect because excessive pressure will only blow steam out of seals externally, but have no effect on the sealing, hence vacuum capability.
B is correct because the loop seals, if empty allow air to sucked directly in to the condenser, causeing a loss of vacuum (see ONOP-014)
C is incorrect because these reliefs are under positive pressure at 100% power
D is incorrect because high gland steam condenser pressure will cause the gland seal steam to cross over the exhaust chamber and exit the seal externally.

Answer: B

42. 057AA1.01 1

Operators have placed the 'AS' Vital Inverter in service to replace the '3A' Inverter. Vital Instrument bus 3P07 is currectly being powered from the 'AS' Vital Inverter. The Alternate Source Transfer switch, 3Y01B, is locked in the "Backup to Normal Inverter" position.

The elctrical maintenance worker inadvertantly opened the supply breaker to the 'AS' Vital Inverter vice the supply breaker to the '3A' Inverter.

Which ONE of the following describes the consequence of this event?

A. 3P07 will automatically transfer to the Constant Voltage Transformer (CVT).

B. 3P07 will automatically transfer back to the '3A' Inverter.

C. A loss of Vital Instrument bus 3P07 will occur.

D. A loss of Vital Instrument bus 3P07 and 4P07 will occur.

Question Source: Modified from Turkey Point 2000 NRC Exam
Enabling Objective: EO#5 of Lesson Plan LP6902139

Distractor Analysis:
A: Incorrect, Without the 3Y01B switch being in the "Backup to Spare Inverter" position transfer will not occur.
B: Incorrect, Automatic transfer between inverters does not occur when one inverter is lost.
C: Correct, IAW system discription SD144, Improper manual transfer to the Spare Inverter (i.e. not properly selecting "Backup to Spare Inverter" on the 3Y01B switch) will lead to a loss of vital AC instrument bus 3P07.
D: Incorrect, 'AS' Vital Inverter is a backup source to both 3P07 and 4P07, 4P07 will be unaffected since it is receiving power from its normal source '4A' Inverter.

Answer: C

43. 061AK1.01 1

Refueling operations are in progress on Unit 3 when the following occurs:

- Annunciator X-4/1, ARMS HI RADIATION, alarms
- Area Radiation Monitor, R-7, in the Spent Fuel Pit is the affected channel

Operators quickly entered ONOP-066, High Radiation Monitoring System Alarm, and determined that the high alarm is not valid and that R-7 has failed.

Which ONE of the following is correct regarding the Refueling operations in progress?

A. Refueling operations shall be stopped immediately. Refueling operations can continue if a portable radiation monitor with an alarm is used in the Spent Fuel Pit.

B. Refueling operations are unaffected and may continue without restrictions.

C. Refueling operations shall be stopped until HP has completed surveys to ensure there is no source of high radiation in the Spent Fuel Pit area.

D. Refueling operations shall be stopped immediately. Refueling operations can not continue until R-7 has been repaired.

Question source: Modified from Turkey Point requal question bank 71021440301-ORQ; ORQ#066

Distractor Analysis:
A: Correct, Refueling operations should be stopped immediately when the annunciator alarms. The limitations of not having the detector available to provide alarms is to not allow refueling operations until a portable detector with an alarm can be provided (ONOP-066 and OP-038.1).
B: Incorrect, OP-038.1, Preparation for Refueling Activities, step 5.2.2.2 is not satisfied, therefore refueling operation can not continue.
C: Incorrect, HP is required to start performing surveys until the alarm is determined to be invalid, at which time they can terminate having to perform surveys. Us of HP instead of a detector or portable detector with an alarm is not recognized as acceptable per OP-038.1.
D: Incorrect, Refueling operations do not have to wait until R-7 is repaired.

Answer: A

44. 061K6.01 1

The following plant conditions exist on Unit 3:
- 'A' AFW pump is running at low rpm and not delivering flow.
- A malfunction of the 'A' AFW pump turbine trip and throttle (T&T) valve is suspected.
- The 'A' AFW pump T&T valve indicates latched.

Which ONE of the following describes the actions to be taken in accordance with ONOP-075, "Auxiliary Feedwater System Malfunction"?

A. Shutdown the 'A' AFW pump by closing the steam supply MOV.

B. Locally verify the governor speed control knob is fully counter-clockwise.

C. Station an operator locally at the 'A' AFW pump to observe the T&T valve while cycling the valve using the control switch on the console.

D. Locally adjust 'A' AFW pump speed by manually controlling the T&T valve to maintain discharge pressure 150 psig greater than steam supply pressure.

Question Source: Turkey Point exam bank Q#1.1.25.2.2.2,M
Enabling Objective EO#2&3 of Lesson Plan LP6902202

Distractor Analysis:
A: Incorrect, This is done for an AFW steam supply line fault.
B: Incorrect, Check with Licensee for quality of distractor
C: Incorrect, Check with Licensee for quality of distractor
D: Correct, ONOP-075 step 3.c RNO and Attachment 5.

Answer: D

45. 062K2.01 2

- Unit 3 is at 100% power.
- 3B battery has been temporarily removed from service to jumper a battery cell.
- Subsequent to the removal of 3B battery from service, a differential fault occurs on the Unit 3 Auxiliary Transformer and 3A and 3B busses fail to fast transfer to the Startup Transformer.

Which ONE of the following decribes the status of the RPS channels?

A. Channel I deenergized, Channel II energized, Channel III energized, Channel IV energized

B. Channel I energized, Channel II deenergized, Channel III energized, Channel IV energized

C. Channel I energized, Channel II energized, Channel III deenergized, Channel IV energized

D. Channel I energized, Channel II energized, Channel III energized, Channel IV deenergized

Ref: TP Lesson Plan 6902138, enabling objective #5
TP System Description 140 & 144
TP 0-OP-003.1, Att. 2 & 3

Answer A is correct because the stem removes AC sources (Startup, Aux Transformers and 3B EDG due to lack of field flash from 3B battery). Also the stem removes B train DC power which supplies power to Inverter C. Inverter C is the power supply for vital panel 3P06 which in turn is the power supply for Channel I Rx protection.

Answers B, C and D are incorrect because their respective Rx protection channels are feed from 3P07, 3P08 and 3P09, respectively which receive power from 3A, 4B and 4A batteries respectively.

Notes
Added status of each of the channels to make the answers better fit the phrasing of the stem
There is a one-to-one correspondance between batteries and channels, therefore it would not be plausible to show more than one deenergized channel for a given out-of-service battery. Basically, this question is asking the DC source for Channel I RPS
(In response to Chief examiner's comment)

Answer: A

46. 063K2.01 1

Unit 4 has lost the 4B DC bus (3D23).

Which ONE of the following statements correctly describes the control power source for 3D 4160V switchgear?

A. None, control power is lost.

B. 4A DC bus (4D23)

C. 3A DC bus (3D01)

D. 3B DC bus (4D01)

REF: System description 144, Fig. 1
TP lesson plan 6902139, enabling objective 5

Distractor analysis:
Note: Per System Description 144, fig 1 attached, 3D AC bus has an ABT (3S75) supplied by either 4A or 4B DC busses.

Answer A is incorrect because the ABT will shift to supply control power to 3D 4160V if EITHER 4A or 4B DC busses are available.
Answer B is correct because the ABT will be aligned to 4A DC bus
Answer C and D are incorrect because niether are connected to the ABT.

Answer: B

47. 064K2.02 1

Which ONE of the following is the correct power supply for the 3B EDG Fuel Oil Priming Pump and the Fuel Oil Transfer Pump, respectively?

A. 3D01, MCC 3H

B. 3D23, MCC 3K

C. 3D01, MCC 3J

D. 3D23, MCC 3B

Ref: TP Lesson Plan 6902136, Enabling Objective #4
TP System Description 137, pp. 71

Distractor analysis:

Answer B is correct based on load list from system description.
All other answers are combinations of other power supplies.

Answer: B

48. 067AK1.01 1

A report has been received in the control room of a fire in the hydrogen seal oil skid.

Which ONE of the following describes the classification that will be reported over the plant page system, and the supression agent that would be effective in combating the fire?

A. Class B; water or dry chemical.

B. Class C; CO_2 or dry chemical.

C. Class B; CO_2 or dry chemical.

D. Class C; water or dry chemical.

Modified from bank question # 3.4.1.2.7.4.M
No specific learning objective found.

A. Incorrect, this is the correct classification, but not the correct extinguishing agent.

B. Incorrect, this is not the correct classification.

C. Correct, this is the correct classification and extinguishing agent.

D. Incorrect, wrong classification and agent.

Answer: C

49. 068A3.02 1

A radioactive liquid release is in progress from the Waste Monitor Tank 'A' through the liquid release header.

Which ONE of the following describes the automatic isolation associated with the liquid release in progress?

A. MOV-1415 and MOV-1416 close to less than 6% open resulting in the shutting of SV-1413 and/or MOV-1413 and MOV-1414 close to less than 6% open resulting in the shutting of SV-1414.

B. High liquid release flow on FI-1064 resulting in the shutting of RCV-18, Liquid Waste Discharge Valve.

C. Loss of one of the running Circulating water pumps resulting in the shutting of SV-1414, SV-1413 and RCV-18.

D. RE-18 causing annuciator H-1/4, Process Monitor Hi Radiation, resulting in the shutting of RCV-18.

Enabling Objective: EO#6 of Lesson Plan LP6902149

Distractor Analysis:
A: Incorrect, SV-1413 can not be opened until MOV-1415 or MOV-1416 are opened to more than 6%, similarly for SV-1414. SV-1413 and SV1413 do not auto close in association with this interlock.
B: Incorrect, Liquid release flow is required to be monitored by T.S. but no automatic isolation is associated with the flow rate.
C: Incorrect, Correct number of Circ water pumps is required by the discharge permite and the release is required to be secured if dropping below the minimum required but this does not occur automatically.
D: Correct, RE-18 alarming above the setpoint will result in the shutting of RCV-18 thus securing the release.

Answer: D

50. 068AA1.31 1

A bomb threat has caused the NPS to direct a Control Room evacuation with both Units initially at 100% power. A Loss of Off-Site Power (LOOP) occurred as the Control Room was being evacuated.

Which ONE of the following describes the required operator response concerning the operation of the Emergency Diesel Generators (EDGs)?

A. The '3A' and '4A' EDGs are shutdown and the '3B' and '4B' EDGs are maintained in normal control.

B. The '3A' and '4A' EDGs are shutdown and the '3B' and '4B' EDGs are placed in local control.

C. The '3B' and '4B' EDGs are shutdown and the '3A' and '4A' EDGs are placed in local control.

D. The '3B' and '4B' EDGs are shutdown and the '3A' and '4A' EDGs are maintained in normal control.

Enabling Objective EO4 of Lesson Plan LP6902252

Distractor Analysis:
A: Incorrect, 'B' EDGs are placed in local control per ONOP-105 Attachment #2 step 10 and Attachment #6 step 16.
B: Correct, The 'A' EDGs are shutdown per ONOP-105 Attachment #2 step 7 and Attachment #6 step 13. The 'B' EDGs are placed in local control per ONOP-105 Attachment #2 step 10 and Attachment #6 step 16.
C: Incorrect, The 'A' EDGs are shutdown and the 'B' EDGs are placed in local control.
D: Incorrect, The 'A' EDGs are shutdown and the 'B' EDGs are placed in local control.

Answer: B

51. 069AK2.03 1

The following conditions exist on Unit 3 while in Mode 3:

- A Containment entry is made.
- On the way out it is determined that both of the Containment Personnel Access Airlock doors can be opened at the same time.
- The Inside door is latched closed with NO apparent leakage past the door seal.
- The Outside door can NOT be latched closed and is able to swing freely.

Which ONE of the following statements is correct concerning the Containment Personnel Access Airlock doors?

(Reference provided)

A. Consider the Outside door inoperable and apply Technical Specification Action 3.6.1.3.a.

B. Consider the air lock inoperable and apply Technical Specification Action 3.0.3.

C. Consider the air lock inoperable and apply Technical Specification Action 3.6.1.3.b.

D. Consider primary Containment Integrity inoperable and apply Technical Specification Action 3.6.1.1.

Question source: Turkey Point requal question bank 69027890401-ORQ; ORQ#683

Distractor analysis:
A: Correct, Outside door is inoperable and TS 3.6.1.3.a applies since only one containment air lock door is inoperable.
B: Incorrect, Applicant must determine the air lock is not inoperable, even with the air lock inoperable TS 3.0.3 would not be applicable.
C: Incorrect, Applicant must determine the air lock is not inoperable per TS 3.6.1.3 since the deficiency is a result of an air lock door being inoperable.
D: Incorrect, Applicant must realize that this does not make the Containment Integrity inoperable.

Answer: A

52. 072K3.01 1

Unit 4 operators are performing Core Alterations.

The following evants occur:
- PRMS R-4-11 fails high.
- Core Alterations have been temporarily suspended.

Which ONE of the following describes the prerequisites to resume Core Alterations?

Fuel movement may be resumed only after:

A. The control room ventilation system is in the recirculation mode and the containment ventilation isolation valves are maintained closed.

B. The control room ventilation system is in the recirculation mode and the containment ventilation isolation valves are reopened.

C. The control room ventilation system is in the normal mode and the containment ventilation isolation valves are reopened.

D. The control room ventilation system is in the normal mode and the containment ventilation isolation valves are maintained closed.

Question source: Turkey Point requal test bank 70021440101-ORQ; ORQ#864

Distractor analysis:
A: Correct, Required per Attachment 4 of OP-038.1, Preparation for Refueling Activities, and TS 3.9.13 (ACTION a and b) with one radiation monitor inoperable.
B: Incorrect, Containment isolation valves are required to be closed (TS 3.9.13 ACTION a and Attachment 4 of OP-038.1).
C: Incorrect, Control room ventilation must be operating in recirc mode (TS 3.9.13 ACTION b) and containment isolation valves are required to be closed (TS 3.9.13 ACTION a and Attachment 4 of OP-038.1)
D: Incorrect, Control room ventilation must be operating in recirc mode (TS 3.9.13 ACTION b)

Answer: A

53. 073K1.01 1

Unit 4 is at 100% steady state reactor power when the following occurs:

- Annunciator H-1/4, PRMS HI RADIATION, alarms.
- Annunciator A-1/2, RCP THERMAL BARR COOLING WATER HI TEMP, alarms.

Operators have verified countrate meters on PRMS R-17A and R-17B have increased above the alarm setpoint and proper seal injection flow exists. Component Cooling Water (CCW) flow indicator from the RCP Thermal barriers FI-4-626 has increased to 125 gpm. CCW head tank level indicator LI-4-614A indicates 78%.

Which ONE of the following describes the current position of the CCW Head Tank Vent Valve, RCV-4-609 and RCP Thermal Barrier Outlet Valve, MOV-4-626?

A. RCV-4-609 is closed and MOV-4-626 is closed.

B. RCV-4-609 is closed and MOV-4-626 is open.

C. RCV-4-609 is open and MOV-4-626 is open.

D. RCV-4-609 his open and MOV-4-626 is closed.

Question source: Turkey Point question bank Q# 1.1.24.40.5.14
Enabling Objectives EO#5 and EO#6 of Radiation Monitoring and Protection Lesson Plan LP6900168

Distractor Analysis:
A: Incorrect, RCV-609 will auto close on an H-1/4, PRMS HI RADIATION, R-17A/B alarm; MOV-626 will not auto close on an A-1/2,RCP THERMAL BARR COOLING WATER HI TEMP, alarm, it will auto close on an A-1/1 RCP THERMAL BARR COOLING WATER HI FLOW, alarm.
B: Correct, RCV-609 will auto close on an H-1/4, PRMS HI RADIATION, R-17A/B alarm; MOV-626 will remain open until auto closing on an A-1/1 RCP THERMAL BARR COOLING WATER HI FLOW.

C: Incorrect, RCV-609 will auto close on an H-1/4, PRMS HI RADIATION, R-17A/B alarm it also auto closes on a CCW head tank level above 85%; MOV-626 will not auto close on an A-1/2,RCP THERMAL BARR COOLING WATER HI TEMP, alarm.

D: Incorrect, RCV-609 will auto close on an H-1/4, PRMS HI RADIATION, R-17A/B alarm it also auto closes on a CCW head tank level above 85%; MOV-626 will auto close on an A-1/1 RCP THERMAL BARR COOLING WATER HI FLOW, alarm.

Answer: B

54. 074EK2.03 1

-3-EOP-FR-C.1 "RESPONE TO INADEQUATE CORE COOLING" has been entered due to CET's greater than 1200 ^{O}F.
-Safety injection flow is NOT in progress, and was unable to be established by any means.
-Condensate Storage Tank levels indicate 9%.
-Steam Generator narrow range levels are A=13%; B=11%; C=5%
-Total AFW flow is 370 gpm
-Containment Pressure is 10 psig.
-All Steam Generators are intact.
-5th (fifth)hottest core thermocouple is 1205 ^{O}F.

Which ONE of the following describes what action should be taken next and why?

A. Start bearing oil lift pumps and start all RCP's to start reflux cooling.

B. Transition to SACRG-1 Severe Accident Control Room Guidline-1, core damage has already occured.

C. Align makeup water to the CST; this will prevent AFW pumps from loosing a suction source.

D. Secondary heat sink is adequate;Transition to procedure and step in effect.

Modified from a Farley Bank Question.
LP-6902347 Enabling objective # 3.

A. Incorrect, FR-C.1 does direct the starting of RCPs but only one at a time, and much later in the procedure.

B. Incorrect, The Transistion to SACRG-1 will be much later in the procedure. Core damage may or may not have occured.

C. Correct, In order to maintain a heat sink the source of water to the AFW pumps must be maintained.

D. Incorrect, while secondary heat sink may be adequate at this point, CET's must be less than 1200 degrees F to go to procedure and step in effect.

Answer: C

55. 075A2.01 1

The following conditions exist on Unit 3 with the Unit at 80% power:

- 3A1 Intake Well has a 1.5 foot water fall that is slowly increasing.
- 3A2 Intake Well has a 2.0 foot water fall that is slowly increasing.
- 3B1 Intake Well has a 2.5 foot water fall that is slowly increasing.
- 3B2 Intake Well has a 3.0 foot water fall that is slowly increasing.

Assuming the trends continue, which ONE of the following describes the correct operator actions?

A. Trip the reactor and enter E-0, Reactor Trip or Safety Injection. Stop the 3B2 and 3B1 CWPs.

B. Ramp power down to ≤ 60% using ONOP-100, Fast Load Reduction. Stop the 3B2 and 3B1 CWPs.

C. Immediately stop the 3B2 and the 3B1 CWPs. Ramp power down to ≤ 60% using ONOP-100.

D. Immediately stop the 3B2 CWP. Ramp power to ≤ 60% using ONOP-100 then stop the 3B1 CWP.

Question source: Turkey Point requal question bank 71021520301-ORQ; ORQ#610

Distractor analyais:
A: Correct, Applicant must realize that loss of the Circ Water Intake is inevitable applying ONOP-011 fold out page item #3 directing the reactor tripped if unable to maintain 2 CWPs running while < 60% or 3 CWPs running while > 60%. If the trends continue, as stated in the stem, at least 3 CWPs will have to be stopped per ONOP-011 fold out page item #1 since the Intake Well waterfall will be greater than 2.5 feet.
B: Incorrect, CWPs should be immediately stopped when a waterfall of >2.5 feet is present and not wait until after the load reduction.
C: Incorrect, Correct if able to maintain at least 2 CWPs running, from the stem the loss of at least 3 CWPs is inevitable. This could only be consider as a temporary fix to the situation presented.
D: Incorrect, Correct if conditions at the Intake was stable at the presented waterfall values.

Answer: A

56. 076AA2.01 1

Unit 3 is at 100% reactor power. Letdown flow is currently 105 gpm with a 45 gpm and a 60 gpm letdown orifice in service.

Which ONE of the following describes the required actions for a high radiation alarm on PRMS channel R-20, Reactor Coolant Letdown Monitor?

A. Increase RCS cleanup flow to 120 gpm by adjusting letdown orifices and charging pumps.

B. Decrease letdown flow to 60 gpm and monitor PRMS channel R-20 response.

C. Request a radiochemical analysis of the RCS for fission product concentration and gross activity and request a survey of the letdown line.

D. Reduce power as required to maintain less than 90% of the allowable Technical Specifications 3.4.8 limit of 100/E.

Distractor analysis:
A: Incorrect, This is performed if the high RCS activity is confirmed from an RCS sample.
B: Incorrect, Note in ONOP-041.1 states that letdown flows above 60 gpm can result in alarms.
C: Correct, The applicant must know that the R-20 alarm does not in itself confirm the high RCS activity due to the detector location and features, a sample must be taken to confirm high RCS activity. ONOP-041.4, step 5.1.
D: Incorrect, This is performed if the high RCS activity is confirmed from an RCS sample.

Answer: C

57. 076K3.05 1

Unit 4 is in Mode 5 and all loops are filled. The following equipment is out of service:

- RHR loop 'A'
- '4C' ICW pump
- '4C' CCW pump

Which ONE of the following will result in a loss of RHR as required by ONOP-050, "Residual Heat Removal System"?

Failure of the:
A. '4A' EDG.

B. '4D' 4Kv bus.

C. '4A' CCW pump.

D. '4B' ICW pump.

Distractor Analysis:
A: Incorrect, 4A EDG does not power the required RHR loop.
B: Incorrect, 4D Kv bus powers the C ICW pump which is not required.
C: Incorrect, 4A CCW pump is not the required pump for being powered from the 4B 4Kv bus
D: Correct, OP-050 step 4.5 has requirements for RHR in Mode 5. Loss of the 4B ICW pump will result in a loss one of the required RHR loops related support equipment that is powered from the same electrical source (4Kv bus) and an operable EDG.

Answer: D

58. 078A4.01 1

Unit 3 is operating at 100% power

Annunciator I-6/2, Instr Air Compressor Trouble, alarms.

The control room operator notes that PI-3-1444, Unit 3 Instrument Air Pressure Indicator is slowly decreasing and begins to increase at approximately 95 psig and continues to increase to 110 psig.

Note: Assume air demand remains constant

Which ONE of the following describes the current status of the Instrument Air Compressors?

A. The ELECTRIC LEAD compressor has tripped, the ELECTRIC LAG compressor failed to load, the DIESEL LAG compressor is supplying instrument air and the DIESEL STANDBY compressor is in standby.

B. The ELECTRIC LEAD compressor is running, the ELECTRIC LAG compressor is running, the DIESEL LAG compressor is not running and the DIESEL STANDBY compressor is in standby.

C. The ELECTRIC LEAD compressor has tripped, the ELECTRIC LAG compressor is running and supplying instrument air, the DIESEL LAG compressor is not running and the DIESEL STANDBY compressor is in standby.

D. The ELECTRIC LEAD compressor is running, the ELECTRIC LAG compressor failed to load, the DIESEL LAG compressor failed to start and the DIESEL STANDBY compressor is running.

Enabling Objective #2, #6 and Terminal Objective #1 from Instrument Air System Lesson Package 6900145 (SD-155).
Ref:
Turkey Point
Instrument Air control bands lesson package 6910145, page 13
Instrument Air ARP I 6/2 Instr air compressor trouble

Distractor analysis:
A: Correct, the alarm is actuated by compressor trip, not actual instrument air pressure value. Air pressure can decrease below 99+/- 2.5 psig only if electric lead trips and electric lag fails to load. In this case, diesel lead starts at 96+/- 2.5 psig and begins cycling between 104 and 110 psig.

B: Incorrect because no compressors are tripped and therefore the alarm would not annuciate.

C: Incorrect because air pressure should not drop below 99 psig with the lag

compressor loading and should not go above the lag compressor unload point of 105 +/- 2.5 psig

D: Incorrect because no compressor has tripped and air pressure did not get low enough to start the diesel lag compressor.

Setpoints (+/- 2.5 psig)
Electric lead load/unload 104-110 psig
Electric lag load/unload 99-105 psig
Diesel lag start 96 psig load/unload 104-110 psig
Diesel stby start 90 psig load/unload 104-110 psig

Answer: A

59. 103A3.01 1

Which ONE of the following describes the complete action(s) an AUTOMATIC safety injection signal will have on the Unit 3 Containment systems?

A. Close all containment isolation Phase 'B' valves, stop the containment purge fans, and start the 'A' and 'C' ECCs.

B. Close all containment isolation Phase 'A' valves, stop the containment purge fans, and start the 'A' and 'C' ECCs.

C. Close all containment isolation Phase 'A' valves, start the containment purge fans, and stop the 'A', 'B', and 'C' ECCs.

D. Close all containment isolation Phase 'B' valves, stop the containment purge fans, and start the 'A', 'B', and 'C' ECCs.

Question Source: Turkey Point exam bank Q#1.1.24.29.6.12,M
Enabling Objective: EO#6 of Lesson Plan LP6902129

Distractor Analysis:
A: Incorrect, Phase B does not actuate from an S signal.
B: Correct, SD-029, Containment Ventilation and Heat Removal Systems.
C: Incorrect, Containment purge fans stop and ECCs start.
D: Incorrect, Phase B does not actuate from an S signal and all three ECCs do not start only one per train.

Answer: B

60. G2.1.22 2

Which ONE of the following Mode changes requires at least two (2) mode determination parameters to change?

(Mode determination parameters are those defined by Technical Specifications Definitions.)

A. Going from Mode 1 to Mode 2.

B. Going from Mode 5 to Mode 4.

C. Going from Mode 3 to Mode 2.

D. Going from Mode 5 to Mode 6.

Enabling Objective: EO#1 of Lesson Plan LP6902518

Reference Technical Specification Definitions Table 1.2.

Distractor Analysis:
A: Incorrect, Difference between Mode 1 and Mode 2 requires only % Rated Thermal Power to change.
B: Incorrect, Difference between Mode 5 and Mode 4 requires only Average Coolant Temperature to change change..
C: Incorrect, Difference between Mode 3 and Mode 2 requires only Reactivity Condition, Keff, to change.
D: Correct, Difference between Mode 5 and Mode 6 requires both Reactivity Condition, Keff, and Average Coolant Temperature to change.
Added the words 'at least' to the stem prior to 'two (2)' since going from Mode 5 to Mode 6 also requies the head bolts to be detensioned. (Chief Examiner comment)

Answer: D

61. G2.1.29 1

The inside SNPO is performing 0-OSP-205, "Verification of Administratively Controlled Valves, Locks, and Switches."

Which ONE of the following describes the required "As-found" condition of valve 892A, SI Pump Mini Flow Recirc X-Conn Valve?

Locked closed with:

A. a tan colored lock and secured such that it is incabable of even slight movement.

B. an orange colored lock and secured such that it is incabable of even slight movement.

C. a tan colored lock and secured such that it would require intentional manipulation to allow operation.

D. an orange colored lock and secured such that it would require intentional manipulation to allow operation.

Question Source: Turkey Point 2001 requal exam

Reference: 0-OSP-205, "Verification of Administratively Controlled Valves, Locks, and Switches."
NOTE: Licensee did not provide this reference in initial submittal of reference material.

Answer: D

62. G2.1.32 1

Unit 3 is at 100% power when operators determine 9 smoke detectors are inoperable inside containment.

Which ONE of the following describes the required operator response?

A. Monitor the containment air temperature at least once per 8 hours.

B. Monitor the containment air temperature at least once per hour.

C. Establish a fire watch patrol to inspect the containment within 1 hour.

D. Restore the inoperable detectors to operable status within 14 days.

Question source: Turkey Point requal test bank 69020380302-ORQ; ORQ#177

Distractor analysis:
A: Incorrect,
B: Correct, 0-ADM-016, Section 5.6.3.3.b
C: Incorrect,
D: Incorrect,

Licensee did not provide ADM-016 as part of the reference material therefore, question could not be validated prior to draft exam submittal. Question was last reviewed by the licensee on 12/20/01 according to the requal question bank.

Answer: B

63. G2.2.01 2

The following conditions exist on Unit 4:

- The Unit is in Mode 3.
- The reactor trip breakers are closed.
- RCS T_{avg} is 548 ^{o}F.
- RCS pressure is 2235 psig.
- A dilution to the calculated critical boron concentration is in progress.

Which ONE of the following is allowed per 4-GOP-301, "Hot Standby to Power Operation"?

A. Energization of the Pressurizer backup heaters.

B. Testing of the AFW pumps.

C. Stopping of an operating Reactor Coolant Pump.

D. Withdrawal of the shutdown control rods.

Question Source: Turkey point 1999 NRC Exam

Distractor Analysis:
A: Correct, Allowed by the GOP.
B: Incorrect, Requires power to be 2-3%. Plant is currently being diluted to the critical boron concentration.
C: Incorrect, All reactor coolant loops must be in operation for Mode 3.
D: Incorrect, Reactor is below the POAH, reactivity shall not be changed by rod withdrawal and boron dilution at the same time.

Deleted the word 'obtain' from the fifth condition stated in the stem. (Chief Examiner comment)

Answer: A

64. G2.2.11 1

You are the extra operator and will be the sponser of a Temporary System Alteration (TSA).

In accordance with ADM-503, Control and Use of Temporary System Alterations, process, which ONE of the following are you responsible for performing?

A. Ensuring the TSA will not result in a violation of Technical Specification.

B. Take the necessary action to ensure that the planned TSA will not conflict with existing plant conditions, including any existing TSAs.

C. Perform a design evaluation on the TSA that shows the design will perform its intended function.

D. Ensure the TSA is entered in the TSA log and file.

Distractor analysis:
A: Incorrect, Duty of the NPS; ADM-503, Step 3.3.1.1.
B: Correct, ADM-503, Step 5.2.1.3.
C: Incorrect, System Engineer; ADM-503, Step 3.2.1.
D: Incorrect, Shift Engineer; ADM-503, Step 3.4.1.1.

Answer: B

65. G2.3.01 1

With the plant in Mode 5, Cold Shutdown, a small accessible area in containment has a general area dose rate of 1150 mrem/hr. The top of this area cannot be enclosed for the purpose of locking the area.

Which ONE of the following describes the minimum additional measures (other than appropriate posting) that must be executed for this area?

A. Must be barricaded off, conspicuously posted, and a flashing light must be activated.

B. Must be roped off and the entrance to the containment must be kept locked.

C. Must be barricaded off, conspicuously posted, and a guard posted at the entrance to the this area.

D. A flashing light must be activated and the entrance to containment must be kept locked.

SOURCE: Farley 2001 NRC Exam
Enabling Objective: EO#3 of Lesson Plan LP6900519

A - Correct, Per TS 6.12 High Radiation Area section 6.12.2, which states: For individual high radiation ares accessible to personnel with radiation levels of greater than 1000 mrem/hr and less than 500 rads/hr that are located within large ares, such as PWR containment, where no enclosure exist for purposes of locking, and where no enclosure can be reasonably constructed around the individual area, that individual area shall be barricaded, conspicuously posted, and a flashing light shall be activated as a warning device.
B - Incorrect, This is correct if the entire containment was affected by radiation level in excess of 1000 mrem/hr, this would be too restrictive.
C - Incorrect, This would result in unnecessary exposure to the guard.
D - Incorrect, This is correct if the entire containment was affected by radiation level in excess of 1000 mrem/hr, this would be too restrictive.

Answer: A

66. G2.3.11 1

The following conditions exist:

- Both units are in Mode 5.
- 4A1 Circulating Water Pump is the only circulating water pump which is running.
- PRMS R-18, Liquid Effluent Monitor, is out of service.
- A liquid release is in progress.

The following occurs:

- 4A1 Circulating Water Pump trips.

Which ONE of the folowing identifies the required operator response to the loss of the 4A1 Circulating Water Pump?

A. Verify two ICW pumps running and continue the release.

B. Manually isolate the liquid release by shutting RCV-018.

C. Continue the release while starting another Circulating Water Pump.

D. Verify the liquid release has automatically isolated.

Question Source: Turkey Point 1998 NRC Exam

Distractor Analysis:
A: Incorrect, Discharge of RCV-018 is into the circ water system not the ICW.
B: Correct, Operator must manually isolate RCV-018 since R-18 is out of service and FSAR requires at least 157,000 gpm of circ water flow.
C: Incorrect, Release without circ water flow is violation of FSAR.
D: Incorrect, With R-18 out of service RCV-018 will not automatically isolate.

Answer: B

67. G2.4.09 1

The following conditions exist on Unit 3 while on RHR:
- RCS temperature is 300 ^{O}F.
- RCS pressure momentarily spikes to 550 psig.

The RCO took the following actions:
- Verified the amber and blue lights for MOV-750 and MOV-751, Loop C RHR Pump Suction Stop Valves, were lit.
- Depressed and released the override pushbuttons to open MOV-750 and MOV-751.
- Determined that MOV-750 and MOV-751 continued to stroke closed.

Which ONE of the following describes why MOV-750 and MOV-751 continued to stroke closed?

A. The Overpressure Mitigating System (OMS) mode selector switches are in the NORMAL position.

B. The MOVs must stroke to the fully closed position before they will automatically reopen.

C. The RCS pressure was too high when the override pushbuttons were depressed.

D. The override pushbuttons need to be held in the depressed position until the yellow lights go out.

Question source: Turkey Point question bank Q# 1.1.25.10.4.19,M

Distractor analysis:
A: Correct, OMS mode selector switch is not placed into the LO press OPS until RCS is less than 285 ^{O}F (OP-041.4, Step 5.2.2.12). Override pushbutton does not function unless the OMS is in LO press mode.
B: Incorrect, This is not how the override pushbutton worksalthough many MOVs work this way.
C: Incorrect, Pressure spiked and did not remain high as stated in the stem.
D: Incorrect, This is typical of many controllers but not required for the override pushbuttons.

Answer: A

68. G2.4.20 1

While performing EOP-ES-1.3, "Transfer To Cold Leg Recirculation," and after placing the control switches to the CLOSE position for the RHR suction from the RWST valves (MOV-862A and MOV-862B) the ANPS reads the following CAUTION:

"DO NOT CONTINUE until RHR pump suction is isolated from the RWST"

Which ONE of the following describes the consequences of continuing in ES-1.3 before the MOV-862 A&B valves are fully closed?

A. If the containment pressure is greater than the RWST pressure, contaminated sump water will flow from the containment to the RWST.

B. If an RHR pump is restarted before the MOV-862 A&B valves are fully closed, the RHR pump will not have adequate NPSH.

C. If high head SI pumps are running, they will short circuit flow back to the RWST, robbing the reactor of cooling flow.

D. The RHR pumps are interlocked with MOV-862 A&B such that the RHR pumps cannot be started until the MOV's are completely closed.

Question Source: Turkey Point 2000 NRC Exam.
Enabling Objective EO#4 of Lesson Plan LP6902330

Distractor Analysis:
A: Correct, LP6902330 page 24, step 19.
B: Incorrect, NPSH is provide through the MOV-862's from the RWST and via MOV-860's and MOV-861's once transfered to the sump.
C: Incorrect, HHSI pumps are pumping directly into the RCS and only recirculating back to the RWST.
D: Incorrect, MOV-750 and MOV-751, RHR suctions from the RCS, are interloccked with MOV-862's not the RHR pumps.

Answer: A

69. W/E02EA1.1 1

Unit 3 operators have entered ES1.1, "SI Termination," and are preparing to start a Main Feedwater pump and secure the Auxiliary Feedwater (AFW) pump.

The Following conditions exist:
- 'A' AFW pump is running
- 'B' and 'C' AFW pumps are stopped and aligned for auto start.
- The NWE locally starts the '3A' Steam Generator Feedwater Pump (SGFP).

The BOP verifies that the '3A' SGFP is running but fails to "red flag" the '3A' MFP control switch semaphore.

Which ONE of the following describes the effect of the BOP's failure to "red flag" the '3A' SGFP control switch semaphore?

A. AFW pump automatic start capability will be degraded.

B. 'B' and 'C' AFW pumps will automatically start.

C. The '3A' SGFP will not trip from a Safety Injection (SI) signal.

D. The '3A' SGFP will automatically trip in 50 seconds.

Question Source: Turkey Point question bank Q# 1.1.24.23.6.24,M

EOP-ES-1.1 step 31 checks if AFW should be stopped an directs the starting of a SGFP per OP-074. The NOTE prior to step 13.b of OP-074 illistrates that failure to match the flags in the control room for the SGFP just started will not enable the SGFP trip AFW start signal from that SGFP.

DISTRACTOR ANALYSIS:
A: Correct.
B: Incorrect, Tripping of the SGFP if the flags are matched will cause the starting of the AFW pumps, failure to match the flage does not enable this feature.
C: Incorrect, SI signal trips the breaker to the SGFP independent of the control room switch position.
D: Incorrect, 50 second trip is an anti pumping feature.

Answer: A

70. W/E03EK3.1 1

-Unit 4 has had a Small Break LOCA.
-The Crew has entered 4-EOP-ES-1.2 Post LOCA Cooldown and Depressurization, and is performing the step for checking if SI Accumulators Should be Isolated.

Which ONE of the following describes the reason(s) for isolating the Accumulators?

A. To prevent gas binding in the S/Gs, or a hard bubble in the Pressurizer.

B. To prevent gas binding in the RCPs, when started, or a hard bubble in the reactor vessel head.

C. To prevent gas binding in the running charging pumps, and loss of NPSH for the RHR pumps.

D. To prevent injection of the accumulator in to the RCS, and thereby preventing an excess cooldown.

LP 6902329 EOP-ES-1.2 Post LOCA Cooldown and Depressurization. Enabling objective # 4.
Modified from a Farley Bank question.

A. Correct, using the basis information provided in LP 6902329.

B. Incorrect, Gas binding in the RCPs is not a concern.

C. Incorrect, In this mode of operation gas binding of the charging pumps is not a concern, the Nitrogen would come out of soulution in the VCT, or the source of water to the pumps would be the RWST, or the containment sump.

D. Incorrect, The accumulators may have already injected into the RCS, the concern is Nitrogen injecting into the RCS.

Answer: A

71. W/E09EG2.4.48 1

-Unit 3 has had a Reactor Trip due to a loss of off site power.
-A Natural Circulation Cooldown has been started in accordance with 3-EOP-ES-0.2 "Natural Circulation Cooldown.
-Based on Core Exit thermal couples subcooling indicates 218 ^{O}F.
-RCS Cold leg temperatures have not changed over the last 30 minutes.

Which ONE of the following describes the correct actions to be taken?

A. Dump Steam to the condenser at a faster rate to increase natural circulation.

B. Stop RCS depressurization to increase subcooling and dump steam to the condenser at a faster rate to increase natural circulation .

C. Dump Steam to atmosphere at a faster rate to increase natural circulation.

D. Stop RCS depressurization to increase subcooling, and dump steam to atmosphere at a faster rate to increase natural circulation.

Turkey Point Lesson Plan LP-6902324 Enabling objectives # 3 and 4.

A. Incorrect, first the crew should stop depressurizing the RCS and then increase the cooldown, Steam dumps will not work after a loss of off site power.

B. Incorrect, unable to dump steam to the condenser after an LOOP.

C. Incorrect, RCS depressurization should be stopped first.

D. Correct, RCS depressurization should be stopped first, and then steam dumped to the atmosphere to increase natural circulation.

Answer: D

72. W/E11EG2.4.18 1

Which ONE of the following describes the mitigating strategies contained in ECA-1.1, "Loss of Emergency Coolant Recirculation".

A. Minimizing the depletion of the RWST, Maximizing Subcooling, determination of minimum containment spray requirements.

B. Maximizing Subcooling, minimizing the depletion of the RWST, and depressurization of the RCS to minimize break flow.

C. Minimizing the depletion of the RWST, determination of minimum containment spray requirements, and depressurization of the RCS to minimize break flow.

D. Maximizing Subcooling, determination of minimum containment spray, and depressurization of the RCS to minimize break flow.

Modified from a Bank Question # 1.1.26.32.1.3.M
LP 6902332 3/4-EOP-ECA-1.1 Loss of Emergency Coolant Recirculation, Enabling objective 4.

A. Incorrect, ECA-1.1 does not attempt to maximize subcooling.

B. Incorrect, ECA-1.1 does not attempt to maximize subcooling.

C. Correct, these are the mitigating statigies used by ECA-1.1.

D. Incorrect, ECA-1.1 does not attempt to maximize subcooling.

Answer: C

73. W/E12EK1.3 1

-Unit 3 has had a Reactor Trip and Safey Injection, 20 minutes ago.
-RCS Cold leg temperature is 475 ^{O}F.
-The crew has entered 3-EOP-ECA-2.1 Uncontrolled Depressurization of all Steam Generators.
-All steam generator levels are 4% narrow range.

Which ONE of the following describes the correct actions for controlling AFW flow.

A. Reduce AFW flow to all three steam generators to 25 gpm each.

B. Contol AFW flow to all three steam generators to maintain RCS cooldown to less than 100 ^{O}F/hr.

C. Isolate AFW to the Steam Generators with the lowest pressure, and control AFW flow to the remaining Steam generator to limit cooldown to less than 100 ^{O}F/hr

D. Establish AFW to all steam generators, feed to maintain steam generator levels between 6% and 50%.

LP 6902335 EOP-ECA-2.1, Uncontrolled Depressurization of All S/Gs Enabling Objective # 3.

A. Incorrect, This would be correct if RCS cooldown had exceeded 100 degrees F in an hour.

B. Correct, AFW should be throttled to minimize cooldown to , 100 degrees F in an hour.

C. Incorrect, ECA 2.1 does not direct the operator to isolate AFW.

D. Incorrect, AFW should be throttled to minimize cooldown of the RCS.

Answer: B

74. W/E13EA2.1 1

- Unit 3 has had a Reactor trip from 100% power.
- "A" SG NR level is 5%; "B" SG NR level is 0%; "C" SG NR level is 16%.
- "C" SG WR levels are 81%.
- "A" &" "C" SG PORV's are cycling to maintain SG pressure.
- The "B" SG PORV is inoperable.
- One "B" SG safety is cycling 60 psig above its design setpoint.
- AFW flow indicates: 125 gpm on "A" SG, 110 gpm on "B" SG, and 115 gpm on "C" SG.
- Containment conditions are normal.

Which ONE of the following is the correct procedure to address these conditions?

A. 3-EOP-FR-H.1-"Loss of Secondary Heat Sink."

B. 3-EOP-FR-H.2-"Response to Steam Generator Overpressure."

C. 3-EOP-FR-H.3-"Response to Steam Generator High Level."

D. 3-EOP-FR-H.4-"Response to Normal Steam Release Capabilities."

LP-6902337 EOP-FR-H1,2,3,4,&5, enabling objective #1
Modified from Surry NRC Exam 2002 question.

Distractor Analysis:
A. Incorrect, total AFW flow is greater than 345 gpm, and one narrow range level is greater than 6%.

B. Correct, one SG safety is cycling 60 psig above its design setpoint (1075 + 60 = 1135 psig) this is greater than the entry conditons for H-2 of 1130 psig.

C. Incorrect, Wide range level indicates greater than 80% the entry conditions use the narrow range level.

D. Incorrect, This would be the correct procedure to enter if the steam generator pressure was between 1080 and 1130 psig.

Answer: B

75. W/E15EK3.1 1

3- EOP- FR-Z.2 (Response to Containment Flooding) Step #1 states: "Try to identify unexpected source of water to containment." This is based on a water level greater than the design basis flood level as provided by water from the RWST, SI Accumulators and what other sources?

A. Component cooling water, intake Cooling Water, Unit 4 RWST, main steam and feedwater.

B. Unit 4 RWST, main steam, feedwater, and primary makeup water and component cooling water.

C. Main steam, feedwater, intake cooling water and primary makeup water,and component cooling water.

D. Intake cooling water, primary makeup water, main steam, Unit 4 RWST, and feedwater.

LP 6902338 EOP-FR-Z.1, Z.2 and Z.3 Enabling Objective # 4.

A. Incorrect, Intake cooling is not a source of water in containment.

B. Correct, These are sources of water that could raise containment level.

C. Incorrect, Intake cooling is not a source of water in containment.

D. Incorrect, Intake cooling is not a source of water in containment.

Answer: B

1. 001A2.10 1

Unit 3 is operating at 100% steady state power when the following annunciator is received:

- B-8/6, ROD CONTROL SYSTEM GROUND.

Which ONE of the following describes the effect on the control rod system and the operator actions required?

A. Loss of power to the CRDMs is imminent; trip the reactor and enter 3-EOP-E-0, "Reactor Trip or Safety Injection."

B. Control rods will be unaffected although one MG set has tripped; verify MG output voltage is set at 260 volts.

C. Control rods will be unaffected; shutdown one of the MG sets using 3-OP-028, "Control Rod Drive M-G Set Operation.

D. Loss of power to the CRDMs is imminent; shutdown using 3-GOP-103, "Power Operation to Hot Standby."

Enabling Objective: EO#2 and EO#6 of Lesson Plan LP6902105

Distractor Analysis:
A: Incorrect, Loss of power to the CRDMs is not assured and a reactor trip is not warranted.
B: Incorrect, Annunciator B-8/5, ROD CONTROL MG SET TRIP would indicate the loss of one MG set.
C: Correct, One MG set is capable of carrying the entire rod control system load. Actions of annunciator B-8/6 requires one MG set to be secured at a time to isolate the ground.
D: Incorrect, Loss of power to the CRDMs is not assured, a reactor shutdown is not necessary.

Answer: C

2. 002A2.04 (R) 1

Unit 3 is at 100% power with all systems and plant parameters in their normal configuration.

The following events occur:
- '3C' Steam Generator main steam line breaks causing a reactor trip and SI actuation.
- '3C' Steam Generator completely depressurizes.
- Containment pressure peaks at 26 psig.
- '3A' and '3B' Steam Generator levels drop below the narrow range.

Which ONE of the following describes the correct operator response?

Isolate AFW flow to the '3C' Steam Generator:

A. while performing E-0, Reactor Trip or Safety Injection. Increase AFW flow to the '3A' and '3B' Steam Generators.

B. while performing E-0, Reactor Trip or Safety Injection. No additional AFW flow adjustments will be necessary.

C. when transition is made to FR-Z.1, Response to High Containment Pressure. No additional AFW flow adjustments will be necessary.

D. when transition is made to FR-H.1, Responses to Loss of Secondary Heat Sink. Increase AFW flow to the '3A' and '3B' Steam Generators.

Question source: Turkey Point requal question bank 69023210501-ORQ; ORQ#624
Enabling Objectives: EO#3 & EO#5 of LP6902321

Distractor Analysis:
A: Correct, E-0 fold out page item #2 state to isolate AFW flow to the faulted S/G and maintain feedwater flow > 345 gpm until narrow range levels in at least one S/G is >6%.
B: Incorrect, AFW flow will need to be adjusted to turn and increase levels in the '3A' and '3B' Steam Generators.
C: Incorrect, FR-Z.1 will be transition to if steps 1-29 of E-0 are complete and a RED path condition exists (ORANGE path exists per F-0 at this time). E-0 fold out page criteria for isolating the faulted S/G and increasing AFW flow will occur first.
D: Incorrect, FR-H.1 will be transition to if steps 1-29 of E-0 are complete and a RED path condition exists (YELLOW path exist per F-0 at this time). E-0 fold out page criteria for isolating the faulted S/G and increasing AFW flow will occur first.

Answer: A

3. 003G2.1.20 (R) 1

Unit 3 has performed a seal package replacement for the A RCP and are ready to run the A RCP.

Which ONE of the following requires immediate tripping of the RCP in accordance with 3-OP-041.1, REACTOR COOLANT PUMP?

A. An RCP bearing temperature indicates 230 ^{o}F and increasing slowly.

B. An RCP No 1 seal leak-off temperature has increased to and stabilized at 235 ^{o}F.

C. An RCP starting current decreased to and stabalized at 1043 amps.

D. An RCP No 1 seal Delta P has decreased to 200 psid and decreasing slowly.

When an RCP is started and starting amps do not decrease to below 943 amps the RCP is to be stopped. If other RCP parameters are not in specification then a cross check of RCP parameters shall be considered prior to stopping the RCP.

DISTRACTOR ANALYSIS:
A: Incorrect, Precaution step 4.12.5 of OP-041.1 required the cross check of parameters and does NOT mandate the immediate tripping of the RCP.
B: Incorrect, Incorrect, Precaution step 4.12.6 of OP-041.1 required the cross check of parameters and does NOT mandate the immediate tripping of the RCP.
C: Correct
D: Incorrect, Precaution step 4.12.9 of OP-041.1 required the cross check of parameters and does NOT mandate the immediate tripping of the RCP.

Answer: C

4. 005A2.02 1

Unit 3 is on RHR cooldown with the following conditions:
- RCS pressure is 395 psig.
- RCS temperature is 340 ^{O}F.

The following events occur:
- RCS pressure spikes to 520 psig and returns to 395 psig 10 seconds later.
- The RCO stops the running RHR pump.
- The RCO depresses the interupt pushbuttons for MOV-750 and MOV-751, Normal RHR Suction From Loop Hot Leg.

Which ONE of the following describes the system response and the subsequent actions require by ONOP-050, Loss of RHR?

A. MOV-750 and MOV-751 will reopen. The RCO will verify MOV-744A and MOV-744B are open and will restart the RHR pump.

B. MOV-750 and MOV-751 will reopen. The RCO will verify MOV-744A and MOV-744B are open and will close HCV-758 and FCV-605 and restart the RHR pump.

C. MOV-750 and MOV-751 will continue to close. When fully closed, the RCO will reopen them using the control switches and will verify MOV-744A and MOV-744B are open and will restart the RHR pump.

D. MOV-750 and MOV-751 will continue to close. When fully closed, the RCO will reopen them using the control switches and will verify MOV-744A and MOV-744B are open and will close HCV-758 and FCV-605 and restart the RHR pump.

Enabling Objective EO-4 and Performance Objective PO-6 from 3/4-ONOP-050, Loss of RHR. ECCS LP6902210

RCS pressure increase above 515 psig will cause MOV-750 & 751 to start shutting. If pressure returns below 515 psig, and the interupt buttons are pushed within the 2.5 minute closing time, the valves will go back open. ONOP-050 steps 4 & 5 are then followed to get the RHR pump started again.

DISTRACTOR ANALYSIS:
A: Incorrect, RHR pump is not started until HCV-758 and FCV-605 are closed.
B: Correct
C: Incorrect, MOV-750 & 751 will not continue to close.
D: Incorrect, Correct if pressure went above 525 psi.

Answer: B

5. 005A2.04 (R) 1

Unit 4 is on RHR cooldown in MODE 4 on the way to MODE 5.
- RCS pressure is 395 psig.
- RCS temperature is 300 ^{O}F.

During the construction of scafolding, the instrument air line to the RHR bypass flow control valve, FCV-605, is broken, resulting in loss of air to the valve.

Given this condition which ONE of the following describes the method for continuing RCS cooldown?

A. Fill the Steam Generators to greater than 10% and then open the steam dumps to atmosphere. The RHR pumps will continue to circulate the RCS via HCV-758, RHR heat exchanger outlet.

B. Start the SI pumps for RCS feed and cycle the PORVs open for a bleed path to the PRT. PRT level and pressure are monitored to prevent rupture of the PRT and the RHR pumps continue to circulate the RCS.

C. Open HCV-758, RHR heat exchanger outlet, until flow is between 3500-3700 gpm. Then throttle the RHR heat exchanger CCW outlet valve(s) MOV-749A and/or MOV-749B as required to control the cooldown rate.

D. Direct the SNPO to go to the 10 foot elevation in the RHR Heat Exchanger room and manually control RHR heat exchanger bypass flow control valve, FCV-605, to establish the desired flow rate.

Enabling Objective EO-4 from 3/4-ONOP-050, Loss of RHR.
ECCS LP6902210

Loss of air to FCV-605 will cause the valve to close, thereby forcing all flow through the RHR heat exchangers. CCW flow must then be trottled to control cooldown rate.

DISTRACTOR ANALYSIS:
A: Incorrect, Action if RHR system is lost and plant is heating up.
B: Incorrect, Action if RHR system is lost and S/G's not available.
C: Correct, ONOP-050 steps 7-9
D: Incorrect, ONOP-050 step 8 action assumes that air pressure is still at FCV-605.

Answer: C

6. 013G2.4.9 (R) 2

-Unit 3 is shutdown on RHR.
-RCS pressure is 325 psig.
-RCS Temperature is 250^{O}F.
-A 300 gpm leak has developed in the RCS.
-3-ONOP-041.7 "Shutdown LOCA [Mode 3(Less than 1000 PSIG) or Mode 4]" has been entered.

Which ONE of the following actions should be taken to mitigate the event in progress?

A. Manual safety Inject the plant by depressing either safety injection push button on VPB(1/2).

B. Perform a manual Phase A isolation by depressing both phase A push buttons on VPA(1/2).

C. Manual safety Inject the plant by depressing both safety injection push buttons on VPA(1/2).

D. Perform a manual Phase A isolation by depressing either phase A push button on VPB(1/2).

LP 6902163 Reactor Protection and Safeguards Actuation System, enabling objectives # 5 and 6.

A. Incorrect, the procedure does not direct the crew to manually safety inject by using the push buttons on the control board, it has the team align the required valves and rack in and start safety injection pumps as required.

B. Incorrect, this is the correct action, but at the wrong location.

C. Incorrect, the procedure does not direct the crew to manually safety inject by using the push buttons on the control board, it has the team align the required valves and rack in and start safety injection pumps as required.

D. Correct, this is the signal and actuation required and the correct location to perform.

Answer: D

7. 015A3.03 2

Which ONE of the following correctly describes the behavior of reactor power following a trip from 100% power?

A. Prompt drop to middle of the Intermediate Range, SUR decreases to a constant -1/3 DPM, levels off in the Source Range.

B. Prompt drop to approximately 5% in the Power Range, SUR decreases to a constant -1/3 DPM, levels off in the Source Range.

C. Prompt drop to approximately 5% in the Power Range, SUR decreases to a constant -1/2 DPM, levels off below the Source Range.

D. Prompt drop to middle of the Intermediate Range, SUR decreases to a constant -1/2 DPM, levels off in the Source Range.

Question Source: Turkey point bank question Q#1.1.24.4.6.38,M
Enabling Objective EO#2 of Lesson Plan LP6902104

Distractor Analysis:
A: Incorrect, Initial power drop does not drop to the middle of the IR.
B: Correct, SD004, figure 5 & 23
C: Incorrect, SUR is too large.
D: Incorrect, Initial power drop does not drop to the middle of the IR and SUR is too large.

Distractors C and D modified to eliminate the ambiguous SUR. (Chief Examiner comment)

Answer: B

8. 026AA2.02 (R) 1

-Unit 3 is in mode 5.
-Operators have begun to collapse the bubble in the pressurizer.
-CCW Head Tank Level begins to decrease unexpectedly.

Which ONE of the following describes the component that could be the cause of the leak?

A. An RCP Thermal Barrier Heat Exchanger.

B. The Seal Water return Heat Exchanger.

C. The Non -Regenerative Heat Exchanger.

D. The RHR Heat Exchanger.

Bank Question #1.1.25.29.2.12,M.
LP 6902229 enabling objective # 3.
LP 6902140 enabling objective # 3.

A. Incorrect, a thermal barrier heat leak would cause head tank level to rise.

B. Correct, the seal water return heat exchanger will be at a lower pressure than CCW causing level to lower.

C. Incorrect, the non regenitive heat exchanger will be at a higher pressure.

D. Incorrect, the RHR heat exchanger with a bubble in the pressurizer will be at a higher pressure.

Answer: B

9. 033A2.03 (R) 2

Unit 3 is at 100%

Annunciator H-1/1, SFP Lo Level, alarms

Which one of the following decribes the correct actions to be taken in accordance with ONOP-033.1, Spent Fuel Pit (SFP) Cooling System Malfunction?

A. Verify SFP level, trip the running SFP pump.

B. Verify SFP temperature, commence makeup to the SFP.

C. Verify SFP level, determine the rate of level decrease.

D. Verfiy SFP temperature, secure SFP purification alignment.

Ref: TP ARP H-1/1, SFP Lo Level
TP ONOP-033.1 SFPCS Malfunction
TP lesson plan 6910141, pp. 1 Terminal Objective 1

Distractor analysis:

Answer A is incorrect because the SFP pump is only tripped if it is a rapid level decrease which is not determined.
Answer B is incorrect because checking the temperature will not mitigate the loss of inventory and is not IAW procedural guidance.
Answer C is correct because the immediate action of both the ARP and ONOP is to verify the alarm. Subsequently, the rate of level decrease is determined in order to select the appropriate follow-up action.
Answer D is incorrect for the same reason as B.
Question stem modified to bring the question more in line with the K/A, 'to be taken in accordance with ONOP-033.1, Spent Fuel Pit (SFP) Cooling System Malfunction' added to the stem. (Chief Examiner comment)

Answer: C

10. 033G2.2.3 1

Which ONE of the following describes the power supply to the Unit 3 Emergency Spent Fuel Pool (SFP) cooling pump?

A. 480 volt Load Center 'C'.

B. A temporary motor starter connected to an electrical receptacle in the New Fuel storage room.

C. A transfer switch inside the SFP cooling room selects the power supply between the 'A', 'B' and the Emergency SFP cooling pump.

D. A temporary motor starter connected to an electrical receptacle in the cask wash area.

Question source: Modified from Turkey Point question bank Q# 1.1.24.41.5.15,M

Distractor Analysis:
A: Incorrect, power source for the 'A' and 'B' SFP cooling pumps
B: Incorrect, Correct for Unit 4
C: Incorrect, Transfer switch exists for the 'A' and 'B' SFP cooling pumps
D: Correct, Power source and locations listed in SD 41 page 35

Answer: D

11. 056K1.03 1

Unit 3 is operating at 100% steady state reactor power.
The '3C' Condensate pump is electrically tagged out for motor maintenance.

The '3A' Condensate pump trips on overcurrent.

Which ONE of the following describes the affect on the Steam Generator Feed Pumps (SGFPs)?

A. SGFP '3B' will automatically trip when the '3A' Condensate pump supply breaker opens and '3A' SGFP will trip 5 seconds later.

B. SGFP '3A' and SGFP '3B' will automatically trip when the '3A' Condensate pump supply breaker opens.

C. SGFP '3A' and SGFP '3B' will continue to run as long as the SGFP suction pressure maintains greater than 200 psig.

D. SGFP '3A' will automatically trip when the '3A' Condensate pump supply breaker opens and '3B' SGFP will trip 5 seconds later.

Question source: Turkey Point exam bank Q#1.1.24.22.6.3,M
Enabling Objective EO#6 of Lesson Plan LP6900122

Distractor Analysis:
A: Incorrect, The 3B SGFP will not instantly trip since the 3B Condensate pump breaker is still closed.
B: Incorrect, The 3B SGFP will not instantly trip since the 3B Condensate pump breaker is still closed.
C: Incorrect, The 3A SGFP will instantly trip since the logic diagram is satisfied by 3B SGFP breaker being closed, 3A Condensate pump tripping open on overcurrent, and 3C Condensate breaker being open due ti electrical maintenance.
D: Correct, The 3A SGFP will instantly trip since the logic diagram is satisfied this initiates the 5 second TDC which then results in the tripping of the 3B SGFP. (See Logic Diagram for the SGFP figure 10 of System Discription 112.)

Answer: D

12. 058AA2.03 1

-Unit 3 is at 100% power.
-A loss of DC bus 3D23 occurs.
-Offsite power remains available.

Which ONE of the following will be a result of the loss of power.

A. Control power to both PZR PORVs is lost.

B. MSIV's Channel A air solenoid valves de-energize, closing all MSIV's

C. Loss of 'C' AFW pump control and protection.

D. '3A' Emergency Diesel Generator will start but not load.

Bank question 1.1.25.53.2.1.M
LP6902139 120 VAC and 125 VDC Distribution enabling objective # 5.

A. Incorrect, control power to only one PORV would be lost.

B. Incorrect, The B channel air solenoind valves go closed.

C. Correct, IAW 3-ONOP-003.5, the C AFW pump will loose control and protection power.

D. Incorrect, the 3B dislel will be lost.

Answer: C

13. 059A1.03 2

Unit 3 is operating at 100% power
3A Steam Generator Feed Pump trips

Which ONE of the following describes the automatic action that occurs directly due to the Steam Generator Feed Pump trip?

A. Isolates Steam Generator Blowdown

B. A runback reduces load until Rx power is less than 45%.

C. A runback reduces load until 1st stage pressure is less than 45% turbine load.

D. Starts Auxiliary Feedwater Pump A

REF: LP-6900122, Terminal objective 1, enabling objectives 3, 5, 6
TP ONOP-089
TP System Description -112
TP exam bank Question #: 1.1.24.22.6.33,M
Distractor analysis:

Answer A is incorrect because SGFP trip is not one of the Feedwater isolation initiators
Answer B is incorrect because Rx power is not an input to the runback circuit
Answer C is correct because the setpoint is 45% as sensed by main turbine 1st stage impulse pressure
Answer D is incorrect because the controller Man/Auto circuit has no input from the SGFP's

Notes:
Changed answers A and D to be more plausible. A and D would occur if 3A feedpump were the LAST feedpump running. However, the stem starts the transient at 100% power which requires both feedpumps to be operating. The trip of just one feedpump will not auto start AFW nor isolated S/G blowdown. (In response to Chief Examiners comment)

Answer: C

14. 059A4.08 1

-Unit 3 is starting up per procedure 3-GOP-301

-1A Condensate Pump is running

-3A Steam Generator Feed Pump is running

-Switchover from the Feedwater Bypass valves to the Main Feedwater Control valves is in progress.

-As demand is increased on FCV-3-478, feed flow to the 3A Steam Generator does not increase.

Which ONE of the following describes the cause?

A. The Condensate recirc valve has failed open.

B. CV-2900, 1A Feedwater Stop Check valve, diaphragm has failed.

C. 3A Steam Generator Feed Pump recirc valves opened.

D. FCV-3-478, 1A Feedwater Control valve, diaphragm has failed.

Ref: TP LP-6902122, Enabling Objective #6, and Terminal Objective #1
TP System Decription 112, pp. 20
TP Startup Procedure 3-GOP-301, step 5.71.2

Distractor analysis:
A is incorrect because the condensate recirc valve fails closed
B is incorrect because CV-2900 is an air assisted stop check and lack of air would not force it closed with a forward d/p.
C is incorrect because the stem states that the flow remains constant. A drop in feed pressure would cause flow to decrease. (Same is true for A)
D is correct because the FRV fails closed on a diaphragm failure but the controller demand will still increase per operator demand without any valve movement.

Answer: D

15. 061K4.02 2

Operators are performing a Unit 3 startup and are currently preparing to start the first Steam Generator Feed Pump (SGFP). The RCO places the control switch for the '3A' SGFP to START. The '3A' SGFP does NOT start.

Which ONE of the following describes the actions that follow the RCO releasing the SGFP control switch?

A. AFW actuation occurs on both trains of AFW.

B. The '3B' SGFP will receive an auto start signal.

C. A Turbine runback signal will be generated but no runback will occur.

D. The SGFP Turbine runback signal will be defeated.

Question source: Turkey Point requal question bank 69022480310-ORQ; ORQ# 839

Distractor analysis:
A: Correct, Trip of the last SGFP causes AFW auto start when control switch at the control room was used.
B: Incorrect, '3B' SGFP will not be setup for auto start since '3A' SGFP is the first pump being started. The idle SGFP recieves auto start on running pump trip from overcurrent or low lube oil, neither case can be confirmed from the initial conditions.
C: Incorrect, Turbine runback active above 45% power after SGFP start.
D: Incorrect, Turbine runback active above 45% power after SGFP start.

Distractor C changed to one suggested by the Chief Examiner to make it more plausible. (Chief Examiner comment)

Answer: A

16. 068A2.02 1

A liquid release is in progress. You have just been notified by the chemist that the Waste Monitor tank that is being pumped was not recirculated prior to sampling for the release.

Which ONE of the following discribes the actions that should be taken?

A. Increase monitoring of PRMS channel R-18 for any unexpected increase and direct chemistry to take periodic samples.

B. Direct chemistry to sample the release and adjust the alarm setting on PRMS channel R-18 if required.

C. Increase Circulating water flow by starting an additional Circ Water Pump and direct chemistry to take periodic samples.

D. Stop the liquid release in progress and direct chemistry to take required grab samples.

Distractor analysis:
A: Incorrect, R-18 is normally continuously monitored during the release. The discharge should not continue with the posibility of R-18 alarm setpoint in error.
B: Incorrect, Discharge should be stopped. A new representative sample will need to be optained and the R-18 alarm setpoint adjusted if discharge is to be restarted.
C: Incorrect, Increasing Circ water flow will increase the dilution associated with the discharge.
D: Correct, Discharge should be stopped per ONOP-067 and samples taked to verify that the limits of 10CFR20 have not been exceeded.

Answer: D

17. 071G2.4.10 (R) 2

-A Waste gas release is in progress on Unit 3.
-Annunciator H1/4 "PRMS HI RADIATION" alarms.
-R-14 alarm light is lit, and indication is continuing to trend up.
-The SNPO reports that thelights for RCV-14 are as follows

-Red light illluminated.
-Green light illuminated.
-White light illuminated.

Which one of the following describes the correct position and correct action to be taken?

A. RCV-14 is fully open, locally close the waste gas decay tank outlet valve.

B. RCV-14 is fully closed, check waste gas decay tank release flow rate at zero.

C. RCV-14 is still in its last demanded postion, close the waste gas decay tank outlet valve.

D. RCV-14 has had a trip signal and appears stuck, locally close RCV -14 isolation.

LP 6902168 Radiation Monitoring and Protection. Enabling Objective # 5.

A. Incorrect. RCV is intermediate, and the local RCV-14 isolation should be closed.

B. Incorrect. RCV 14 is not closed,and the local RCV-14 isolation should be closed.

C. Incorrect. RCV 14's last demanded postion was closed (from HI Alarm), and the local RCV-14 isolation should be closed.

D. Correct, RCV has had a closed signal, and appears to be open, and the local isolation should be closed.
Changed the wording of distractor D from 'closed signal' to 'trip signal'. (Chief Examiner comment)

Answer: D

18. 071K4.05 1

A waste gas release is in progress with the auxiliary building ventilation system in a normal alignment.

'3B' Motor Control Center (MCC) is deenergized for maintenance.

Which ONE of the following will result in shutting of the gas release flow control valve, RCV-014?

A. '4H' 480 volt load center is inadvertantly deenergized.

B. Power is lost to both exhaust fan dampers, MOV-3419 and MOV-3420.

C. '3D' MCC is inadvertantly deenergized.

D. A high alarm occurs on process radiation monitor R-11 or R-12.

Question Source: Turkey Point question bank Q#1.1.24.50.6.8,M
Enabling Objective: EO#5 of Lesson plan LP6902155 and EO#6 of Lesson plan LP6902150

Distractor Analysis:
A: Correct, Exhaust fan 'A' can be the only exhaust fan operating with MCC '3B' deenergized. Exhaust fan 'A' is powered from '4D' MCC which is powered from '4H' 480 volt load center. Loss of both auxiliary building exhaust fans will result in the shutting of RCV-014
B: Incorrect, Power loss to both dampers will not cause the exhaust fans to trip but will cause annunciator X-4/3, EXHAUST FAN MOTOR TRIP, to alarm.
C: Incorrect, Loss of '3D' MCC will cause the loss of auxiliary building supply fan 'B'.
D: Incorrect, R-14 stack monitor provides the auto trip of RCV-014.

Answer: A

19. 076K3.01 1

The following conditions exist on Unit 3 at 100% power.
- The '3A' ICW pump is out of service.
- The '3B' and '3C' ICW pumps are running.
- The calculated minimum ICW flow through CCW heat exchangers (HX) is 11,000 gpm.

The following events occur:
- The '3B' ICW pump trips due to a bearing failure.
- The following flow exists after the '3B' ICW pump trips:
  - ICW flow through the CCW HXs: 11,200 gpm
  - ICW flow through the TPCW HXs: 8,100 gpm
- TPCW temperatures are 96 ^{o}F.

Which ONE of the following describes the correct operator response?

A. Throttle CCW HX Outlet Spool Piece Bypass valve, 3-50-406, to reduce total ICW flow. Notify the IST coordinator to perform vibration monitoring of the '3C' ICW pump.

B. Throttle TPCW HX Outlet Combined ICW Isolation valve, 3-50-401, to reduce total ICW flow. Notify the IST coordinator to perform vibration monitoring of the '3C' ICW pump.

C. Reduce load using 3-GOP-103, "Power Operation to Hot Standby." Throttle CCW HX Outlet Spool Piece Bypass valve, 3-50-406, to reduce total ICW flow.

D. Reduce load using 3-GOP-103, "Power Operation to Hot Standby." Throttle TPCW HX Outlet Combined ICW Isolation valve, 3-50-401, to reduce total ICW flow.

Question Source: Turkey Point requal Q#71021540402-ORQ ORQ#152
Enabling Objective: EO# 2,3,4 of Lesson Plan LP7102154

Distractor Analysis:
A: Incorrect, Calculated minimum ICW flow through the CCW HX is 11,000 gpm adjusting 3-50-406 alone will not result in total ICW flow less than 19,000 gpm.
B: Correct, Total ICW flow is 19,300 gpm, ONOP-019, step 4 RNO, states that with only one ICW pump flow must be less than 19,000 gpm. TPCW ICW flow is adjusted using 3-50-401 to bring total flow below 19,000 gpm and then the IST must monitor for vibration on the operating ICW pump, OP-019 step 4.20.
C: Incorrect, Load is reduced if ICW flow can not be reduced less than 19,000 gpm, it is not done in conjuction with or prior to attempting to adjust flow.
D: Incorrect, Load is reduced if ICW flow can not be reduced less than 19,000 gpm, it is not done in conjuction with or prior to attempting to adjust flow.

Answer: B

20. 086A4.06 1

Operators are responding to a fire in the Cable Spreading Room (Fire Zone 98). The main Halon tanks automatically discharged and the fire is still not under control.

The fire team leader desires to reinitiate Halon to the area.

Which ONE of the following describes how Halon will be reinitiated?

A. Depress the Halon discharge push button located on local panel C286.

B. Depress the Halon discharge push button located on local panel C288.

C. Place the MAIN/RESERVE switch located on local panel C286 in the RESERVE position.

D. Place the MAIN/RESERVE switch located on local panel C288 in the RESERVE position.

Question source: Turkey Point question bank Q# 71021430402-ORQ ORQ# 705

Disteactor Analysis:
A: Incorrect, Halon has already discharged.
B: Incorrect, Halon has already discharged and this is the incorrect panel.
C: Correct, Step 5.1.6.1 of ONOP-016.8, RESPONSE TO A FIRE/SMOKE DETECTION SYSTEM ALARM.
D: Incorrect, This is the incorrect panel.

Answer: C

21. G2.1.12 (R) 1

Which ONE of the following describes the components which may be aligned to either AFW Train (in accordance with plant procedures and Technical Specifications) in order to maintain dual train redundancy?

A. MOV-1403, AFW Steam supply from 'A' S/G: 'B' AFW pump.

B. MOV-1403, AFW Steam supply from 'A' S/G: 'C' AFW pump.

C. MOV-1404, AFW Steam supply from 'B' S/G: 'B' AFW pump.

D. MOV-1404, AFW Steam supply from 'B' S/G: 'C' AFW pump.

Question source: Turkey Point question bank Q#1.1.24.23.5.25,M
Enabling Objective: EO#1 of Lesson Plan LP6902527

Distractor Analysis:
A: Incorrect, MOV-1403 is a designated Train 2 valve; B AFW pump is a designated Train 2 pump.
B: Incorrect, MOV-1403 is a designated Train 2 valve.
C: Incorrect, B AFW pump is a designated Train 2 pump.
D: Correct, Per T.S. table 3.7-3 Auxiliary Feedwater System Operability, Notes 1 and 2

Answer: D

22. G2.2.12 (R) 1

Unit 3 is in Mode 1 when a review of plant documentation reveals that the last time the required Technical Specification surveillance was performed on any Pressurizer heaters was 120 days ago.

Which ONE of the following describes the actions required by Technical Specifications?

(References provided)

A. Place Unit 3 in Hot Standby within the next 6 hours.

B. Place Unit 3 in Hot Standby with the Reactor Trip Breakers open within 6 hours and place Unit 3 in Hot Shutdown within the following 6 hours.

C. Perform the required surveillances within the next 72 hours or place Unit 3 in Hot Standby within the next 6 hours and in Hot Shutdown within the following 6 hours.

D. Perform the required surveillances within the next 24 hours or place Unit 3 in Mode 3 within the next 6 hours.

Question source: Turkey Point requal question bank 69025240303-ORQ; ORQ#408

Distractor analysis:
A: Incorrect, TS 3.0.3 actions.
B: Incorrect, TS 3.4.3 action b. with inoperable Pressurizer.
C: Incorrect, TS 3.4.3 action a. with only one group of heaters operable.
D: Correct, TS 4.0.3 failure to meet surveillance requirement for pressurizer heaters (92 days) and 25% extention (115 days allowed by TS 4.0.2) actions.

Answer: D

23. G2.3.10 (R) 1

Given the following conditions at a work site:

- Airborne activity is 3 DAC
- Radiation level is 40 mrem/hr
- Radiation level with shielding is 10 mrem/hr
- Time to place shielding is 15 minutes
- Time to conduct task WITH resporator is 1 hour
- Time to conduct task WITHOUT resporator is 30 minutes

Assumptions:

- The airborne dose with a resporator will be zero.
- A dose rate of 40 mrem/hr will be received while placing the shielding.
- All tasks will be performed by one worker.
- Sheilding can be installed in 15 minutes with or without a resporator.

Which ONE of the following would result in the lowest whole body dose?

A. Place shielding WITH respirator and conduct task WITHOUT respirator.

B. Conduct task WITHOUT respirator or shielding.

C. Conduct task WITH respirator and WITHOUT shielding.

D. Place shielding and conduct task WITH respirator.

Question source: Summer 2000 NRC Exam

Distractor analysis:
A: Correct, 10 mrem (placing shielding) + 5 mrem (conduct task) + 3.75 mrem (airborne) = 18.75 mrem.
B: Incorrect, 20 mrem (conduct task) + 3.75 mrem (airborne) = 23.75 mrem.
C: Incorrect, 40 mrem (conduct task) + 0 mrem (airborne) = 40 mrem.
D: Incorrect, 10 mrem (placing shielding) + 10 mrem (conduct task) + 0 mrem (airborne) = 20 mrem.

Answer: A

24. G2.4.16 (R) 1

Considering the ONOP-004 series:

ONOP-004, Loss of Offsite Power
ONOP-004.1, System Restoration Following Loss of Offsite Power
ONOP-004.2, Loss of 3A 4KV Bus
ONOP-004.3, Loss of 3B 4KV Bus
ONOP-004.4, Loss of 3C 4KV Bus
ONOP-004.5, Loss of 3D 4KV Bus

Which ONE of the following describes the applicability/usage of the ONOP-004 series of procedures in relation to the EOP implementation hierarchy?

A. All 6 of these procedures are applicable after ECA-0.0, Loss of All AC Power, has been entered.

B. Any of these 6 procedures can be performed when needed in parallel with the EOP Network.

C. When a Loss of Offsite Power (LOOP) has occurred and after the immediate actions of E-0, Reactor Trip or Safety Injection, are complete any of these 6 procedures can be performed when needed.

D. Any of these 6 procedures, with the EXCEPTION of ONOP-004, can be performed when needed in parallel with the EOP Network.

Question source: Turkey Point requal test bank 69022630201-ORQ; ORQ#590
Enabling Objectives: EO#2 of LP 6902255, EO#1 of LP 6902256, & EO#1 of LP 6902263

Distractor Analysis:
A: Incorrect, ONOP-004 is not applicable during the performance of any EOPs.
B: Incorrect, ONOP-004 is not applicable during the performance of EOPs.
C: Incorrect, ONOP-004 is not applicable during the performance of any EOPs.
D: Correct, All ONOP-004 procedures can be performed in parallel with the EOP network with the exception of ONOP-004, which is not applicable while in the EOP network.

Answer: D

25. W/E04EA2.2 1

The crew has transitioned to ECA-1.2, "LOCA Outside Containment."

Which ONE of the following parameters is used to determine if the break is isolated, in accordance with ECA-1.2?

A. Pressurizer level increasing.

B. RCS subcooling increasing.

C. Core exit thermocouple temperature decreasing.

D. RCS pressure increasing.

Question source: Turkey Point question bank Q# 1.1.26.33.3.2,M

DISTRACTOR ANALYSIS:
A: Incorrect, PZR level alone is not sufficient indication of break isolation.
B: Incorrect, RCS subcooling increasing is indication of heat removal and possible pressure increase but not a sole indicator of break isolation.
C: Incorrect, Core exit thermocouple temperature decreasing is indication of heat removal not a sole indicator of break isolation.
D: Correct, Step 3 of ECA-1.2

Answer: D

1. 001A2.12 (S) 1

You are the NPS and Unit 3 is performing a reactor startup. The operators have completed the third rod withdrawal of the control banks.

The 1/M plot reveals criticality will occur at D-150.
The ECC calculation predicted criticality at D-76.
Core age is 10,000 MWD/MTU.

Which ONE of the following describes the appropriate actions you should take in accordance with GOP-103, Hot Standby to Power Operation?

(Reference provided)

A. Direct the operators to continue with the reactor startup and pull to criticality.

B. Direct the operators to reinsert control rods and borate the RCS as necessary.

C. Direct the operators to reinsert control rods and dilute as necessary.

D. Obtain permission from the Reactor Engineering Supervisor to continue with the reactor startup and pull to criticality.

Question source: Turkey Point requal question bank 69024070126-ORQ; ORQ#089

Distractor analysis:
A: Correct, HZP for D-76 is 811pcm; HZP for D-150 is 459pcm; difference of 352pcm (between 300 -400pcm) which is GOP-301 step 4.27.3 criteria for continuing with NPS permission.
B: Incorrect, action if projected critical rod position is below the insertion limit GOP-301 step 4.27.1 criteria.
C: Incorrect, action if projected that the reactor can not be made critical at the current boron concentration GOP-301 step 4.27.2 criteria.
D: Incorrect, action if difference of between >400 $\leq$ 500pcm which is GOP-301 step 4.27.4 criteria for continuing with Reactor Engineering Supervisor permission.

Answer: A

2. 002A2.04 (S) 2

-Unit 3 is in mode 5, with RHR in service.
-The running RHR pump has just tripped.
-Efforts to restore either RHR pump to service has failed.
-RCS Temperature is 180 degrees and slowly rising.
-RCS pressure is 320 psig.

Which ONE of the following describes the correct actions in accordance with 3-ONOP-050 "Loss of RHR," for restoring a heat sink for the RCS.

A. Monitor RCS heat-up rate every 15 minutes, isolate containment, check for 2 S/Gs available, continue attempts to restore RHR to service unless RCS exceeds 190 ^{O}F.

B. Align a HHSI pump to take a suction through the RHR pumps and heat exchangers, transferring the RCS heat to the CCW system via the RHR heat exhchangers.

C. Monitor RCS heat-up rate every 5 minutes, close any open containment penetrations, check for secondary heat sink availabity, dump steam as needed to maintain RCS temperatrue.

D. Align a HHSI pump to take a suction on the RWST, using normal charging feed the RCS with RWST and open one PORV to establish a bleed path, evacuate containment.

3/4 ONOP-050 Loss of RHR, enabling objective # 3 and 4.
Modified from two bank questions.

A. Incorrect, heat up rate should be monitored every 5 minutes.

B. Incorrect, This is not a method describeed in the procedure.

C. Correct, These are the actions described in ONOP-050 for these symptoms.

D. Incorrect, These actions would not be taken in accordance with ONOP-050.
08/20/2002, added in accordance with 3-ONOP-050 "Loss of RHR" to stem. (Chief Examiner comment)

Answer: C

3. 003G2.1.20 (S) 1

The crew has just transitioned to 3-EOP-ECA-3.3, SGTR WITHOUT PRESSURIZER PRESSURE CONTROL. The crew has just been informed that the B RCP has become available. It has also been determined that a pressurizer PORV is available.

Which ONE of the following describes the actions that should be taken in accordance with 3-EOP-ECA-3.3?

A. Verify PORV operable and continue with 3-EOP-ECA-3.3.

B. Start B RCP per 3-EOP-ECA-3.3. Transition to 3-EOP-E-3, STEAM GENERATOR TUBE RUPTURE.

C. Establish auxiliary spray and continue with 3-EOP-ECA-3.3.

D. Do NOT start B RCP while in 3-EOP-ECA-3.3. Transition to 3-EOP-E-3 and start B RCP per 3-EOP-E-3.

Enabling Objective #3 from 3-EOP-ECA-3.3 Lesson Plan
TP bank question 1.1.26.45.3.4,M

3-EOP-ECA-3.3 step 4 checks for the conditions for RCP B or C starting and starts the RCP (steps 4-7), verifies normal spray available and then transitions to E-3 per step 8.

DISTRACTOR ANALYSIS:
A: Incorrect, 3-EOP-ECA-3.3 step 9 utilizes the PORV after attempts are made to establish RCPs and normal spray.
B: Correct
C: Incorrect, 3-EOP-ECA-3.3 step 10 utilizes aux spray for pressure control.
D: Incorrect, 3-EOP-ECA-3.3 does not allow transitioning back to E-3 until it has established pressure control.

Answer: B

4. 005A2.04 (S) 2

The following conditions exist on Unit 3:
- RCS temperature is 140 ^{O}F.
- RCS drain down level is 24%.
- The 3B RHR pump is running.
- The Steam Generator manways are removed.

An operator inadvertantly restores the power to 3-MOV-750. While this problem is being resolved an instrument failure causes 3-MOV-750 to close. Valve 3-MOV-750 mechanically binds and will not reopen.

Which ONE of the following describes the procedure(s) and actions needed to mitigate the consequences of this occurrance?

A. Perform the actions of ONOP-041.7, Shutdown LOCA (Mode 3 <1000 psig or Mode 4), to remove decay heat by feed and bleed using the cold leg injection and both PORVs.

B. Perform the actions of ONOP-041.8, Shutdown LOCA (Mode 5 or 6), to remove decay heat by feed and bleed using the cold leg injection and one PORV.

C. Perform the actions of ONOP-050, Loss of Residual Heat Removal. Do NOT perform the actions of other ONOPs until RCS temperature approaches saturation from the heatup rate plot.

D. Perform the actions of ONOP-050 and then transition to ONOP-041.8 to remove decay heat by feed and bleed using the hot leg injection and both PORVs.

Enabling Objective EO-4 and Performance Objective PO-8 from 3/4-ONOP-050.
Reference provided from ONOP-050 and ONOP-041.8.

With S/G unavailable and RHR valve MOV-750 stuck shut, an alternate means of DHR must be established, RCS feed and bleed.

DISTRACTOR ANALYSIS:
A: Incorrect, ONOP-041.7 covers the incorrect Mode for the existing plant conditions.
B: Incorrect, Operators must first complete the steps of ONOP-0505 for the loss of RHR prior to transitioning to ONOP-o41.8.
C: Incorrect, Operator must not wait until the core has reached saturation prior to taking action.
D: Correct.
Question Cog Level changed from M to C/A. (Chief Examiner comment)

Answer: D

5. 013G2.4.9 (S) 1

-Unit 3 is shutdown on RHR.
-RCS pressure is 325 psig.
-RCS Temperature is 250^{O}F.
-A 300 gpm leak has developed in the RCS.
-3-ONOP-041.7 "Shutdown LOCA [Mode 3(Less than 1000 PSIG or Mode 4]" has been entered.

Which ONE of the following describes an action that should be performed to mitigate the effects of a loss of coolant IAW 3-ONOP-041.7, and the reason for that action?

A. Manually Initiate a Safety Injection to maintain proper RCS level.

B. Immediately stop all RHR pumps to conserve inventory.

C. Manually Initiate a Phase A containment isolation to prevent a potential release.

D. Immediately commence an RCS depressurization to limit break flow.

LP 6902265 ONOP-041.7 Shutdown LOCA [Mode 3 (Less than 1000 psig) or Mode 4], enabling objectives # 3 and 4.

A. Incorrect, The procedure does not direct a manual initiation of Safety Injection.

B. Incorrct, the procedure does not direct the operator to immediately secure the RHR pumps, several conditions must be met first, and then it is to prevent damage to the RHR pumps.

C. Correct, Step 6 directs the operator to initiate a Phase A Containment Isolation to prevent a release.

D. Incorrect, An RCS depressurization is called for to refill the pressurizer but it is not immediate.

Answer: C

6. 024AA2.02 1

While Emergency Boration is in progress, MOV-350 closes and can NOT be reopened.

Which ONE of the following operator actions is/are required to resume Emergency Boration from the BASTs?

A. Opening LCV-115B and closing LCV-115C, and removing power from LCV-115C.

B. Opening FCV-113A and FCV-113B, locally opening valve 356, and when 356 is open then closing FCV-113B.

C. Locally opening valve 358.

D. Locally opening valve 356.

Question Source: Turkey Point requal test bank Q# 69022320408-ORQ;ORQ#241
Enabling Objective: EO#3 of Lesson Plan LP6902232

Distractor Analysis:
A: Incorrect, LCV-115B is path from RWST, LCV-115C is path from the VCT.
B: Correct, ONOP-046.1 step 1.d RNO
C: Incorrect, Flow path from RWST
D: Incorrect, This alone will not setup a flow path from the BAST

Answer: B

7. 026AA2.02 (S) 1

Unit 3 is at 100% reactor power when the following events occur:
- Annunciator A-1/1, RCP THERMAL BARR COOLING WATER HI FLOW, alarms.
- PRMS channels R-17A/B have High and Warning alarms.
- CCW Head Tank level is slowly decreasing.

Which ONE of the following describes the correct operator response to the above events?

A. Maintain RCP Thermal Barrier CCW Outlet valve, MOV-626, closed. If the affected RCP's thermal barrier delta P is less than "0", then trip the reactor and stop the RCP.

B. Open RCP Thermal Barrier CCW Outlet valve, MOV-626. If the affected RCP's thermal barrier outlet flow exceeds 28 gpm, then trip the reactor and stop the RCP.

C. Open RCP Thermal Barrier CCW Outlet valve, MOV-626. If the affected RCP's thermal barrier delta P is less than "0", then trip the reactor and stop the RCP.

D. Maintain RCP Thermal Barrier CCW Outlet valve, MOV-626, closed. If the affected RCP's thermal barrier outlet flow exceeds 28 gpm, then trip the reactor and stop the RCP.

Question Source: Turkey Point requal test bank Q#69022420403-ORQ;ORQ#094
Enabling Objective: EO#3 of Lesson Plan LP6902205; EO#4 of Lesson Plan LP6902242; EO#3 & EO#4 of Lesson Plan LP6902229

Distractor Analysis:
A: Correct, MOV-626 auto closes from annunciator A-1/1, then goto ONOP-041.1 and ONOP-067. ONOP-067 step 30 RNO transitions to ONOP-041. ONOP-041.1 step 34 has MOV-626 closed and maintain RCP's thermal barrier delta P greater than "0" otherwise RNO trips the reactor and secures the RCP.
B: Incorrect, MOV-626 is reopened if A-1/1 was caused by CCW pump start.
C: Incorrect, MOV-626 is reopened if A-1/1 was caused by CCW pump start.
D: Incorrect, ONOP-067 step 30 checks RCP's thermal barrier outlet flow $\leq$ 28 gpm if A-1/1 was clear.

Answer: A

8. 033A2.03 (S) 1

Unit 4 is in a refueling outage with fuel movement in the Spent Fuel Pool in progress.

Annunciator H-1/1, SFP Lo Level, has alarmed.

Which ONE of the following discribes the impact and required action?

A. Loss of SFP pump NPSH, verify alarm.

B. Loss of shielding, verify alarm.

C. Loss of SFP pump NPSH, stop fuel movement.

D. Loss of shielding, stop fuel movement.

Ref: TP ARP H-1/1, SFP Lo Level
TP ONOP-033.1 SFPCS Malfunction
TP lesson plan 6910529, pp. 1 Terminal Objective 1

Distractor analysis:

Answer A is incorrect, because the design basis loss of required shielding occurs at a higher pool level than NPSH requirements.

Answer B is correct because the low level alarm coincides with the Tech Spec minimum level for refueling analysis shielding and the ARP and AOP require verification of the alarm as an immediate action.

Answer C is incorrect for the same reason as answer A and stopping fuel movement is not required until after the alarm is verified.

Answer D is incorrect because alarm verification is required prior to stopping fuel movement.

Answer: B

9. 037AA2.16 1

-Unit 3 has a Steam Generator Tube leak in progress.
-Actions of 3-ONOP-071.2 "Steam Generator Tube Leak", are being performed.
-An RCS Cooldown is in progress.

Which one of the following describes where RCS pressure should be maintained during the Steam Generator Cooldown?

A. RCS pressure should be maintained greater than 2000 psig until the cooldown is complete, then immediately reduced to equal steam generator pressure.

B. RCS pressure should be reduced to less than 1950 psig and then the Low Pressure Safety injection should be blocked, RCS pressure should remain constant until the cooldown is complete.

C. RCS pressure should be reduced to less than 1950 psig and the Low Pressure Safety Injection should be blocked, then RCS pressure should be immediately reduced to equal S/G pressure.

D. RCS pressure should be reduced throughout the cooldown by maintaing subcooling at least 60 degrees F by CET's , until RCS pressure equals steam generator pressure.

LP 6902236 3/4-ONOP-071.2, Steam Generator Tube Leak enabling objective # 3.

A. Incorrect, RCS pressure should be reduced as soon as possible to reduce leakage into the S/G.

B. Incorrect, RCS pressure should be reduced to < 1950 psig and the Low pressure SI blocked, however this should be performed prior to the cooldown, pressure should then be reduced to stop leakage flow into the S/G.

C. Incorrect, RCS pressure should be reduced < 1950 psig and the low pressure SI blocked prior to the cooldown, RCS pressure should then be reduced but not immediately, this would cause a loss of subcooling.

D. Correct, RCS pressure should be reduced during the cooldown and should maintain 60 degrees subcooling until RCS equals S/G pressure.

Answer: D

10. 051AA2.02 1

Unit 3 is experiencing a loss of condenser vacuum. The load is being reduced in accordance with GOP-103, Power Operation to Hot Standby. When turbine load reaches 100 MWe, vacuum drops and stabilizes at 21 inches Hg.

Which ONE of the following describes the crew response to this event?

A. Continue the load reduction while performing ONOP-014, Main Condenser Loss of Vacuum.

B. Stop the load reduction, place the standby steam jet air ejectors in service, and attempt to restore vacuum.

C. Trip the reactor and turbine and perform the immediate actions of E-0, Reactor Trip or Safety Injection.

D. Use ONOP-100, Fast Load Reduction, to get the turbine off line as quickly as possible.

Question source: Turkey Point question bank Q# 1.1.44.22.7.1,M

Distractor analysis:
A: Incorrect, correct action if vacuum was still within the limits of ONOP-014 enclosure 1.
B: Incorrect, IAW procedure this action is done prior to initiating the load reduction and only if vacuum is being maintained within the limits of ONOP-014 enclosure 1.
C: Correct, Vacuum is NOT within the limits of ONOP-014 enclosure 1 thus requiring a reactor trip and turbine trip IAW ONOP-014 step 5.4.
D: Incorrect, ONOP-014 authorizes load reduction per GOP-103 and not per ONOP-100. Reactor trip is required.

Answer: C

11. 054AA2.01 1

-Unit 3 is at 65% power.
-'A' S/G Feed Regulating Valve is in manual do to maintenance.
-The operator becomes distracted and 'A' S/G level increases to 81%.

Which ONE of the following will occur as a result of this condition?

A. Reactor trips as a result of a turbine trip, all feed reg valves close in 20 sec. (slow close)

B. Reactor trips directly, all feed regulating valves close in 7sec. (fast close)

C. Reactor trips as a result of a turbine trip, all feed reg valves close in 7sec. (fast close)

D. Reactor trips directly, all feed regulating valves close in 20 sec. (slow close)

SD 063 SYS. 049,063. LP-6902163 enabling objective # 6.

A. Incorrect, the valves will close in 7 sec, (fast close).

B. Incorrect, the reactor trips due to a turbine trip.

C. Correct, the reactor trips as a result of the turbine trip, and the valves will close in 7 sec.

D. Incorrect, the reactor does not trip directly.

Answer: C

12. 058AG2.1.12 1

Both Units are at 100% power with all systems operable except the '4A' EDG which is Out Of Service on a clearance. The '3B1' battery charger fails and all DC bus loads are automatically shifted to the '3B2' battery charger.

Which ONE of the following describes the required operator response?

Restore the '3B1' battery charger to service within:

A. 72 hours or shutdown both Units within the next 12 hours.

B. 2 hours or shutdown both Units within the next 12 hours.

C. 72 hours or shutdown only Unit 4 within the next 12 hours.

D. 2 hours or shutdown only Unit 4 within the next 12 hours.

Question source: Turkey Point requal question bank 69025280301-ORQ; ORQ#600

Distractor analysis:
A: Correct, 3B1 has failed TS 3.8.2.1.b.1) not satisfied. 3B2 does not have 4A EDG operable TS 3.8.2.1.b.2) not satisfied. The conditions for 125-volt DC battery bank 3B and associated full capacity chargers can not be satisfied. TS 3.8.2.1 ACTION a. is applicable since 3B2 is available but not capable of being powered from its associated EDG
B: Incorrect, Actions required for TS 3.8.2.1 ACTION b. Applicable if required battery banks are inoperable or no chargers operable.
C: Incorrect, Correct action but TS 3.8.2.1 ACTION a. is applicable to both units simultaneously.
D: Incorrect, Actions required for TS 3.8.2.1 ACTION b. Applicable if required battery banks are inoperable or no chargers operable. TS 3.8.2.1 ACTION b. is applicable to both units simultaneously.

Answer: A

13. 062AA2.04 1

Unit 3 is at 100% power with the '3C' ICW Pump out of service.

A massive grass influx has resulted in causing ICW/CCW and ICW/TPCW basket strainer clogging.

The OATC reports:
- Component Cooling Water heat exchanger outlet temperature is increasing at a rate of 1 ^{O}F/min and is currectly 118 ^{O}F.
- '3A' and '3B' TPCW heat exchangers are at 4200 gpm ICW flow.
- '3A', '3B, and '3C' CCW heat exchangers are at 3000 gpm ICW flow each.

Which ONE of the following describes the actions that should be taken due to the above conditions?

A. Trip the reactor and Turbine.

B. Reduce turbine load as necessary to maintain temperatures within normal bands.

C. Attempt to reduce CCW heat load and backwash the ICW/CCW basket strainer.

D. Enter into Technical Specification 3.0.3.

Enabling Objectives: EO#2 and EO#5 of Lesson Plan LP6902154

Distractor Analysis:
A: Incorrect, Trip criteria for ICW malfunction, ONOP-019, is CCW cannot be maintained less than 120 ^{O}F.
B: Incorrect, Correct action if temperature problem was with the TPCW.
C: Correct, ICW flow to the CCW HX is being lost due to strainer clogging. CCW HX outlet HTA is imminent (alarms at 120 ^{O}F). Action to reduce CCW heat load and flush the strainer should be initiated.
D: Incorrect, Correct for total flow of ICW dropping below minimum flow rate of 12,400 gpm for more than 5 minutes.

Answer: C

14. 071G2.4.44 (S) 1

You are the NPS and the following sequence of events has occurred:

- At 0200 an unathorized release from the in service Waste Gas Decay Tank occurred.
- At 0210 you as the Emergency Coordinator (EC) requested the on-shift Chemistry Technicial to perform an off-site dose calculation.
- At 0255 the Chemistry Technicial reports that he has completed the off-site dose calculation and is waiting for the Chemistry Supervisor to arrive to verify the data since he believes a limit may have been exceeded.

Which ONE of the following describes the correct action you should take concerning the Protective Action Recommendations (PARs) for this event?

A. Make the PARs using the chemistry technician's values without waiting for the verification.

B. Make the PARs after the Chemistry Supervisor completes the data verification.

C. Make the PARs using the default values.

D. Do not make the PARs at this time.

Question Source: Turkey Point requal exam bank 32020040301-ORQ; ORQ# 541

A: Correct, IAW EPIP-20126 the EC should be given the dose calculations as soon as they are available without waiting for the Chemistry Supervisor verification. The EC must use the most recent data to make the necessary PARs.
B: Incorrect, Waiting for the Chemistry Supervisor review has the potential to result unnecessary exposure to the general public and therefore would not be correct.
C: Incorrect, Default values are used when data is not available.
D: Incorrect, Unnecessary delay of the PARs could result in unnecessary exposure to the general public and therefore would not be correct.
Question replace SRO only question 071G2.4.10 (S). Original question written for 071G2.4.10 (S) did not match the K/A and was not at the SRO only level. It was decided that K/A 071G2.4.10 was not conducive to writting an SRO only question therefore, the K/A was randomly changed to 071G2.4.44. (Chief Examiner comment)

Answer: A

15. G2.1.06 1

You are the Unit 3 Assitant Nuclear Plant Supervisor (ANPS).

An Unusual Event has just been declared by the Nuclear Plant Supervisor (NPS) on Unit 4.

Almost immediately thereafter the NPS becomes incapacitated due to a heart attack.

Which ONE of the following describes who must assume the management duties of the NPS as the Emergency Coordinator?

A. You must call the Nuclear Watch Engineer to assume the duties of the Emergency Coordinator.

B. The position will not be filled until a member of Plant Management Staff arrives to assume the duties of the Emergency Coordinator.

C. You must find a member of the plant staff with an active SRO license not presently on duty in the control room to assume the duties of the Emergency Coordinator.

D. You must assume the duties of the Emergency Coordinator until a member of Plant Management Staff arrives to relieve you.

Question Source: Turkey Point Requal question bank Q#32020010307-ORQ;ORQ#283

Distractor Analysis:
A: Incorrect, ANPS is next in sequence per EPIP-20101, NWE takes the duty if ANPS is not available.
B: Incorrect, Position must be manned until relieved by a member of Plant Management Staff.
C: Incorrect, ANPS is next in sequence per EPIP-20101, any SRO takes the duty if ANPS or NWE is not available.
D: Correct, ANPS is next in sequence per EPIP-20101.

Answer: D

16. G2.1.09 2

You are the NPS on shift. Both units are at 100% steady state reactor power. Your precence has been requested at a meeting that will require you to be away from the Control Room for approximately 60 minutes.

Which ONE of the following describes your responsibilities in relation to the command and control function of Control Room personnel activities?

A. Must carry a portable radio or beeper, be no more that 10 minutes away, ensure that the STA is available to remain in the control room and announce this to the crew.

B. Must be no more that 10 minutes away and ensure that the fire brigade chief is available to remain in the control room and announce this to the crew.

C. Must be no more that 10 minutes away, designate an ANPS as being in charge and announce this to the crew.

D. Must carry a portable radio or beeper, be no more that 10 minutes away, designate an ANPS as being in charge and announce this to the crew.

Enabling Objective EO#2 of Lesson Plan LP6902025

Distractor Analysis:
A: Incorrect, IAW ADM-200 the SRO left in charge can not be the STA.
B: Incorrect, IAW ADM-200 the SRO left in charge can not have fire brigade duties.
C: Incorrect, IAW ADM-200 the NPS must be no more than 10 minutes from the control room.
D: Correct, IAW ADM-200 steps 3.3.25, 5.2.4, and 5.2.4.2.
Distractor C changed to prevent the posibility of also being argued as correct.
from:
'Must carry a portable radio or beeper, designate an ANPS as being in charge and announce this to the crew'
to:
'Must be no more that 10 minutes away, designate an ANPS as being in charge and announce this to the crew.'
(Chief Examiner comment)

Answer: D

17. G2.1.12 (S) 1

Unit 4 is in Mode 3 and Pressurizer pressure is 2235 psig.

Which ONE of the following conditions results in HHSI Loop B hot leg check valve, 4-874B, having acceptable leakage in accordance with Technical Specifications?

(Reference provided)

A. The current measured leakage is 5.5 gpm.

B. The previously measured leakage was 4.0 gpm and the currently measured leakage is 4.6 gpm.

C. The previously measured leakage was 0.5 gpm and the currently measured leakage is 2.5 gpm.

D. The previously measured leakage was 3.0 gpm and the currently measured leakage is 4.4 gpm.

Question Source: Turkey Point test bank Q# 1.1.28.24.3.4,M
Provide Tech Spec 3.4.6.2 as a reference
Enabling Objective EO1 of Tech Spec lesson plan LP6902524

Distractor Analysis:
A: Incorrect, Leak rate is outside the acceptable 5.0 gpm limit per table 3.4-1 note 4 of TS 3.4.6.2.
B: Incorrect, Per table 3.4-1 note 3 of TS 3.4.6.2, leak rate change is too great. Leak rate must be less than 4.5 gpm to be acceptable (5.0-4.0=1.0; 1.0*0.5=0.5; 4.0+0.5=4.5).
C: Correct, Per table 3.4-1 note 2 of TS 3.4.6.2, leak rate change and final leak rate are acceptable. Leak rate must be less than 2.75 to be acceptable (5.0-0.5=4.5; 4.5*0.5=2.25; 0.5+2.25=2.75).
D: Incorrect, Per table 3.4-1 note 3 of TS 3.4.6.2, leak rate change is too great. Leak rate must be less than 4.0 gpm to be acceptable (5.0-3.0=2.0; 2.0*0.5=1.0; 3.0+1.0=4.0).

Answer: C

18. G2.2.12 (S) 1

Unit 3 is currently in Mode 4, Hot Shutdown. At 0900 today, it is discovered that a rountine 24-hour surveillance involving Shutdown Margin was last performed at 0600 on the previous day.

Which ONE of the following describes the response to the failure to perform the surveillance?

A. Technical Specification LCO 3.0.3 must be applied.

B. LCO is declared as not being met and the ACTION statement must be immediately initiated.

C. The surveillance may be delayed until 0600 tomorrow per Technical Specification 4.0.3.

D. The surveillance requirements are satisfied if the surveillance is completed by 1200 today.

REF: TS 4.0.2 (Amendment Nos. 189 and 183)
SOURCE: Farley 2001 NRC Exam, Byron Exam 2000-301

A. Not declared until 25% extension exceed IAW 4.0.2

B. Not declared until 25% extension exceed IAW 4.0.2

C. Per SR 4.03, the ACTION statements may be delayed upto 24 hours to permit completion of the surveillance when the allowable outage time limits of the ACTION requiremetna are less than 24 hours.

D. Correct - Per SR 4.02 there is an allowable extension of not to exceed 25% of the interval.

Answer: D

19. G2.3.10 (S) 2

The following conditions exist on Unit 3:

- The Unit has returned to 100% power following a runback due to a spurious SGFP trip.
- DEQ I-131 is 50 μCi/gm.
- DEQ I-131 has been greater than 1 μCi/gm for > 48 hours.

Which ONE of the following describes the correct operator actions?

A. Reduce power using GOP-103, Power Operation to Hot Standby, to place the Unit in at least Mode 3 with T_{avg} < 500 °F within 6 hours and continue to sample the RCS for Iodine once every 4 hours.

B. Operation at 100% reactor power may continue as long as the RCS is sampled for Iodine once every 4 hours.

C. Reduce power using GOP-103, Power Operation to Hot Standby, to ≤ 80% and continue to sample the RCS for Iodine once every 4 hours. If Iodine is not be restored within limits within 24 hours be in at least Mode 3 with T_{avg} < 500 °F within the next 6 hours.

D. Unrestricted operation at 100% reactor power may continue since no Technical Specification Actions apply.

Question source: Turkey Point requal test bank 69025240310-ORQ; ORQ#180

Distractor Analysis:

A: Correct, TS 3.4.8 ACTION a. Iodine greater than 1 μCi/gm and has been that way for > 48 hours. High activity levels must be reduced in order to prevent excessive levels of radiation and high personnel exposure on containment entries.
B: Incorrect, Required action for Iodine greater than 1 μCi/gm.
C: Incorrect, Reducing power will reduce Iodine production but is not IAW TS Actions.
D: Incorrect, Action if Iodine not above the limit 1 μCi/gm

Question stem, answer and distractor C changed to bring the question more in line with the K/A. Chief Exminer comment stated that the original question was oriented toward TS and not toward procedure action as required by the K/A. (Chief Examiner comment)

Answer: A

20. G2.4.08 1

-A Loss of all AC has occured on Unit 3.
-3-EOP-ECA-0.0 was in progress when an SI signal was received.
-Efforts to restore AC power have not been successful.
-The STA reports the status of the CSF's to be as follows:
-Subcriticality - GREEN
-Core Cooling - RED
-Heat Sink - RED
-Integrity - GREEN
-Containment - GREEN
-Inventory - YELLOW

Which one of the following is the correct procedure to transition to?

A. 3-EOP-ECA-0.2, "Loss of All AC Power Recovery with SI Required."

B. 3-EOP-FR-C.1, "Response to Inadequate Core Cooling."

C. 3-EOP-FR-H.1, "Response to a Loss of Secondary Heat Sink."

D. 3-SACRG-1, "Severe Accident Control Room Guideline Initial Response."

Bank question from Farley NRC Exam 1999.

LP-6902348 EOP-ECA-0.0 Loss of All AC Power, enabling objective # 2.

A. Incorrect, with core exit TCs greater than 1200 ^{O}F the SACRG is the correct proedure to go.

B. Incorrect, FR's are not entered during ECA-0.0 because they assume one train of AC power is available.

C. Incorrect, FR's are not entered during ECA-0.0 because they assume one train of AC power is available.

D. Correct, With a red path on Core Cooling core exit TCs are greater than 1200 ^{O}F, therefore SACRG-1 is the correct procedure to transition to.

Answer: D

21. G2.4.16 (S) 1

Unit 4 is operating at 100% power with the 4A EDG out of service when the following sequence of events occur:

- The operators respond to an ATWS using FR-S.1, "Response to Nuclear Power Generation/ATWS."
- The reactor trips due to a loss of off-site power.
- The 4B EDG locks out and cannot be restarted.

Which ONE of the following describes the correct operator response?

A. Complete the actions of FR-S.1 and then go to ECA-0.0, "Loss of All AC Power." Power will be restored to a 4KV bus using the appropriate ONOP upon completion of ECA-0.0.

B. Complete the actions of FR-S.1 and then go to ECA-0.0. Power will be restored to a 4KV bus using the appropriate ONOP while performing the actions of ECA-0.0.

C. Stop performance of FR-S.1 and immediately go to ECA-0.0. Power will be restored to a 4KV bus using the appropriate ONOP upon completion of ECA-0.0.

D. Stop performance of FR-S.1 and immediately go to ECA-0.0. Power will be restored to a 4KV bus using the appropriate ONOP while performing the actions of ECA-0.0.

Question Source: 1999 NRC Exam
Enabling Objective EO5 of ADM-211 LP#6902320

Distractor Analysis:
A: Incorrect, FR-S.1 assumes at least one emergency 4KV bus has power. When both busses are deenergized, ECA-0.0 takes precedence over FR-S.1. Operators should not wait until completion of ECA-0.0 to repower a bus.
B: Incorrect, FR-S.1 assumes at least one emergency 4KV bus has power. When both busses are deenergized, ECA-0.0 takes precedence over FR-S.1.
C: Incorrect, Operators should not wait until completion of ECA-0.0 to repower a bus.
D: Correct, ADM-211, step 5.1.2 and step 5.13.2 first example; and ECA-0.0, step 10 RNO.

Answer: D

22. G2.4.41 1

The following events occurred on Unit 3 while it was in Mode 1 and Unit 4 was defueled:

1200: A main feed line break destroys all main, standby and auxiliary feed capability.

1205: Operators initiate Bleed and Feed in accordance with FR-H.1, "Response to Loss of Secondary Heat Sink."

1206: A Loss Of Offsite Power occurs. Both EDGs lock out and cannot be restarted.

1208: A Pressurizer Safety valve lifts and fails to reseat.

1209: Operators enter ECA-0.0, "Loss of All AC Power."

1309: 3A 4KV Bus is energized from 3C Bus.

1214: Operators transition to ECA-0.2, "Loss of All AC Power Recovery with SI Required."

Which ONE of the following identifies the highest emergency classification that applies?

A. Unusual Event.

B. Alert.

C. Site Area Emergency.

D. General Emergency.

Question source: Turkey Point question bank. Q# 32020030310-ORQ; ORQ# 580

Distractor Analysis:
A: Incorrect
B: Incorrect
C: Incorrect
D: Correct, EPIP 20101, Enclosure 1, Cat 9.B

Answer: D

23. W/E04EA2.1 1

Operators are responding to a LOCA outside containment using ECA-1.2, "LOCA Outside Containment." The crew efforts to isolate the break are unsuccessful.

Which ONE of the following identifies the procedure ECA-1.2 will direct the operators to transition to?

A. E-1, "Loss of Reactor or Secondary Coolant."

B. ES-1.2, "Post LOCA Cooldown and Depressurization."

C. ES-1.3, "Transfer to Cold Leg Recirculation."

D. ECA-1.1, "Loss of Emergency Coolant Recirculation."

Question source: Turkey point question bank Q# 1.1.26.33.3.3,M

DISTRACTOR ANALYSIS:
A: Incorrect
B: Incorrect
C: Incorrect
D: Correct

Answer: D

24. W/E05EA2.1 1

-A small break LOCA is in progress on Unit 3.
-Containment temperature is 195 ^{O}F.
-Total AFW flow is 300 gpm.
-SG Narrow range levels all indicate 8%.
-Core Exit TCs indicate 735 ^{O}F.
-SI Flow is in progress.
-The crew has reached the transition step of 3-EOP-E-0 "Reactor Trip or Safety Injection", and have diagnosed that the RCS is NOT intact.

Which ONE of the following procedures should be implemented based on the above conditions?

A. 3-EOP-FR-C.2, "Response to Degraded Core Cooling"

B. 3-EOP-E-1, "Loss of Primary or Secondary Coolant"

C. 3-EOP-ES-1.2, "Post LOCA Cooldown and Depressurization"

D. 3-EOP-FR-H.1, "Reponse to Loss of Secondary Heat Sink"

Slightly Modified bank question from TP question and Farley question.
LP 6902337 EOP-FR-H1,2,3,4&5, Heat Sink. Enabling Objective # 1.

A. Incorrect, C.2 is an orange path, and H.1 is a red path.

B. Incorrect, E-1 would be the correct path if a red or orange path was not present.

C. Incorrect, ES-1.2 will be the correct Event Specific procedure to enter after transition from E-1.

D. Correct. The CSFs direct entry in FR-H.1 on a red path.

Answer: D

25. W/E08EA2.1 1

-Unit 4 has had a Large Steam Break 30 minutes ago.
-Safety Injection is still in progress.
-Containment Pressure indicates 45 psig.
-RCS Cold Leg Temperature indicates 310 ^{O}F.
-RCS Pressure is 1450 psig and rising.

Which ONE of the following describes the action(s) that should be taken based on the above conditions?

A. 4-EOP-FR-Z.1 is the only procedure that should implemented until entry conditions are restored to yellow or green path.

B. 4-EOP-FR-P.1 is the only procedure that should implemented until entry conditions are restored to yellow or green path.

C. 4-EOP-FR-Z.1 should be implemented until completion and then 4-EOP-FR-P.1 should be implemented.

D. 4-EOP-FR-P.1 should be implemented until completion, then 4-EOP-FR-Z.1 should be implemented.

Modified from a Farley bank question.
LP- 6902336 EOP-FR-P.1/P.2 Integrity, Enabling Objective # 1.

A. Incorrect, FR-P.1 should be entered first (higher priority orange path), Then FR-Z.1 should be entered.

B. Incorrect FR-P.1 shuld be entered first, Then FR-Z.1 should be entered.

C. Incorrect, FR-P.1 should be entered first (higher priority orange path), Then FR-Z.1 should be entered.

D. Correct, According to the CSF's P.1 should be entered, then Z,1 should be entered. (May want to change until completion to at the step for performing a soak.)

Answer: D