U.S. Nuclear Regulatory Commission

Site-Specific RO Written Examination

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

Instructions

Use the answer sheets provided to document your answers. Staple this cover sheet on top of the answer sheets. To pass the examination, you must achieve a final grade of at least 80.00 percent. Examination papers will be collected 6 hours after the examination begins.

Applicant Certification

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

_____
Applicant's Signature

Results	
Examination Value	_____ Points
Applicant's Score	_____ Points
Applicant's Grade	_____ Percent

1. Given the following plant conditions:

- The unit has just experienced an automatic reactor trip from 100% RTP.
- The turbine failed to trip automatically.
- A manual turbine trip was initiated and the following indications are present:
  - Left Turbine Stop Valve indicates CLOSED
  - All Governor Valves indicate OPEN
- RCS pressure is 1860 psig
- T_{avg} is 542°F
- No SI equipment has actuated

S/G	Pressure	Steam Flows
A	895 psig	0.1 X 10^6 lbm/hr
B	915 psig	0.1 X 10^6 lbm/hr
C	835 psig	1.45 X 10^6 lbm/hr

Which ONE (1) of the following identifies the required operator response IAW PATH-1?

Runback the turbine until....

A. ALL Governor Valves indicate CLOSED AND verify TWO (2) charging pumps running

B. at least the Right Upper and Right Lower Governor Valves indicate CLOSED (all Governor Valves not required to indicate closed) AND verify TWO (2) charging pumps running

C. ALL Governor Valves indicate CLOSED AND manually initiate SI

D. at least the Right Upper and Right Lower Governor Valves indicate CLOSED (all Governor Valves not required to indicate closed) AND manually initiate SI

2. Given the following plant conditions:

   - The plant is at 100% RTP.
   - PC-444J, PZR PRESS, has failed **HIGH**.

   Assuming **NO** operator actions are taken, which ONE (1) of the following completes the following statement?

   The FIRST reactor trip signal will be generated when the reactor protection __(1)__ setpoint is exceeded.

   PCV-455C, PZR PORV, will receive a closed signal once pressurizer pressure lowers below __(2)__ psig.

   A. (1) OTdeltaT

      (2) 2000

   B. (1) Low Pressurizer Pressure

      (2) 2000

   C. (1) OTdeltaT

      (2) 2185

   D. (1) Low Pressurizer Pressure

      (2) 2185

3. Given the following plant conditions:

- A LOCA has occurred.
- RCS pressure is 1100 psig and lowering.
- Containment pressure had peaked at 12 psig.
- The crew is performing actions of EPP-8, Post LOCA Cooldown and Depressurization.

Which ONE (1) of the following identifies the method that will be used to initiate cooldown of the RCS?

Initiate cooldown using the...

A. steam dumps at the maximum achievable rate.

B. steam dumps at no greater than 100°F per hour.

C. S/G PORVs at the maximum achievable rate.

D. S/G PORVs at no greater than 100°F per hour.

4. Given the following plant conditions:

   - A Large Break LOCA has occurred from 100% RTP.
   - Containment pressure is 23 psig and rising.
   - PATH-1 is being implemented.
   - The CRS has directed the RO to trip the RCPs.

   Which ONE (1) of the following is the basis for tripping the RCPs?

   A. Allowing the RCPs to run would hinder Accumulator injection due to turbulent two-phase flow characteristics in loops.

   B. Tripping the RCPs will protect them from overheating due to loss of cooling water.

   C. Allowing the RCPs to run would force more water out of the break and cause core uncovery sooner.

   D. Tripping the RCPs allows the loop seal to clear thus minimizing RCS inventory loss.

5. Given the following plant conditions:

At time 1852
- The plant experienced a reactor trip from 100% RTP.
- 480V Bus E-2 de-energized and operators manually energized the bus from its associated EDG.

At time 1918
- PCV-1716, Instrument Air Isolation to CV, failed closed and Air Operated Valves in Containment are repositioning to their fail position.

Which ONE (1) of the following completes the statement below?

At time 1933, RCP motor bearing temperatures will __(1)__ and RCP seal leakoff temperatures will __(2)__ the associated alarm setpoint.

A. (1) rise

   (2) rise above

B. (1) rise

   (2) remain below

C. (1) remain approximately constant

   (2) rise above

D. (1) remain approximately constant

   (2) remain below

6. Given the following plant conditions:

   - The plant is operating at 100% RTP.
   - RCS Makeup System is properly aligned and an Auto makeup is in progress.
   - The air supply line to FCV-114A, Primary Water Flow Dilute Mode, severed ONE (1) minute ago.

   Which ONE (1) of the following identifies the failed position of FCV-114A and expected alarm?

   FCV-114A will fail __(1)__ and APP-003-D5, BA FLOW DEV, __(2)__ be received.

   A. (1) OPEN

      (2) will

   B. (1) OPEN

      (2) will NOT

   C. (1) CLOSED

      (2) will

   D. (1) CLOSED

      (2) will NOT

7. Which ONE (1) of the following identifies the basis for closing FCV-605, RHR HX Bypass Valve, and HCV-758, RHR HX Outlet Flow To Cold Legs, prior to starting the standby RHR Pump IAW AOP-020, Loss of RHR (Shutdown Cooling), Section E, Loss of RHR Flow or Temperature Control?

   A. Prevent cavitation of the pump.

   B. Reduce the pump starting current and prevent pump runout.

   C. Prevent water hammer damage to the RHR Heat Exchangers.

   D. Control the introduction of cooler water from the stagnant water in the suction and discharge piping of the standby pump.

8. Given the following plant conditions:

   - EPP-1, Loss of All AC Power, is being implemented.
   - The DS Bus has been energized IAW EPP-1, Attachment 6, Restoring AC Power At the DSDG Generator Control Panel.
   - EPP-22, Energizing Plant Equipment Using DSDG, Attachment 1, Energizing Pressurizer Heaters from DS Bus, has been completed and specified heaters energized.
   - PC-444J, PZR PRESS, has **FAILED** to 0% output.

   Which ONE(1) of the following identifies the alternate method to control pressurizer heaters IAW EPP-22 based on the conditions given above?

   A. Operate breakers on Pressurizer Htr Panel #3 Control Group

   B. Operate breaker 52/15B, 480V Bus 3 Main Bkr from the RTGB

   C. Operate breaker 52/12B, 480V Bus 2B-3 Tie Bkr from the RTGB

   D. Operate the PZR Heater Emergency Control Station in the Rod Control Room

9. Given the following plant conditions:

- An ATWS has occurred.
- The crew is performing immediate actions of FRP-S.1, Response to Nuclear Power Generation/ATWS.
- A manual reactor trip using both RTGB pushbuttons was unsuccessful.
- Rods are being inserted in MANUAL.
- IAO and OAO have been dispatched to locally trip the reactor.
- The THINK and Manual Turbine Trip Buttons have been depressed.
- Main Turbine Governor and Stop Valves indicate open.

Which ONE (1) of the following identifies the **NEXT** required action(s) that must be taken IAW FRP-S.1?

A. Close all MSIVs and MSIV Bypasses.

B. Depress and hold the GV Down and GV Fast pushbuttons.

C. Depress the turbine manual pushbutton and then depress and hold the the GV Down pushbutton ONLY.

D. Depress the turbine manual pushbutton and then depress and hold the GV Down and GV Fast pushbuttons.

10. Given the following plant conditions:

- The plant was operating at 100% RTP.
- The plant has experienced a S/G tube rupture with a Loss of Coolant Accident.
- Current RCS level is at the hot leg centerline.
- No SI flow exists due to multiple malfunctions.

Which ONE (1) of the following identifies how the majority of the heat is removed from the core for the given conditions?

Boiling in the core produces steam which condenses in....

A. the reactor vessel annular space and re-floods the core.

B. the upper head and re-floods the core via the upper internals.

C. the S/G tubes and flows down the cold leg back to the core.

D. the S/G tubes and flows down the hot leg back to the core.

11. Given the following plant conditions:

- Plant had been operating at 100% RTP for 285 days prior to a plant trip and safety injection ocurring.
- The crew is performing actions of FRP-H.1, Response to Loss of Secondary Heat Sink.
- Plant conditions require that an RCS Bleed and Feed be performed.

Which ONE(1) of the following completes the statement below?

To ensure adequate RCS Injection flow a MINIMUM of __(1)__ safety injection pump(s) are/is required to be running AND __(2)__ PZR PORV(s) will be opened to provide an adequate RCS Bleed path.

A. (1) one

   (2) one

B. (1) one

   (2) two

C. (1) two

   (2) one

D. (1) two

   (2) two

12. Given the following plant conditions:

- Reactor power is at 100% RTP.
- A Generator Lockout occurs simultaneously with a loss of the Startup Transformer.
- Both EDGs fail to start.

Which ONE (1) of the following completes the statements below?

For the conditions given above, IAW EPP-1, Loss of All AC Power, steam is verified isolated to the Turbine by __(1)__ and __(2)__ are required to be CLOSED to isolate letdown flow.

A. (1) closing the MSIVs AND MSIV Bypasses

(2) LCV-460A/B, Letdown Line Stop Valves

B. (1) closing the MSIVs and MSIV Bypasses

(2) CVC-204A/B, Letdown Line Isolation Valves

C. (1) verifying BOTH Turbine Stop Valves CLOSED

(2) LCV-460A/B, Letdown Line Stop Valves

D. (1) verifying BOTH Turbine Stop Valves CLOSED

(2) CVC-204A/B, Letdown Line Isolation Valves

13. Given the following plant conditions:

- The reactor has tripped due to a loss of off-site power.
- Natural circulation flow is being established.
- The Subcooling Monitor indicates the following information:
  - T/C at B07 558°F
  - T/C at H04 555°F
  - T/C at D05 556°F
  - T/C at R08 554°F
- The RTGB indicates the following information:
  - PI-445: 1800 psig
  - PI-456: 1785 psig
  - PI-457: 1795 psig

Determine the current value of subcooling that will be utilized while in the EOP Network.

A. 60.8 - 62.5°F

B. 62.8 - 64.5°F

C. 64.8 - 66.5°F

D. 66.8 - 68.5°F

14. Given the following plant conditions:

- The plant is operating at 100% RTP.
- A loss of Instrument Bus 2 has occurred.

Which ONE (1) of the following completes the statement below?

Safeguards Train __(1)__ Sequencer is currently de-energized and __(2)__.

A. (1) "A"

(2) bistable Status Panel "A" will be de-energized

B. (1) "B"

(2) bistable Status Panel "A" will be de-energized

C. (1) "A"

(2) channel 2 bistables on Status Panel "A" will be illuminated with the exception of CV HI-HI Pressure

D. (1) "B"

(2) channel 2 bistables on Status Panel "A" will be illuminated with the exception of CV HI-HI Pressure

15. Given the following plant conditions:

- Plant was operating at 100% RTP.
- A loss of "A" DC Bus occurs.

FIVE (5) minutes later, which ONE (1) of the following identifies the expected plant response due to the loss of "A" DC Bus?

	Safety Injection Actuation	Exciter Field Bkr Auto Trips
A.	YES	YES
B.	YES	NO
C.	NO	YES
D.	NO	NO

16. Given the following plant conditions:

- Plant is at 35% RTP.
- APP-002-E7,INST AIR COMP D TRIP, illuminates.
- APP-002-F7, INST AIR HDR LO PRESS, illuminates.

- AOP-017, LOSS OF INSTRUMENT AIR, is entered.
  - Station Air and Instrument Air have been cross-connected.
  - Transition has been made to AOP-017, Section A, Modes 1 AND 2.
  - Instrument Air pressure is 64 psig.
  - "B" and "C" S/Gs Levels are at 42% and slowly lowering.

Which ONE (1) of the following completes the statement below?

The operating crew is required to _____ while continuing in AOP-017.

A. cross-connect Station Air and Construction Air

B. lower turbine load as necessary to maintain feed and steam flows matched

C. trip the turbine and implement AOP-007, Turbine Trip below P-8,

D. trip the reactor and Go to PATH-1

17. Given the following plant conditions:

- A loss of BOTH Main Feedwater Pumps (MFP) has resulted in a manual reactor trip.
- All 3 AFW Pumps are disabled.
- The crew is performing actions of FRP-H.1, Response to Loss of Secondary Heat Sink.
- Wide Range S/G levels are at 25% and lowering.
- Attempts to start either MFP have failed.
- PZR Level was maintained greater than 16%.

Which ONE (1) of the following completes the statement below?

IAW FRP-H.1, RCS pressure will be reduced by opening __(1)__ to allow the __(2)__.

A. (1) one PZR PORV

(2) Hi Steam Line DP and PZR Pressure SI signals to be blocked prior to performing actions to establish Condensate flow

B. (1) CVC-311, Aux. Spray

(2) Hi Steam Line DP and PZR Pressure SI signals to be blocked prior to performing actions to establish Condensate flow

C. (1) one PZR PORV

(2) safety injection flow to inject into the RCS

D. (1) CVC-311, Aux. Spray

(2) safety injection flow to inject into the RCS

18. Given the following plant conditions:

- A Reactor Trip and Safety Injection have occurred from 100% RTP.
- Following the Immediate Action Verifications of PATH-1, Breaker 52/2BL, Feed to MCC-9, trips.
- EPP-16, Uncontrolled Depressurization of All Steam Generators, is being performed.
- All steam generator (S/G) pressures are lowering uncontrollably.

Which ONE (1) of the following completes the statement below regarding the **preferred** method for controlling feedwater flow in accordance with EPP-16?

The basis for lowering flow to 80 to 90 gpm to all S/Gs is to __(1)__ and the **preferred** method of controlling AFW flow is to __(2)__.

A. (1) minimize RCS repressurization rate

(2) dispatch an operator to manually throttle the V2-16s

B. (1) maintain S/G components in "wet" condition

(2) dispatch an operator to manually throttle the V2-16s

C. (1) minimize RCS repressurization rate

(2) throttle the MDAFW Flow Controllers FIC-1424 and FIC-1425

D. (1) maintain S/G components in "wet" condition

(2) throttle the MDAFW Flow Controllers FIC-1424 and FIC-1425

19. Given the following plant conditions:

- The plant is operating at 50% RTP with OST-011, Rod Cluster Control Exercise & Rod Position Indication, being performed.
- When Control Bank "D" rods are returned to 164 steps it is noted that one rod is 17 steps below the rest of the bank.
- AOP-001, Malfunction of Reactor Control System, is implemented by the crew.
- The Shift Manager has directed that the rod be realigned IAW AOP-001.

Which ONE (1) of the following completes the basic method used to realign the rod in accordance with AOP-001 listed below?

Open the Control Bank "D" lift coil disconnect switch(es) for __(1)__.
Realign the rod using __(2)__ position of the rod bank selector switch.
Close all lift coil disconnect switches.

A. (1) all but the misaligned rod

   (2) CB D

B. (1) all but the misaligned rod

   (2) M (MANUAL)

C. (1) the misaligned rod

   (2) CB D

D. (1) the misaligned rod

   (2) M (MANUAL)

20. Given the following plant conditions:

- Plant is at 100% RTP.
- "C" Charging Pump is in Auto and "B" Charging Pump is in Manual.
- Pressurizer level transmitter LT-459 is selected for control.
- The reference leg for LT-460 develops a leak.

Which ONE (1) of the following identifies the instrument and plant response?

	LI-460 PZR LVL Indication	**"C" Charging Pump Speed Controller Output**
A.	Lowers	Rises
B.	Rises	Lowers
C.	Lowers	Remains the same
D.	Rises	Rises

21.

I&C has just completed a surveillance on the high voltage power supply to Source Range nuclear instrument N-31. The surveillance determined the as-found voltage was 1400 VDC, instead of the normal 1600 VDC.

Which ONE (1) of the following identifies the effect the lower voltage has on SR N-31 instrument response?

N-31 will indicate __(1)__ than normal due to a reduction in voltage to the __(2)__.

A. (1) higher

   (2) pulse height discriminator

B. (1) higher

   (2) detector

C. (1) lower

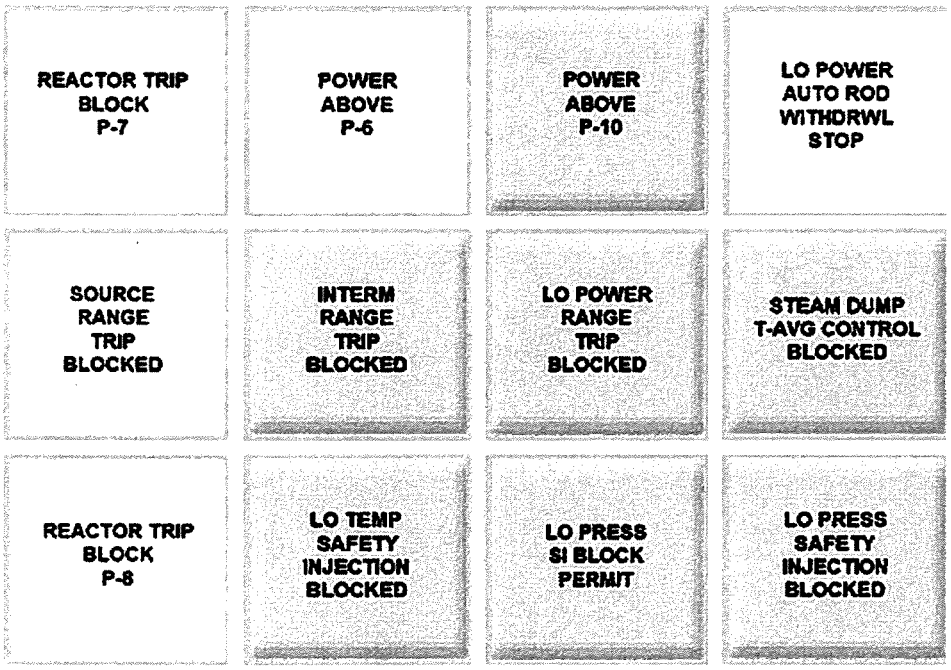
   (2) pulse height discriminator

D. (1) lower

   (2) detector

22. Given the following plant conditions:

- The plant is at 8% RTP with the Turbine at 1800 RPM, unloaded.
- The following is the current status of plant permissives:



(lightly shaded blocks are illuminated, darker blocks are extinguished)

- An operator assisting I&C with N-35 maintenance removes the N-35 control power fuses.

Which ONE (1) of the following identifies the Reactor Protection System response for the N-35 IR Level Trip Bypass switch positions shown below?

	NORMAL	BYPASS
A.	No Reactor Trip	No Reactor Trip
B.	Reactor Trip	No Reactor Trip
C.	No Reactor Trip	Reactor Trip
D.	Reactor Trip	Reactor Trip

23. Given the following plant conditions:

- Plant is in Mode 3.
- R-14C, Main Vent Stack (Low Range Noble Gas), is inoperable.
- A leak on "C" Waste Gas Decay Tank has resulted in an R-20, Fuel Handling Building Lower Level - Low Range, alarm.
- IAW AOP-009, Accidental Gas Release From a WGDT, the HP has been directed to obtain air samples of the affected area and local evacuation completed.

Which ONE(1) of the following completes the statements below?

IAW AOP-009, HVE-5A __(1)__ HVE-5B are required to be placed in service and __(2)__ due to R-14C being inoperable.

A. (1) AND

(2) R-11/R-12 are required to be selected to the VENT Position

B. (1) OR

(2) R-11/R-12 are required to be selected to the VENT Position

C. (1) AND

(2) verify that R-14D, Main Vent Stack Mid Range, is operable

D. (1) OR

(2) verify that R-14D, Main Vent Stack Mid Range, is operable

24. Given the following plant conditions:

- The plant is operating at 100% RTP.
- The following fire alarms (color of text) have been received on the Fire Alarm Computer.

  - A43 ZN-20 Fire Alm. TRN-A E1/E2 Room (RED)
  - A51 ZN-20 Fire Alm. TRN-A E1/E2 Rm. Halon Actuated (RED)
  - A55 ZN-NO Fire Alm. TRN-A FDAP A1 Master Fire Alm. (RED)
  - B04 ZN-20 Fire Alm. TRN-B E1/E2 Room (RED)
  - B06 ZN-20 Fire Alm. TRN-B E1/E2 Rm. Halon Actuated (RED)
  - B09 ZN-NO Fire Alm. TRN-B FDAP B1 Master Fire Alm. (RED)

Which ONE(1) of the following completes the statement below IAW AOP-041, Response to Fire Event?

The Control Room Operator is responsible for dispatching the fire brigade, starting the motor driven fire pump, placing the.....

A. PCV-456 and PCV-455C Power Isolation Switches to the ISOLATED position and securing Auxiliary Building Ventilation. (Control Room Ventilation to remain in Normal Mode.)

B. EDG and E1/E2 Breaker's Appendix R Isolation switches to NORMAL and securing Auxiliary Building Ventilation. (Control Room Ventilation to remain in Normal Mode.)

C. PCV-456 and PCV-455C Power Isolation Switches to the ISOLATED position, securing Auxiliary Building Ventilation and placing Control Room Ventilation in Pressurization Mode.

D. EDG and E1/E2 Breaker's Appendix R Isolation switches to NORMAL, securing Auxiliary Building Ventilation and placing Control Room Ventilation in Pressurization Mode.

25. Given the following plant conditions:

- Plant is currently at 100% RTP preparing for a shutdown due to high RCS Activity levels.
- A RCS leak of 10 gpm has been identified inside Containment.

Which ONE(1) of the following identifies which process radiation monitors will indicate an elevated reading?

R-11: Containment Air Particulate
R-12: Containment Air Gas
R-14C: Plant Stack Gas (Low range)

	R-11	R-12	R-14C
A.	Yes	Yes	Yes
B.	Yes	Yes	No
C.	No	Yes	Yes
D.	Yes	No	No

26. Given the following plant conditions:

- Plant was operating at 100% RTP when a steam line break occurs in the CV.
- All RCS Cold leg temperatures are right of Pressure - Temperature Limit "A".
- RCS pressure is 600 psig.

Which ONE(1) of the following completes the statement below?

The CSFST for CSF-4, RCS Integrity, states that entry requirements for FRP-P.1, Response to Imminent Pressurized Thermal Shock, RCS Cold Leg Temperature must have dropped **greater** than __(1)__ in the last 60 minutes and RCS Cold Leg Temperature must be less than __(2)__.

A. (1) 100°F

   (2) 320°F

B. (1) 100°F

   (2) 290°F

C. (1) 50°F

   (2) 320°F

D. (1) 50°F

   (2) 290°F

27. Given the following plant conditions:

- The reactor has tripped due to a loss of off-site power.
- A RCS cooldown to Mode 5 must be performed.
- A Natural Circulation cooldown is in progress in accordance with EPP-5, Natural Circulation Cooldown.
- BOTH CRDM Cooling Fans, HVH-5A and 5B, are running.
- TSC has determined that the RCS cooldown rate must exceed the EPP-5 limit.

Which ONE (1) of the following completes the statement below?

Following procedure transition, the RCS cooldown rate is limited to __(1)__ in order to __(2)__.

A. (1) 100°F/hr

(2) remain within the Technical Specification limits

B. (1) 50°F/hr

(2) remain within the Technical Specification limits

C. (1) 100°F/hr

(2) prevent formation of voids in the Reactor Vessel upper head region

D. (1) 50°F/hr

(2) prevent formation of voids in the Reactor Vessel upper head region

28. Given the following plant conditions:

- Plant cooldown is in progress IAW GP-007, Plant Shutdown from Hot Shutdown to Cold Shutdown.
- RCS temperature and pressure is 250°F and 375 psig.
- "A" and "C" RCP seal leakoff flows indicate 0.7 gpm.
- Seal injection flows are normal.

RCS pressure control malfunction occurs and pressure begins to lower.

- Maximum RCP Seal Leakoff Temperature is 145°F.
- Maximum RCP Pump Bearing Temperature is 132°F.

Which ONE (1) of the following completes the statement below?

At __(1)__ the crew is required to __(2)__.

A. (1) 325 psig RCS pressure

(2) secure RCPs

B. (1) 325 psig RCS pressure

(2) open CVC-307, PRI SEAL BYP ISO

C. (1) 210 psid across the RCP #1 Seal

(2) secure RCPs

D. (1) 210 psid across the RCP #1 Seal

(2) open CVC-307, PRI SEAL BYP ISO

29. Given the following plant conditions:

- The RCS is on RHR and solid.
- RCS pressure is 340 psig.
- PC-145, PRESSURE, in AUTO.
- HIC-142, PURIFICATION FLOW, controller setting is at 55% demand.

Subsequently,

- HIC-142 controller setting was adjusted to 50% demand.

Which ONE (1) of the following completes the statement below?

Steady-state to Steady-state, PC-145 **controller output** will __(1)__ to restore letdown pressure to its original value and overall RCS pressure will __(2)__..

A. (1) lower

   (2) rise

B. (1) rise

   (2) rise

C. (1) rise

   (2) lower

D. (1) lower

   (2) lower

30. Given the following plant conditions:

- The plant is operating at 100% RTP.
- "C" Charging Pump is currently running in AUTO and "B" Charging Pump is running in MANUAL at minimum speed.
- Maintenance has been completed on "A" Charging Pump and WCC has dispatched an operator to remove the clearance and align the pump for recirculation.
- During the valve alignments the operator incorrectly aligns the recirculation path by having **BOTH** CVC-277C, Charging Pump "A" Recirc Root, **AND** CVC-290, Charging Pump "A" To Charging Line, **OPEN**.

Which ONE(1) of the following completes the statement below, assuming no operator action?

The output on "C" Charging Pump speed controller will rise __(1)__ and VCT level will __(2)__.

A. (1) and maintain PZR program level

   (2) rise

B. (1) to maximum

   (2) rise

C. (1) and maintain PZR program level

   (2) remain the same

D. (1) to maximum

   (2) remain the same

31. Given the following plant conditions:

Initial Conditions
- Plant is in Mode 5 with the RCS depressurized.
- "A" RHR Pump is in-service.
- FC-605, RHR HX BYPASS FLOW, is in Manual with flow set at 3400 gpm.

Current Conditions
- APP-001-A7, RHR HX LO FLOW, is received.
- Observed that SI-863A, RHR Loop Recirc, valve indicates dual position.

Which ONE (1) of the following completes the statement below?

Based on the conditions above, RCS Temperature will __(1)__ and RCS Level will __(2)__.

A. (1) rise

   (2) lower

B. (1) rise

   (2) remain stable

C. (1) lower

   (2) lower

D. (1) lower

   (2) remain stable

32. Which ONE (1) of the following identifies the reason for RCP restart IAW FRP-P.1, RESPONSE TO IMMINENT PRESSURIZED THERMAL SHOCK, if the SI termination criteria cannot be satisfied?

A. Restores PZR spray to allow RCS depressurization in subsequent steps.

B. Equalizes S/G pressures to allow simultaneous cooldown of all three loops in subsequent steps.

C. Mixes Safety Injection water and RCS water to ensure adequate shutdown margin.

D. Mixes Safety Injection water and RCS water to raise the fluid temperature entering the Reactor Vessel downcomer.

33. Which ONE(1) of the following completes the statements below?

The PRT high level alarm setpoint is __(1)__.

The basis for this setpoint is to minimize the possibility of __(2)__.

A. (1) 91%

(2) challenging the rupture discs following a 100% Load Rejection without a reactor trip

B. (1) 83%

(2) challenging the rupture discs following a 100% Load Rejection without a reactor trip

C. (1) 91%

(2) thermally shocking the pressurizer safeties and PORVs which could cause them to leak

D. (1) 83%

(2) thermally shocking the pressurizer safeties and PORVs which could cause them to leak

34. Given the following plant conditions:

- The plant had been operating at 100% RTP when a Reactor Trip and Safety Injection occurred due to a faulted steam line outside containment.

- While performing PATH-1 actions the following indications were observed:
  - APP-003-D3, PRT HI/LO LEVEL
  - APP-003-C3, PRT HI PRESS, alarmed and cleared
  - R-2, CV Low Range Monitor - Stable
  - CV Sump Level - Rising

Which ONE(1) of the following identifies the cause of the indications given?

A. SI-857B, Loop "B" Cold Leg Inj Relief to PRT, failed open

B. Reactor Vessel Head inner o-ring fails

C. PZR Safety Valve failed open

D. "A" RCP #2 seal failure

35. Given the following plant conditions:

- Unit has experienced a LBLOCA.
- EPP-10, Transfer to Long Term Recirculation, has been implemented.
- APP-002-E5, SI PMP COOL WTR LO FLOW, is received.

Which ONE(1) of the following completes the statements below IAW APP-002-E5?

The SI Pump Cooling Water Low Flow alarm setpoint is __(1)__ GPM.

APP-002-E5 requires the operator to __(2)__ .

A. (1) 100

(2) continue operation of the SI Pump

B. (1) 50

(2) continue operation of the SI Pump

C. (1) 100

(2) stop the SI Pump immediately

D. (1) 50

(2) stop the SI Pump immediately

36. Given the following plant conditions:

- The plant is in Mode 1 at 100% RTP
- The Pressurizer Pressure Controller, PC-444J, is in AUTOMATIC

Which ONE (1) of the following identifies how RCS pressure and PC-444J Controller output will respond if the controller potentiometer setpoint is lowered from 6.7 to 6.4 ?

	RCS Pressure	**Controller Output (Demand)**
A.	Rise	Rise
B.	Rise	Lower
C.	Lower	Rise
D.	Lower	Lower

37. Which ONE(1) of the following completes the statement below?

A design feature of the Pressurizer maintains a small amount of flow in the spray lines in order to .....

A. reduce the potential for water hammer upon spray initiation.

B. maintain a small differential across the spray valves.

C. maintain a constant firing rate to the Control Group heaters.

D. reduce thermal stresses in the spray piping and auxiliary spray connection.

38. Given the following plant conditions:

- Unit at 30% RTP
- Power Range channel N-43 has been removed from service IAW OWP-011 to support drawer calibration.

Subsequently:

- Inverter A trips

What impact will the failure have on the Reactor Protection System?

A. Reactor will trip from Power Range High Flux (HIGH) setpoint.

B. Reactor will trip from Power Range High Flux (LOW) setpoint.

C. Reactor will trip from Intermediate Range High Flux trip.

D. Reactor will NOT trip.

39. Which ONE (1) of the following identifies the power supply to the ESFAS interposing relays?

	Train "A"	Train "B"
A.	IB-7A	IB-3
B.	IB-6	IB-9
C.	IB-2	IB-8
D.	IB-1	IB-4

40. A Large Break LOCA concurrent with a loss of the Startup Transformer has occurred.

- Train "A" Engineered Safeguards Sequencer did NOT automatically actuate.
- Both "A" and "B" CV Spray Pumps tripped.

Which ONE (1) of the following completes the statement below?

The **MINIMUM** action required to ensure containment pressure remains below its design limit is to verify __(1)__ automatically started **AND** manually start __(2)__ and ensure all associated cooling water outlet low flow alarms are clear.

A. (1) HVH-3 OR HVH-4

   (2) HVH-1 OR HVH-2

B. (1) HVH-3 AND HVH-4

   (2) HVH-1 AND HVH-2

C. (1) HVH-1 OR HVH-2

   (2) HVH-3 OR HVH-4

D. (1) HVH-1 AND HVH-2

   (2) HVH-3 AND HVH-4

41. Given the following plant conditions:

- It is July 31 and the plant is at 100% RTP.
- Containment temperatures have been slowly approaching the ITS limit.
- ERFIS has just failed.

Which ONE(1) of the following identifies the **correct order of preference** for obtaining the **"official"** Containment Temperature IAW PLP-118, Hot Weather Operations?

1. RTGB Edge meter
2. Make a containment entry to obtain temperature readings.
3. Perform SPP-035, Containment Bulk Average Temperature Measurement

A. 1, 2, 3

B. 1, 3, 2

C. 2, 1, 3

D. 3, 1, 2

42. Given the following plant conditions:

- A Large Break LOCA and Loss of Offsite Power have occurred.
- EDG B tripped while starting.
- RWST is at 9% level.
- Alignment to the CV Sump has been completed.
- CV Pressure is currently 12 psig.

Which ONE (1) of the following completes the statement below?

SI-844A and B, CV Spray Pump Suction Isolation Valves, will be __(1)__ and RHR Pump A is capable of supplying suction to CV Spray Pump(s) __(2)__.

A. (1) closed

(2) "A" ONLY

B. (1) closed

(2) "A" and "B"

C. (1) open

(2) "A" ONLY

D. (1) open

(2) "A" and "B"

43. Given the following plant conditions:

- The plant had been operating at 100% RTP when a Large Break LOCA occurred.
- A malfunction in the CV Spray System results in FI-949,Spray Additive Flow, indicating higher than actual flow.
- The crew has transitioned to "Piggy-Back" Mode IAW EPP-9, Transfer to Cold Leg Recirculation, with CV Pressure at 14 psig.
- Spray Additive Tank level is currently 60%.

Which ONE(1) of the following completes the statement below?

The resultant operational implication of FI-949 failure is that during cold leg recirculation ECCS components will be more susceptible to __(1)__ and IAW EPP-9 the required CV Sump pH is __(2)__.

A. (1) chloride stress corrosion

   (2) 8.5 - 10.5

B. (1) chloride stress corrosion

   (2) greater than 10.5

C. (1) gas binding

   (2) greater than 10.5

D. (1) gas binding

   (2) 8.5 - 10.5

44. Given the following plant conditions:

- The plant is operating at 100% RTP.
- Steam line break occurs on Steam Line A just outside the CV wall.
- MSIV "A" fails to close when demanded.

Which ONE (1) of the following identifies the design feature that will ensure that all of the S/Gs do NOT blowdown through the faulted steam line?

A. MSIV auto closure on High Steam Line Flow with Low Tave signal.

B. MSIV auto closure on High Steam Line Delta P signal.

C. Check valves downstream of each MSIV.

D. Check valves upstream of each MSIV.

45. Given the following plant conditions:

- Plant is operating in Mode 1 at 100% RTP.
- A Reactor Trip and Safety Injection has occurred.
- No AFW pumps are available.
- RCS Bleed-and-Feed is in progress IAW FRP-H.1, Response to Loss of Secondary Heat Sink.
- Both Condensate Pumps are running.

Which ONE (1) of the following completes the statement below?

To restore feed flow to the S/G(s) IAW FRP-H.1, the operator is required to place __(1)__ Feedwater Isolation Key Switch(es) in the OVRD/RESET position, verify the Feedwater Header Section Valves __(2)__ and start 1 Main Feedwater Pump to feed __(2)__ S/G(s).

A. (1) ONE

   (2) OPEN

   (3) ONE

B. (1) THREE

   (2) OPEN

   (3) ONE

C. (1) ONE

   (2) CLOSED

   (3) ALL

D. (1) THREE

   (2) CLOSED

   (3) ALL

46. Which ONE (1) of the following completes the statement below?

At 15% RTP the programmed S/G level is approximately __(1)__ and at 20% RTP the programmed S/G level is approximately __(2)__.

A. (1) 52%

   (2) 52%

B. (1) 49%

   (2) 52%

C. (1) 39%

   (2) 39%

D. (1) 29%

   (2) 39%

47. Given the following plant conditions:

"B" MFP is OOS for Maintenance and the following occurs:

- The Reactor was manually Tripped while operating at 20% RTP due to a trip of "A" MFP
- Tave is 546°F and lowering.
- PZR Level is 22% and slowly lowering.
- RCS Pressure is 2045 psig and lowering.
- Steam Generator Blowdown is Isolated.
- S/G levels are as follows:
    - "A" S/G Narrow Range level is 42% and slowly rising.
    - "B" S/G Narrow Range level is 41% and slowly rising.
    - "C" S/G Narrow Range level is 45% and slowly rising.

Which ONE (1) of the following provides the action(s) that are required to be taken <u>next</u> IAW EPP-4, Reactor Trip Response?

A. Initiate Safety Injection

B. Borate to Cold Shutdown Boron

C. Reduce Auxiliary Feedwater Flow

D. Close the MSIVs & MSIV Bypasses

48. Given the following plant conditions:

- The Plant is in Mode 3.
- "B" MDAFW pump is running.
- A small feedline break occurs between FCV-1425, MDAFW pump "B" FCV, and isolation valve V2-16C, SG C AFW Isolation Valve.
- FCV-1425 is closed and the break flow stops.

The CRS has directed isolation of the leak from all water sources.

Which ONE (1) of the following identifies the SGs available to be fed from "A" MDAFW pump?

A. S/G "A" ONLY

B. S/G "B" ONLY

C. S/Gs "A" and "B" ONLY

D. S/Gs "A", "B" and "C"

49. Given the following plant conditions:

- Unit operating at 50% RTP.
- "A" Train of CR HVAC is in service.
- Breaker 52/21A, Feed to MCC-5 (NORM POWER) & MCC-16, trips open.
- CRS has directed that MCC-5 be transferred to the DS Bus.

Which ONE (1) of the following completes the statements below?

MCC-16 __(1)__ re-energize when MCC-5 is transferred to the DS Bus.

"A" Train of Control Room HVAC __(2)__ be available.

A. (1) will

   (2) will

B. (1) will

   (2) will NOT

C. (1) will NOT

   (2) will NOT

D. (1) will NOT

   (2) will

50. Given the following plant conditions:

- A Loss of Offsite Power has occurred.
- BOTH EDGs have failed to auto start.
- EPP-1, Loss of All AC Power, has been implemented.

Which ONE (1) of the following completes the statement below with respect to load shedding and station battery design?

IAW EPP-1, low priority loads __(1)__ required to be shed from Instrument Buses 2 and 3 to minimize the discharge rate on both DC buses to assure that the station batteries achieve their __(2)__ design time limitation.

A. (1) are

(2) 30 minute

B. (1) are

(2) 1 hour

C. (1) are NOT

(2) 30 minute

D. (1) are NOT

(2) 1 hour

51. Given the following plant conditions:

- APP-010-B2, EDG A START AIR LO PRESS, has been received.
- EDG A Air Receiver relief valve DA-11A has lifted and blown down the air receiver pressure to 80 psig prior to reseating.

Which ONE (1) of the following identifies the LOWEST pressure at which the "A" EDG Air Receiver will be pressurized to a value that supports 8 cold starts of the EDG?

A. 100

B. 210

C. 216

D. 220

52. Given the following plant conditions:

- OST-924-2, Process Radiation Monitoring System, Section 8.10, Fuel Handling Building Upper Level Monitor Test, is in progress.
- The CKT TEST pushbutton on R-21 has been depressed and held in the depressed position.

Given the above conditions, which ONE(1) of the following completes the statement?

While the CKT TEST pushbutton is depressed, the operator is required to check HVS-4 and __(1)__ **OFF** and when the CKT TEST pushbutton is released those fans are required to be checked __(2)__.

HVS-4, Fuel Handling Building Supply Air Handling Unit
HVE-15, Spent Fuel Building Exhaust Air Handling Unit
HVE-15A, Spent Fuel Building Exhaust Air Handling Unit

A. (1) HVE-15

   (2) ON

B. (1) HVE-15

   (2) OFF

C. (1) HVE-15A

   (2) ON

D. (1) HVE-15A

   (2) OFF

53. Given the following plant conditions:

- A plant trip and safety injection has occurred due to multiple events.
- The crew is implementing PATH-1.
- "C" and "D" SW Pumps have tripped and cannot be restarted.
- North and South SW Header pressures are 35 psig.

Which ONE(1) of the following completes the statement below?

Based on the conditions given above, an action required by PATH-1 to isolate the Service Water Supply to the Turbine Building is to close valve __(1)__ and the basis for this action is to ensure __(2)__.

A. (1) V6-16A, SW NORTH HEADER SUPPLY TO TURBINE BUILDING

(2) adequate cooling flow to the EDGs

B. (1) V6-16C, SW ISOLATION TO TURBINE BUILDING

(2) adequate cooling flow to the EDGs

C. (1) V6-16A, SW NORTH HEADER SUPPLY TO TURBINE BUILDING

(2) SW Booster Pumps will NOT trip on low SW pressure

D. (1) V6-16C, SW ISOLATION TO TURBINE BUILDING

(2) SW Booster Pumps will NOT trip on low SW pressure

54. Given the following plant conditions:

- The unit tripped due to a loss of off-site power.
- "A" EDG output breaker failed to close and cannot be manually closed.
- EPP-25, Energizing Supplemental Plant Equipment using the DSDG, has been completed.

Which ONE(1) of the following identifies the air compressor(s) available to be restarted under these conditions?

A. Instrument Air Compressor "A" ONLY

B. Instrument Air Compressor "B" ONLY

C. Instrument Air Compressors "A" AND "B" ONLY

D. Instrument Air Compressors "A" AND "B" and the Primary Air Compressor.

55. Given the following plant conditions:

Initial Conditions
- Plant is in Mode 3 at 547°F and 2235 psig.
- A spurious Safety Injection signal has been received.

Current Conditions
- EPP-7, SI Termination, has been completed.
- APP-002-B7, CV NAR RANGE HI/LO PRESS illuminates.
- CV Pressure indicates - **0.4** psig and degrading.

Which ONE (1) of the following identifies the actions necessary to clear the alarm IAW OP-921, Containment Air Handling?

A. Reset Phase "A" and open Containment Pressure Relief Valves V12-10 and V12-11.

B. Reset Containment Ventilation Isolation and open Containment Pressure Relief Valves V12-10 and V12-11.

C. Reset Containment Ventilation Isolation and open Containment Vacuum Relief Valves V12-12 and V12-13.

D. Reset Phase "A" and open Containment Vacuum Relief Valves V12-12 and V12-13.

56. Given the following plant conditions:

- The plant is operating at 25% RTP.
- Control Bank C step counters indicate **225 steps**.
- Control Bank D step counters indicate **105 steps.**
- Rod Control is in AUTOMATIC.
- A malfunction in the Automatic Rod Control Circuitry causes the rods to insert.
- The rods are stopped when the Rod Bank Selector Switch is taken to Manual(M).
- The Group Step Counters for Control Bank C and D did not function properly.
- A review of ERFIS identified that Control Bank D Rods inserted **10 inches.**

Which ONE(1) of the following identifies what the Group Step Counters for Control Banks C and D would indicate if operating properly?

	Bank C	Bank D
A.	217 steps	89 steps
B.	223 steps	95 steps
C.	215 steps	95 steps
D.	209 steps	89 steps

57. Which ONE (1) of the following identifies (in the order presented) the normal power supplies for the Pressurizer Heaters?

Control Group _____, Backup Group A _____, Backup Group B _____

1. 480V Bus 1
2. 480V Bus 2A
3. 480V Bus 2B
4. 480V Bus 3

A. 3, 1, 2

B. 3, 2, 4

C. 4, 3, 1

D. 2, 1, 3

58. Given the following plant conditions:

- Plant is at 100% RTP.

The following alarms are subsequently received:
- APP-005-A3, PR DROP ROD
- APP-005-C3, PR CHANNEL DEV
- APP-005-F3, PR UPPER CH HI FLUX DEV / AUTO DEFEAT

- It has been determined that N-44 Power Range Detector A failed LOW

Which ONE (1) of the following completes the statement below?

The NI-44C, Delta Flux Meter, will indicate pegged __(1)__ and the Rod Control Selector Switch is __(2)__ to be selected to the MANUAL (M) position.

A. (1) HIGH

(2) NOT required

B. (1) HIGH

(2) required

C. (1) LOW

(2) NOT required

D. (1) LOW

(2) required

59. Given the following plant conditions:

- The plant is in Mode 3 with GP-007, Plant Cooldown from Hot Shutdown to Cold Shutdown, in progress.
- RCS is at 510°F and 1150 psig.
- The PZR PRESS / HI STM LINE DP switch has failed to block the HI STM LINE DP signal.

Which ONE(1) of the following completes the statement below?

If the cooldown continues, the highest S/G pressure at which a HI STEAM LINE DP Safety Injection will be received is _____ psig.

A. 685

B. 614

C. 585

D. 485

60. Given the following plant conditions:

- A LOCA has just occurred and CV Pressure indicates 15 psig on ERFIS.

Which ONE(1) of the following completes the statement below?

In addition to ERFIS and AR-100C, CV Conditions Recorder, CV Pressure is indicated in the control room by __(1)__ Wide Range Indicators on the RTGB and __(2)__ Extended Range indicator(s) on the PAM Panel.

A. (1) three

   (2) one

B. (1) six

   (2) two

C. (1) six

   (2) one

D. (1) three

   (2) two

61. Given the following plant conditions:

- The plant is operating at 100% RTP.
- A 20% Secondary Load Rejection has occurred.
- Steam dump valves did **NOT** actuate.

Which ONE (1) of the following identifies the sequence of actions required to be performed IAW AOP-015, Secondary Load Rejection, to operate the steam dump valves to reduce RCS Tavg?

A. Place PC-464B, Steam Header Press Controller, in Manual and adjust output as necessary.

B. Place the Steam Dump Mode Switch to STEAM PRESS and manually adjust output as necessary.

C. Place PC-464B, Steam Header Press Controller, in Manual and adjust output to MINIMUM. Place the Steam Dump Mode Selector Switch to STEAM PRESS and manually adjust output as necessary.

D. Place the Steam Dump Mode Switch to RESET, then place the switch to STEAM PRESS and manually adjust output as necessary.

62. Given the following plant conditions:

- Plant is in Mode 3.
- A release is in progress from "A" Waste Gas Decay Tank.
- R-14C, PLANT STACK NOBLE GAS LOW RANGE, **FAIL** light illuminates.

Which ONE (1) of the following completes the statement below?

The condition would cause __(1)__ to alarm and RCV-014, Waste Gas Release Isolation, would __(2)__.

A. (1) APP-036-E7, RAD MONITOR TROUBLE,

(2) remain OPEN

B. (1) APP-036-E7, RAD MONITOR TROUBLE,

(2) CLOSE

C. (1) APP-036-D8, PROCESS MONITOR HI RAD,

(2) remain OPEN

D. (1) APP-036-D8, PROCESS MONITOR HI RAD,

(2) CLOSE

63. Given the following plant conditions:

- R-4, Charging Pump Room, is in alarm and has been validated.
- All non-essential personnel have been evacuated from the Charging Pump Room.
- The reason for the alarm is unknown.

Which ONE(1) of the following completes the statement below?

R-4, Charging Pump Room, Area Radiation Monitor measures __(1)__ and the **NEXT** required action to be performed IAW AOP-005, Radiation Monitoring System, is to __(2)__.

A. (1) both gamma and beta

(2) align the Auxiliary Building Exhaust through the Charcoal Filter Unit

B. (1) gamma ONLY

(2) align the Auxiliary Building Exhaust through the Charcoal Filter Unit

C. (1) both gamma and beta

(2) inspect the room for system leakage

D. (1) gamma ONLY

(2) inspect the room for system leakage

64. Given the following plant conditions:

- The plant is operating at 100% RTP.
- A loss of Instrument Air has occurred with pressure currently at 75 psig.
- The crew is implementing AOP-017, Loss of Instrument Air.

Which ONE(1) of the following identifies the preferred flowpath when Station Air is required to be cross-connected with Instrument Air IAW AOP-017?

Flow is from the Station Air Compressor ----->

A. Station Air coalescing filter -----> Instrument Air Header

B. bypass the Station Air coalescing filter -----> Instrument Air Dryers A/B -----> Instrument Air Header

C. Station Air coalescing filter -----> Instrument Air Dryers A/B -----> Instrument Air Header

D. bypass the Station Air coalescing filter -----> Instrument Air Header

65. Given the following plant conditions:

- During clearance restoration on a drained section of Fire Water piping an isolation valve is opened too quickly and Fire Water pressure drops to 83 psig.

Based on the conditions given, which ONE (1) of the following identifies the impact on the Fire Water Pumps?

MDFP - Motor Driven Fire Pump
EDFP - Engine Driven Fire Pump

A. MDFP will start immediately AND the EDFP will start following a 2 sec. time delay

B. MDFP will start following a 2 sec. time delay and the EDFP will start immediately

C. MDFP AND EDFP will both start following a 2 sec. time delay

D. MDFP AND EDFP will both start immediately

66. Which ONE (1) of the following statements identifies the administrative requirements of Standing Instructions IAW OPS-NGGC-1000, Fleet Conduct of Operations?

A. A member of plant management is required to be listed as the Closure Contact.

B. Standing Instructions shall NOT be used to communicate emergency technical specification changes that have NOT been formally issued.

C. All active Standing Instructions issued since last standing watch must be reviewed.

D. Standing Instructions for Operational Issues are NOT required to have an expiration date.

67. Given the following plant conditions:

- A plant event is in progress.
- The plant alarms are out-of-service.
- A Site Area Emergency has been declared.

Based on the conditions above, which ONE (1) of the following completes the statements below?

IAW OMM-001-4, Communications, the SM __(1)__ required to communicate through the CRS to have an operator to place the VLC Switch to the emergency position.

IAW OMM-001-7,Notifications, the emergency announcements should be repeated __(2)__ times.

A. (1) is NOT

   (2) TWO

B. (1) is NOT

   (2) THREE

C. (1) is

   (2) TWO

D. (1) is

   (2) THREE

68. Which ONE (1) of the following completes the statement below?

The Inadequate Core Cooling Monitor (ICCM) is designed to monitor for inadequate core cooling during a _____ .

A. Large Break LOCA

B. Small Break LOCA

C. Loss of All AC Power

D. Loss of Heat Sink Accident

69.

Which ONE (1) of the following statements applies to the temporary procedure change process IAW PRO-NGGC-0204, PROCEDURE REVIEW AND APPROVAL?

PNSC - Plant Nuclear Safety Committee

A. The expiration date of the temporary change shall not exceed 21 days from the approval date.

B. Two SROs, one of which is a PNSC member, must approve a temporary change if the revision is a change of intent.

C. Two SROs, none of which are required to be a PNSC member, must approve a temporary change if the revision is a change of intent.

D. The expiration date of the temporary change shall not exceed four months from the interim approval date.

70. Operations has been scheduled to perform a new Special Test that has been designated as an Infrequently Performed Test or Evolution IAW OPS-NGGC-1315, Conduct of Infrequently Performed Tests or Evolutions (IPTE).

Which ONE(1) of the following completes the statement below?

IAW OPS-NGGC-1315, the _____ is required to designate the IPTE Manager.

A. Shift Manager

B. Manager - Shift Operations

C. Operations Manager

D. Plant General Manager

71. Given the following plant conditions:

- RCS cooldown is in progress IAW GP-007, Plant Cooldown from Hot Shutdown to Cold Shutdown.
- The RCS Filter radiation levels are 1100 mrem/hr at 30 cm from the filter housing.
- You have been assigned by the WCC SRO to hang a clearance on the filter for replacement.

Which ONE (1) of the following identifies

The radiation area is required to be classified as a __(1)__ and the Independent / Concurrent Verification __(2)__ be waived IAW OPS-NGGC-1303, Independent Verification.

A. (1) Locked High Radiation Area

   (2) can

B. (1) High Radiation Area

   (2) can

C. (1) Locked High Radiation Area

   (2) cannot

D. (1) High Radiation Area

   (2) cannot

72. Which ONE (1) of the following are the correct values for the 10CFR20 Federal Adult Occupational Dose Limits?

	Skin	Lens of Eye
A.	50 rem/yr	5 rem/yr
B.	50 rem/yr	15 rem/yr
C.	15 rem/yr	5 rem/yr
D.	15 rem/yr	15 rem/yr

73. Which ONE (1) of the following identifies the procedure that provides the Incident Commander with detailed method of attack strategies for a fire in the MDAFW Pump Room?

A. AOP-041, Response to Fire Event

B. OMM-002, Fire Protection Manual

C. OMM-003, Fire Protection Pre-Plans

D. APP-044, Fire Alarm Response Manual

74. Given the following plant conditions:

- Plant was at 100% RTP.
- At time 1205 a Reactor Trip and several events occurred.
- At time 1215 an ALERT is declared by the CR-SEC.
- At time 1225 the Emergency Notification Form is completed and approved by the CR-SEC.

Which ONE(1) of the following identifies the **LATEST** time that the initial notification to the State and County officials is due?

A. 1220

B. 1230

C. 1235

D. 1240

75. Given the following plant conditions:

- Plant cooldown is in progress. RCS Temperature is at 290°F.
- Excessive leakage has been identified in "C" RCP Bay.
- "A" RHR pump is providing decay heat removal.
- RCS letdown has been isolated.
- Two charging pumps are running at maximum speed.
- PZR level is 12% and lowering.
- RCS subcooling is 40°F.

Which ONE (1) of the following completes the statement below?

IAW AOP-033, Shutdown LOCA, the **NEXT** step required to be performed for mitigation strategy is to .....

A. check SI Pump Suction Line to RWST - ANY REASON TO BELIEVE STEAM BOUND.

B. start the remaining Charging Pump and raise speed to maximum.

C. verify available SI Pump Breakers - RACKED IN

D. stop "A" RHR Pump.

Reference Material Table of Contents

#	ID	Points	Type	Answers 0
1	007 EG2.4.11 1	1.00	MCS	A
2	008 AK2.03 1	1.00	MCS	A
3	009 EK2.03 1	1.00	MCS	D
4	011 EK 2.02 1	1.00	MCS	B
5	015 AK2.08 1	1.00	MCS	D
6	022 AA2.03 1	1.00	MCS	C
7	025 AK3.01 1	1.00	MCS	B
8	027 AA1.05 1	1.00	MCS	C
9	029 EG2.4.49 1	1.00	MCS	D
10	038 EK1.04 1	1.00	MCS	D
11	054 AA1.04 1	1.00	MCS	B
12	055 EG2.1.31 1	1.00	MCS	A
13	056 AK1.03 1	1.00	MCS	B
14	057 AA2.04 1	1.00	MCS	C
15	058 AA1.03 1	1.00	MCS	B
16	065 AA2.05 1	1.00	MCS	D
17	W/E 05 EK3.1 1	1.00	MCS	B
18	W/E 12 EK3.3 1	1.00	MCS	D
19	005 AK2.02 1	1.00	MCS	A
20	028 AA2.04 1	1.00	MCS	D
21	032 AA2.09 1	1.00	MCS	D
22	033 AG2.2.44 1	1.00	MCS	D
23	060 AK1.02 1	1.00	MCS	B
24	067 AA1.06 1	1.00	MCS	A
25	076 AK2.01 1	1.00	MCS	B
26	W/E 08 EG2.4.2 1	1.00	MCS	B
27	W/E 10 EK3.1 1	1.00	MCS	A
28	003 A1.07 1	1.00	MCS	C
29	004 K5.30 1	1.00	MCS	B
30	004 K6.14 1	1.00	MCS	B
31	005 K3.01 1	1.00	MCS	A
32	006 K5.10 1	1.00	MCS	D
33	007 A1.01 1	1.00	MCS	D
34	007 K3.01 1	1.00	MCS	A
35	008 G2.4.50 1	1.00	MCS	D
36	010 K1.03 1	1.00	MCS	C
37	010 K4.01 1	1.00	MCS	D
38	012 A3.05 1	1.00	MCS	A
39	013 K2.01 1	1.00	MCS	A
40	022 A3.01 1	1.00	MCS	B
41	022 A4.05 1	1.00	MCS	D
42	026 K1.01 1	1.00	MCS	D
43	026 K3.02 1	1.00	MCS	A
44	039 K4.06 1	1.00	MCS	C
45	059 A2.04 1	1.00	MCS	D
46	059 A3.02 1	1.00	MCS	B
47	061 K5.01 1	1.00	MCS	C

#	ID	Points	Type	Answers 0
[illegible]	061 K6.02 1	1.00	MCS	C
[illegible]	062 A2.10 1	1.00	MCS	C
50	063 A1.01 1	1.00	MCS	B
51	064 K6.07 1	1.00	MCS	B
52	073 G2.2.12 1	1.00	MCS	A
53	076 G2.4.18 1	1.00	MCS	B
54	078 K2.02 1	1.00	MCS	C
55	103 A4.09 1	1.00	MCS	C
56	001 A3.05 1	1.00	MCS	A
57	011 K2.02 1	1.00	MCS	A
58	015 K6.01 1	1.00	MCS	C
59	016 K3.09 1	1.00	MCS	D
60	028 A4.02 1	1.00	MCS	B
61	041 G2.4.11 1	1.00	MCS	C
62	071 K1.06 1	1.00	MCS	B
63	072 K5.01 1	1.00	MCS	D
64	079 K4.01 1	1.00	MCS	A
65	086 A1.05 1	1.00	MCS	A
66	G2.1.15 1	1.00	MCS	C
67	G2.1.17 1	1.00	MCS	B
68	G2.1.27 1	1.00	MCS	B
69	G2.2.6 1	1.00	MCS	A
[illegible]	G2.2.7 1	1.00	MCS	D
[illegible]	G2.3.13 1	1.00	MCS	A
72	G2.3.4 1	1.00	MCS	B
73	G2.4.25 1	1.00	MCS	C
74	G2.4.39 1	1.00	MCS	B
75	G2.4.9 1	1.00	MCS	B