Nuclear Regulatory Commission
Operator Licensing
Examination

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U.S. Nuclear Regulatory Commission

Site-Specific SRO Written Examination

Applicant Information	
Name:	
Date: August 9, 2006	Facility/Unit: KEWAUNEE
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 overall, with 70.00 percent or better on the SRO-only items if given in conjunction with the RO exam; SRO-only exams given alone require a final grade of 80.00 percent to pass. You have 8 hours to complete the combined examination, and 3hours if you are only taking the SRO portion.

Applicant Certification

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

_____
Applicant's Signature

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

Part A: General Guidelines

1. ***[Read Verbatim]*** Cheating on any part of the examination will result in a denial of your application and/or action against your license.

2. If you have any questions concerning the administration of any part of the examination, do not hesitate to ask them before starting that part of the test.

3. SRO applicants will be tested at the level of responsibility of the senior licensed shift position (i.e., shift supervisor, senior shift supervisor, or whatever the title of the position may be).

4. You must pass every part of the examination to receive a license or to continue performing license duties. Applicants for an SRO-upgrade license may require remedial training in order to continue their RO duties if the examination reveals deficiencies in the required knowledge and abilities.

5. The NRC examiner is not allowed to reveal the results of any part of the examination until they have been reviewed and approved by NRC management. Grades provided by the facility licensee are preliminary until approved by the NRC. You will be informed of the official examination results about 30 days after all the examinations are complete.

Part B: Written Examination Guidelines

1. ***[Read Verbatim]*** After you complete the examination, sign the statement on the cover sheet indicating that the work is your own and you have not received or given assistance in completing the examination.

2. To pass the examination, you must achieve an overall grade of 80.00 percent or greater, with 70.00 percent or greater on the SRO-only items, if applicable. If you only take the SRO portion of the exam (as a retake or with an upgrade waiver of the RO exam), you must achieve an overall grade of 80.00 percent or better to pass. SRO-upgrade applicants who do take the RO portion of the exam and score below 80.00 percent on that part of the exam can still pass overall, but may require remediation. Grades will not be rounded up to achieve a passing score. Every question is worth one point.

3. For an initial examination, the nominal time limit for completing the examination is 6 hours for the RO exam; 3 hours for the 25-question, SRO-only exam; 8 hours for the combined RO/SRO exam; and 4 hours for the SRO exam limited to fuel handling. Notify the proctor if you need more time.

   For a requalification examination, the time limit for completing both sections of the examination is 3 hours. If both sections are administered in the simulator during a single 3-hour period, you may return to a section of the examination that you already completed or retain both sections of the examination until the allotted time has expired.

4. You may bring pens, pencils, and calculators into the examination room; however, programable memories must be erased. Use black ink to ensure legible copies; dark pencil should be used only if necessary to facilitate machine grading.

5. Print your name in the blank provided on the examination cover sheet ***and*** the answer sheet. You may be asked to provide the examiner with some form of positive identification.

6. Mark your answers on the answer sheet provided, and do not leave any question blank. Use only the paper provided, and do not write on the back side of the pages. If you are using ink and decide to change your original answer, draw a single line through the error, enter the desired answer, and initial the change. If you are recording your answers on a machine-gradable form that offers more than four answer choices (e.g., “a” through “e”), be careful to mark the correct column.

7. If you have any questions concerning the intent or the initial conditions of a question, do *not* hesitate to ask them before answering the question. Note that questions asked during the examination are taken into consideration during the grading process and when reviewing applicant appeals. Ask questions of the NRC examiner or the designated facility instructor *only.* A dictionary is available if you need it.

   When answering a question, do *not* make assumptions regarding conditions that are not specified in the question unless they occur as a consequence of other conditions that are stated in the question. For example, you should not assume that any alarm has activated unless the question so states or the alarm is expected to activate as a result of the conditions that are stated in the question. Similarly, you should assume that no operator actions have been taken, unless the stem of the question or the answer choices specifically state otherwise. Finally, answer all questions based on actual plant operation, procedures, and references. If you believe that the answer would be different based on simulator operation or training references, you should answer the question based on the *actual plant*.

8. Restroom trips are permitted, but only one applicant at a time will be allowed to leave. Avoid all contact with anyone outside the examination room to eliminate even the appearance or possibility of cheating.

9. When you complete the examination, assemble a package that includes the examination questions, examination aids, answer sheets, and scrap paper, and give it to the NRC examiner or proctor. Remember to sign the statement on the examination cover sheet indicating that the work is your own and that you have neither given nor received assistance in completing the examination. The scrap paper will be disposed of immediately after the examination.

10. After turning in your examination, leave the examination area as defined by the proctor or NRC examiner. If you are found in this area while the examination is still in progress, your license may be denied or revoked.

11. Do you have any questions?

QUESTION: 001 (1.00)

Given the following:

- The plant is operating at 100% power
- R-11 and R-12, Containment Particulate and Gaseous Radiation Monitors values are increasing.
- A-RC-36D, Reactor Coolant Leak, is being implemented.
- Letdown is isolated.
- Charging flow is 80 gpm.
- Pressurizer level is 45% and constant.
- VCT Makeup is operating normally.
- VCT level is 10% and decreasing.

What operator action should be taken?

a. Align RWST suction to the Charging Pumps and start a rapid power reduction per A-O-03, Rapid Power Reduction.

b. Start a normal power reduction due to RCS leakage exceeding TS limits.

c. Restore at least 40 gpm Letdown flow due to potential for thermal shock on charging line connection to RCS.

d. Trip the reactor and go to E-0, Reactor Trip or Safety Injection.

QUESTION: 002 (1.00)

Given the following:

- The plant is operating at 100% power.
- RXCP seal injection is normal.
- Annunciator 47014-J, RXCP THERM BARRIER TEMP HI alarms, followed shortly by annunciator 47021-I, RXCP CC FLOW LOW.
- Reactor Coolant Pump indications are as follows:

RXCP A TEMP	RXCP B TEMP
OUTLET (TI-612) reads 95°F	OUTLET (TI-608) reads 95°F
THERM BARR (TI-614) reads 95°F	THERM BARR (TI-610) reads 170°F

- CC Surge Tank level has also increased slightly.

What is the consequence of these indications?

a. CC-612B, RXCP B Component Cooling Return Isol, has failed closed. Trip RXCP B within 2 minutes.

b. CCW supply piping to RXCP B has failed. Trip RXCP B within 2 minutes.

c. CC-610B, RXCP B Thermal Barr Comp Cooling Return, has gone to its failed position. Maintain seal injection flow of 6 to 13 gpm to RXCP B.

d. Thermal Barrier HX on RXCP B has ruptured. Maintain seal injection flow of 6 to 13 gpm to RXCP B.

QUESTION: 003 (1.00)

Given the following:

- The plant is operating at 60% power.
- Control Rod G-11 (Control Bank D) disconnects and drops to ZERO steps.
- The plant is stabilized with Control Bank D position at 140 steps.
- A-CRD-49, Abnormal Rod Control System Operations is implemented.
- The fault that caused the dropped rod is corrected.
- The crew initiates A-CRD-49, ATTACHMENT A, to recover the rod.

What is the purpose for recording Control Bank D Group Step Counter value prior to recovery of the dropped rod?

a. Allows for reset of the P/A converter when the rod is withdrawn.

b. Provides a reference point for dropped rod withdrawal to the bank position.

c. Allows the operator to verify the reset value for TLA-1, ROD SUPERVISION ALARM, for PPCS Control Rod Supervision input.

d. Provides the reference point for verification of the reset for annunciator 47042-P, ROD CONTROL URGENT FAILURE, as the dropped rod is withdrawn.

QUESTION: 004 (1.00)

Given the following:

- The plant is operating at 100% power.
- A Bus 1 and Bus 2 Lockout occurs.
- The plant responds as designed.

What is the response of RCS parameters over the period from the point just prior to the trip to TEN minutes following the trip?

a. RCS cold leg temperature decreases and then increases.

b. RCS Hot leg temperature decreases and then stabilizes.

c. Core Delta T decreases and then increases.

d. Subcooling decreases and then increases.

QUESTION: 005 (1.00)

In the case of a fuel defect, what component is designed specifically to remove Cesium from the coolant?

a. Mixed Bed Demineralizer.

b. Cation Bed Demineralizer.

c. Deborating Bed Demineralizer.

d. Reactor Coolant Filter.

QUESTION: 006 (1.00)

Given the following:

- The plant is in Hot Shutdown.
- A failure of VCT level channels LI-112 and LI-141 has occurred.
- Charging pump suction supply automatically transferred to the RWST.
- Repairs have been made to the VCT level channels.
- VCT level is 13%.
- While performing re-alignment of the Charging System to normal, the NCO inadvertently positions the control switch for CVC-301, RWST Supply to Charging Pumps, to CLOSE, before opening CVC-1, VCT Supply to Charging Pumps.

What will occur?

a. CVC-301 will close, causing all Charging Pumps to trip on low suction pressure.

b. CVC-301 will NOT close until CVC-1, VCT Supply to Charging Pumps, is open.

c. CVC-301 will close, causing isolation of the suction for the Charging Pumps.

d. CVC-301 will NOT close until VCT level is greater than 17%.

QUESTION: 007 (1.00)

Given the following:

- The plant is being cooled down to Cold Shutdown.
- Reactor Coolant System has been borated to the Cold Shutdown Boron Concentration
- RCS pressure is 400 psig.
- RCS temperature is 350°F.
- N-RHR-34, Residual Heat Removal System, is in progress to startup RHR for cooldown.

What actions are taken to prevent the possibility of low boron concentration fluid in the RHR system diluting the RCS?

a. RHR fluid is replaced by RCS fluid during RHR System warmup.

b. RHR system is re-circulated to the RWST prior to initiating flow to the RCS.

c. RHR boron concentration is verified by sampling prior to initiating flow to the RCS.

d. RHR system takes a suction from the RWST prior to RHR System warmup.

QUESTION: 008 (1.00) **QUESTION DELETED**

Given the following:

- The plant is operating at 100% power.
- Annunciator 47024-B, ACCUMULATOR A LEVEL HIGH/LOW alarms.
- Accumulator A level is 25%.
- A-SI-33, Abnormal Safety Injection Accumulator Level and Pressure, is implemented.
- SI Pump A is started to fill Accumulator A per A-SI-33.
- SI-101A/ CV-31247, SI Pump Makeup to Accumulator A is opened.
- A Design Basis LOCA occurs.

What is the postulated effect of these conditions on ECCS operation?

a. SI Pump A becomes gas bound from the filling operation and fails.

b. Cold leg injection flow is decreased due to the filling operation.

c. Accumulator A does NOT inject because it is isolated during the filling operation.

d. SI Pump A reaches runout conditions.

QUESTION: 009 (1.00)

Given the following:

- The plant is operating at 100% power.
- An inadvertent Containment Isolation signal is actuated.
- Pressurizer Relief Tank level starts slowly increasing.

What valve is the source of in-leakage to the PRT?

a. PR-2A, Przr PORV.

b. LD-5, Letdown Line Relief Valve.

c. SI-312, RHR to RX Vessel Relief Valve.

d. CVC-261, Seal Water Return Relief Valve.

QUESTION: 010 (1.00)

Given the following:

- The plant is operating at 12% power during a startup.
- PS-1A, Przr Spray Control Loop A, has stuck open and CANNOT be closed
- The RO notes Pressurizer pressure is 1870 psig and slowly dropping.
- Reactor Trip Breaker A and B red lights are lit.

What are the NEXT required operator actions for these conditions?

a. Place RXCP A control switch to PULLOUT and verify Pressurizer pressure stabilizes.

b. Reduce power to less than 10%, and then place RXCP A control switch to PULLOUT.

c. Perform the Immediate Actions of E-0, Reactor Trip Or Safety Injection.

d. Perform the Immediate Actions of FR-S.1, Response to Nuclear Power Generation/ATWS.

QUESTION: 011 (1.00)

Given the following:

- The plant is operating at 100% power
- CC-302, Letdown Cont Outl Temp Controller, valve goes to its FAIL position.

What is the result of this malfunction and what action should be taken?

a. RCS temperature will begin to lower until LD-27, VCT/Holdup Tank Divert Valve, is placed to the Holdup Tank position.

b. RCS boron concentration will begin to lower until LD-14 is placed to the V.C. Tank position.

c. LD-14, LD Demin High Temp Divert Valve, will automatically realign to V.C. Tank position and must be verified in this position until letdown temperature is restored below 140°F.

d. LD-27, VCT/Holdup Tank Divert Valve, will automatically realign to Holdup Tank position and must be verified in this position until VCT temperature is restored below 130°F.

QUESTION: 012 (1.00)

Given the following:

- The plant was operating at 100% power.
- A reactor trip occurred.
- Safety injection is actuated.
- The cause of the reactor trip and safety injection has NOT been determined.

What indication would INITIALLY indicate that a Pressurizer PORV is stuck partially open?

a. Containment humidity and pressure rapidly increasing.

b. Pressurizer Relief Tank pressure and level rapidly increasing.

c. Indication of flow on PR-3A PRZR Safety Valve Flow Monitor.

d. Pressurizer pressure and level decreasing.

QUESTION: 013 (1.00)

Which of the following conditions/signals will DIRECTLY cause the automatic start of the standby Component Cooling Pump?

a. Loss of off-site power.

b. High-High containment pressure.

c. Low CC discharge header pressure.

d. Trip of the operating CC Pump.

QUESTION: 014 (1.00)

The most notable difference in the design basis accident plant response between a Large Break LOCA (LBLOCA) and a Small Break LOCA (SBLOCA) is...

a. Only the SBLOCA clears the loop seal.

b. Only the LBLOCA results in core uncovery.

c. Only the SBLOCA needs added heat removal capacity from the S/Gs.

d. Only the SBLOCA results in peak clad temperatures greater than 1200°F.

QUESTION: 015 (1.00)

Given the following:

- The plant is operating at 57% power during a plant startup to 100% power.

Which event would result in an auto start of both motor-driven AFW pumps when the pumps are in AUTO? (Assume NO operator action)

a. Both Startup Steam Dumps fail open.

b. Main Feedwater Pump A breaker opens.

c. Controlling SG A steam flow channel fails high.

d. Controlling Pressurizer pressure channel fails high.

QUESTION: 016 (1.00)

Given the following:

- The plant is operating at 100% power.
- An RCS leak inside containment is occurring.
- A-RC-36D, Reactor Coolant Leak, is implemented.
- Conditions are as follows:
- Charging flow is 44 gpm.
- Letdown flow is 40 gpm.
- RXCP seal injection flow is 8 gpm per pump.
- RXCP seal leakoff flow is 2.5 gpm per pump.
- Pressurizer level is 41% and has decreased 2% in the last 5 minutes.

Using the provided OPERATOR AID 02-21, what is the approximate RCS leak rate?

a. 20 gpm.

b. 25 gpm.

c. 30 gpm.

d. 35 gpm.

QUESTION: 017 (1.00)

What is the reason for tripping the RXCPs at the onset of a Large Break LOCA?

a. Remove RXCP heat input to RCS.

b. Prevent RXCP degradation and/or damage.

c. Prevent a longer and deeper core uncovery.

d. RXCP flow could reduce effectiveness of ECCS injection.

QUESTION: 018 (1.00)

Given the following:

- The plant is operating at 100% power.
- A total loss of main feedwater occurs.
- A reactor trip signal is generated, but the Reactor Trip Breakers fail to open.
- A Rod Control Urgent Failure prevents rod motion.
- Auxiliary Feedwater System is operating per design.
- Operators have been dispatched to locally open the Reactor Trip Breakers.

What actions should be taken to mitigate this transient?

a. Align maximum Auxiliary Feedwater flow to ONE Steam Generator to preserve a heat sink for RCS heat removal.

b. Reduce turbine load slowly to avoid a rapid RCS temperature and pressure increase causing a lifting of Pressurizer Safety Valves.

c. Trip the main turbine to preserve the water inventory in the Steam Generators.

d. Open the Pressurizer PORVs immediately to avoid an RCS overpressurization as the Pressurizer goes water solid.

QUESTION: 019 (1.00)

Given the following:

- The plant is operating at 100% power.
- A Reactor Trip has occurred.
- Safety Injection has actuated.
- The crew is implementing E-0, Reactor Trip or Safety Injection, step 5 Verify Feedwater Isolation when it is discovered that both the RED and GREEN Position Indicating Lights for FW-12B, Feedwater to Steam Generator B Isolation Valve are NOT lit on Mechanical Control Console A.

What action is taken at this time to verify that Feedwater Isolation is complete?

a. Dispatch operator to locally close FW-12B.

b. Check FW-12B status light DIM on SI Ready Status Panel.

c. Check FW-12B status light BRIGHT on CI Active Status Panel.

d. Check FW-12B status light BRIGHT on SI Active Status Panel.

QUESTION: 020 (1.00)

Given the following:

- PT-947, Containment Pressure Channel IV (Yellow) has failed high.
- NO operator action concerning this channel has been taken yet.

Of the remaining Containment Pressure Channels, (a.) is the MINIMUM number of additional channels that have to trip to cause Safety Injection Actuation, AND (b.) is the MINIMUM number of additional channels that have to trip to cause Containment Spray Actuation.

	(a.)	(b.)
a.	One	One
b.	One	Two
c.	Two	One
d.	Two	Two

QUESTION: 021 (1.00)

Given the following:

- The plant is operating at 100% power.
- The shaft of Reactor Coolant Pump B breaks, resulting in a complete separation of the RXCP impeller from the shaft.

What would be the result of this failure on plant operation?

a. Overcurrent trip of RXCP B breaker, resulting in a reactor trip.

b. Main Steam Header B low pressure, resulting in Safety Injection.

c. RCS Loop B low flow, resulting in a reactor trip.

d. OTDT High, resulting in a reactor trip.

QUESTION: 022 (1.00)

What condition is a possible response to the failure of ONE Nuclear Instrumentation System fission chamber? Erroneous indication for . . .

a. a power range channel.

b. both intermediate range channels.

c. a source range channel and an intermediate range channel.

d. an intermediate range channel and a power range channel.

QUESTION: 023 (1.00)

Given the following:

- The plant is operating at 100% power.
- Annunciator 47024-K, PPCS/SPDS ABNORMAL, is lit.
- Plant Computer Group has determined that PPCS has failed.
- A-CP-46, Abnormal Plant Process Computer System, is implemented.
- NIS Power Range Channel N-42 fails.

What is the effect of the PPCS failure on verification of core power distribution with a failed Power Range Channel?

a. CET Tilt monitoring is lost, power must be reduced to less than 85%.

b. Plant operation may continue, NO additional monitoring is necessary.

c. Plant operation may continue if 4 CETs per quadrant are verified on ICC Monitoring System.

d. Plant operation may continue if quadrant power distribution is verified with an in-core flux map.

QUESTION: 024 (1.00)

Given the following:

- The plant is operating at 100% power.
- Containment pressure is 0.4 psig and stable.
- A containment cooling malfunction has caused containment temperature to increase from 100°F to 160°F.

What is the effect of the increase in containment temperature on the pressurizer level as indicated by the pressurizer level control channels? Indicated level will be . . .

a. HIGHER than actual level because the reference leg fluid density decreases.

b. LOWER than actual level because the reference leg fluid density decreases.

c. HIGHER than actual level because the elevated containment temperature causes evaporation of water from the reference leg.

d. LOWER than actual level because of the elevated containment temperature causes evaporation of water from the reference leg.

QUESTION: 025 (1.00)

Given the following:

- Core Burnup is 9000 MWD/MTU.
- RCS boron concentration is 740 PPM.
- The Reactivity Placard for BORATE reads "1 PPM 2.7 gallons boron/ppm."

Which of the following conditions will require the LARGEST emergency boration (most gallons of boric acid)? (Reactor Data Manual Figures RD-6.6 and RD-6.7 provided)

a. Plant at Hot Shutdown, RCS Tavg is 540°F and rapidly decreasing, Annunciator 47061-B, S/G A SF>FF, is lit.

b. Reactor is critical at 10^4 CPS, Control Bank C is at 65 steps, Annunciator 47042-R, CONTROL BANK LOW LOW LIMIT, is lit.

c. Reactor is tripped, and Control Rod G-3 Rod Bottom Light is dark and its associated IRPI indicator is NOT indicating.

d. Reactor is tripped, and Annunciator 47101-J, BUS 62 LOCKOUT, is lit.

QUESTION: 026 (1.00)

Given the following:

The following time-line applies following a 300 day continuous run:

- 11/01/03, 1000 Reactor Shutdown; Cooldown initiated for a maintenance outage.
- 11/04/03, 1300 Entered Cold Shutdown.
- 11/18/03, 0130 Operating RHR pump tripped and the standby pump could NOT be started.
- 11/18/03, 0200 CETs read 212°F.

- Przr level is 40% and rising slowly.

Using A-RHR-34, ATTACHMENT A, what is the MINIMUM makeup required for this condition?

a. 19 gpm.

b. 22 gpm.

c. 25 gpm.

d. 44 gpm.

QUESTION: 027 (1.00)

Given the following:

- The plant is operating at 100% power.
- A Design Basis LOCA occurs.
- A Loss of Offsite Power occurs.
- Diesel Generator B fails to start.
- Safety Injection and Containment Spray are actuated.
- Containment Spray Pump A is started by the ESF Load Sequencer.

Which of the following is a complete list of the additional actions that occur to establish Containment Spray?

a. CI-1001A Caustic Additive to CNTMT Spray opens, ICS-5A Containment Spray Pump Discharge opens, spray is discharged through 2 spray rings.

b. CI-1001A & CI-1001B Caustic Additive to CNTMT Spray open, ICS-5A Containment Spray Pump Discharge open, spray is discharged through 4 spray rings.

c. CI-1001A & CI-1001B Caustic Additive to CNTMT Spray opens, ICS-5A & ICS-6A Containment Spray Pump Discharge open, spray is discharged through 2 spray rings.

d. ICS-2A ICS Pump Suction opens, CI-1001A & CI-1001B Caustic Additive to CNTMT Spray open, ICS-5A & ICS-6A Containment Spray Pump Discharge opens, spray is discharged through 4 spray rings.

QUESTION: 028 (1.00)

Given the following:

- Group C Pressurizer Heaters are out-of-service.
- A heatup of the RCS is in progress.
- RCS temperature is currently at 450°F.
- Pressurizer pressure is 700 psig and increasing.
- Group A and Group B backup heaters are energized.
- Pressurizer spray valves are approximately 10% open.
- A failure of all Pressurizer Heaters occurs.

What actions are required regarding the Pressurizer Spray Valves and the RCS heatup?

a. Spray valves may remain throttled if Pressurizer level is raised to maintain pressure. RCS heatup must be stopped as pressure CANNOT be raised.

b. Spray valves may remain throttled. RCS heatup may continue because pressure will continue to rise with the heatup.

c. Spray valves must be closed. RCS heatup must be stopped because pressure will decrease due to spray bypass flow and heat loss to ambient.

d. Spray valves must be closed. RCS heatup can continue because pressure will continue to rise with the heatup.

QUESTION: 029 (1.00)

Given the following:

- The crew is responding to an ATWS.
- FR-S.1, Response to Nuclear Power Generation/ATWS has been entered and the Immediate Actions are complete.
- The reactor is tripped and all control rods are inserted.
- Neutron flux is decreasing in the Intermediate Range.
- Safety Injection is NOT actuated.

Which of the following identifies the condition concerning boration as addressed in FR-S.1 based on the above indications?

a. Since the reactor is tripped and neutron flux is decreasing, boration is NOT required.

b. Boration must be initiated in FR-S.1, but may be terminated in FR-S.1 once the sources of positive reactivity addition to the RCS have been eliminated.

c. Boration must be initiated in FR-S.1, and the Cold Shutdown boron concentration achieved, but NOT before leaving FR-S.1

d. Boration must be initiated in FR-S.1, and the Cold Shutdown boron concentration achieved prior to leaving FR-S.1.

QUESTION: 030 (1.00)

Given the following:

- A loss of all AC power has occurred.
- The TSC DG failed to start.
- ECA-0.0, Loss of all AC Power actions are in progress.
- Steam Generators are being depressurized to 300 psig using the SG PORVs.
- Steam Generator pressure is 475 psig.
- RCS Cold Leg temperature is 465°F.
- Both channels of Source Range Startup Rate indicate +0.2 dpm.
- The STA monitoring the CSF Status Trees notifies the crew of a YELLOW path for SUBCRITICALITY due to Intermediate Range Startup Rate.

What action should be taken?

a. Begin an emergency boration.

b. Stop the SG depressurization and allow the RCS to heatup.

c. Immediately transition to FR-S.2, Response to Loss of Core Shutdown.

d. Continue the SG depressurization to 300 psig.

QUESTION: 031 (1.00)

The controller output which automatically positions the Main Feedwater Regulating Valves (FW-7A & B) to maintain programmed level uses steam generator narrow range water level AND which of the following?

a. Turbine impulse pressure.

b. Steam flow and feedwater flow.

c. Steam Flow, feedwater flow, and Turbine impulse pressure.

d. The setpoint established by the operator on the control station.

QUESTION: 032 (1.00)

Given the following:

- Refueling operations are in progress.
- Reactor cavity water level is decreasing.
- E-FH-53B, Loss of Reactor Cavity Inventory During Fuel Movement, is implemented.
- Containment radiation levels are slowly increasing.

Which of the following is the LEAST desirable location for an irradiated fuel assembly if the Containment must be evacuated?

a. Any available location on the lower core support plate.

b. Transfer system sump.

c. Manipulator crane mast.

d. RCC change fixture.

QUESTION: 033 (1.00)

Given the following:

- A Steam Generator Tube Rupture has occurred.
- E-3, Steam Generator Tube Rupture, actions are in progress.
- Step 22, Depressurize RCS to Minimize Break Flow and Refill Pressurizer, is being performed.
- The Pressurizer Spray Valves have just been closed.
- Plant conditions are as follows:
  - Pressurizer level is 8%.
  - Pressurizer pressure is 950 psig.
  - Ruptured SG pressure is 955 psig.
  - Ruptured SG level is 77%.
  - Subcooling is 38°F.

What parameter changes would confirm that the Pressurizer Spray Valves are closed?

a. Pressurizer level increasing.

b. SI flow increasing.

c. Ruptured SG level decreasing.

d. Pressurizer pressure increasing.

QUESTION: 034 (1.00)

Given the following:

- The plant is operating at 100% power.
- AFW Pump B is INOPERABLE.
- Main Steamline rupture occurs on Steam Generator A inside Containment.
- E-2, Faulted Steam Generator Isolation, is performed to isolate SG A.
- Steam Generator A pressure is 25 psig.
- Steam Generator B pressure is 750 psig.
- AFW Header A flow is 0 gpm.
- AFW Header B flow is 280 gpm.
- AFW Pump A discharge pressure is 1600 psig.
- T/D AFW pump discharge pressure is 950 psig.

What operator action is required FIRST for these conditions?

a. Throttle AFW-2B, AFWP Flow Control, to maintain T/D AFW Pump discharge pressure greater than 1000 psig.

b. Place T/D AFW Pump Low Disch Press Trip Bypass Switch to BYPASS.

c. Throttle AFW-2C, T/D AFW Pump Discharge, to maintain T/D AFW Pump discharge pressure greater than 1000 psig.

d. Stop T/D AFW Pump, feed SG B through AFW-10A and AFW-10B, AFW Train A/B Crossover Valves, with AFW Pump A.

QUESTION: 035 (1.00)

Which of the following signals will close the extraction check control valve BS-100, Bleed Steam Supply to FW Heaters 15A and 15B?

a. Turbine trip.

b. High level in the Heater Drain (HD) Tank.

c. High level in Feedwater Heater 15A or 15B.

d. Positive differential pressure from the HD Tank to either Feedwater Heater 15A or 15 B.

QUESTION: 036 (1.00)

Given the following:

- The plant is operating at 100% power.
- Containment humidity has increased off-scale HIGH.
- Containment pressure is 0.6 psig and increasing slowly.
- Power range NIs indicate 100% Rx power and stable.
- Steam flow from both S/Gs is steady at 100% power value.
- FW-7B, S/G B Main Feedwater Regulating Valve is full open and S/G B level is slowly lowering.
- Feedwater flow and level is normal for S/G A.
- A manual reactor trip and safety injection is then initiated.
- Following the trip, both MSIVs are closed.
- S/G B pressure is observed to be lowering while S/G A pressure is stable.

Which of the following describes the probable location of the leak ?

a. Steam piping between S/G B and the containment penetration.

b. S/G B feedwater line between the FW inlet check valve and the S/G.

c. S/G B feedwater line between the containment penetration and the FW inlet check valve.

d. Steam piping between the containment penetration and the S/G B Main Steam Isolation Valve.

QUESTION: 037 (1.00)

Given the following:

- A loss of all AC power has occurred.
- At step 31 of ECA-0.0, the SG PORVs are opened to lower SG pressures to 300 psig.
- While this is in progress, the following annunciators are noted to alarm:
- 47021-A, SI TRAIN A ACTUATED
- 47021-B, SI TRAIN B ACTUATED
- 47021-C, CI TRAIN A ACTUATED
- 47021-D, CI TRAIN B ACTUATED

What operator response should be taken in response to this condition?

a. Verify ALL ESF equipment control switches are in PULLOUT to prevent automatic starting.

b. Position BOTH Safety Injection Train A and Train B Block /Unblock switches to BLK to block the SI signal from starting any ESF equipment when power is restored.

c. Depress BOTH Safety Injection Train A and Train B Reset pushbuttons to allow manual loading of equipment on a ESF bus when power is restored.

d. Verify BOTH Bus 5 and Bus 6 Voltage Restoring Mode Selector switches are in MAN to prevent automatic loading of DGs onto the Buses.

QUESTION: 038 (1.00)

Given the following:

- The reactor is shutdown at HOT STANDBY following a trip from 100% power.
- A loss of off-site power is in progress.
- Safety Injection is NOT actuated.
- Bus 5 and 6 and their associated blackout loads are powered from their respective DGs.
- The TSC DG is supplying Bus 46 and its associated blackout loads.
- ATC reports it will be at least THREE hours before power to the substation can be restored.

Which of the following will result from this condition?

a. Personnel will be unable to use the Gaitronics page to communicate.

b. The Control Room must notify the Fire Protection Engineer to perform a Fire Protection Engineering Evaluation for the water suppression system.

c. The Control Room must notify Radiation Protection to monitor the turbine building and Cardox room for hydrogen and carbon dioxide.

d. The Control Room will notify the AO to isolate the RXCP A and B seal injection flowpaths.

QUESTION: 039 (1.00)

Given the following:

- The plant is operating at 100% power.
- A loss of Instrument Bus 2 (White), BRB-113, has occurred.
- A-EDC-38, Abnormal DC Supply and Distribution System, is implemented.
- Electricians report that Instrument Bus 2 Inverter, BRB-111 has failed but it can be bypassed.
- Electricians are directed to energize Instrument Bus 2 from the alternate source using the Manual Bypass Switch.

Which of the following conditions is NOT an indication that Instrument Bus 2 is energized?

a. ICCMS Train B indications return.

b. Individual Rod Position Indication (IRPI) lights come on.

c. Protection Status Panel 44908 White Channel status light, Pressurizer >2000 psig, comes on

d. NIS Channel 2 Rack is re-energized.

QUESTION: 040 (1.00)

Given the following:

- The plant is operating at 60% power.

What will cause a trip of Main Feedwater Pump (MFP) A?

a. Feedwater header suction pressure decreases to 190 psig.

b. MFP A lube oil pressure decreases to 4 psig.

c. MFP A seal water flow decreases to 6 gpm to inboard and outboard seals.

d. Condenser hotwell level decreases to 17%.

QUESTION: 041 (1.00)

Given the following:

- The plant is operating at 100% power.
- Annunciator 47012-B, RADIATION INDICATION ALERT, alarms.
- Annunciator 47011-B, RADIATION INDICATION HIGH, alarms.
- The alarming channel is on the Area Radiation Monitoring Panel.

What is the effect of the high radiation condition?

a. High radiation on R-2, Containment Area Monitor, causes Containment Evacuation Alarm to sound.

b. High radiation on R-4, Charging Pump Room Monitor, causes a flashing Red light and alarm horn on the Waste Disposal Control Panel.

c. High radiation on R-1, Control Room Area Monitor, causes the Control Room Post-Accident Recirc Fans to start.

d. High radiation on R-5, Fuel Handling Area Monitor, causes a flashing Red light and a local alarm horn on the R-5 local monitor.

QUESTION: 042 (1.00)

Given the following:

- The plant is operating at 100% power.
- A steamline rupture occurs on Steam Generator A.
- Reactor trip and safety injection are actuated.
- All Safeguards equipment operates per design.
- Steam Generator A is isolated per E-2, Faulted Steam Generator Isolation.
- RCS temperature is 460°F and increasing.
- RCS pressure is 1500 psig and increasing.
- Steam Generator A level is 0% wide range.
- Steam Generator B level is 25% wide range and increasing.

With each of the following annunciators lit, which annunciator should be addressed FIRST?

a. 47062-M, AFW PUMP B ABNORMAL.

b. 47063-L, AUX FEEDWATER DISCHARGE XOVR CLOSED.

c. 47064-I, STEAM GEN A PRESSURE LOW.

d. 47062-N, T/D AFW PUMP ABNORMAL.

QUESTION: 043 (1.00)

Given the following:

- The plant is at 15% power
- S/G B level channel LT-473 has been removed from service per A-MI-87, Bistable Tripping for Failed Reactor Protection or Safeguards Inst.

If S/G B level channel LT-471 fails high, what would be the status of feed for both S/Gs?

a. Both S/Gs are being fed from the motor-driven AFW Pumps only.

b. Both S/Gs are being fed from the turbine-driven AFW Pump only.

c. S/G A is being fed from motor-driven AFW Pump A. S/G B has NO feed flow.

d. S/G A feed remains normal. S/G B feed flow lowers due to throttling of its Main Feedwater Flow Control valve.

QUESTION: 044 (1.00)

Given the following:

- The plant was operating at 100% power.
- Low service water header pressure has started all FOUR Service Water pumps.
- SW-3A and SW-3B, Service Water Header Isolation Valves have closed.
- A-SW-02, Abnormal Service Water System Operation was implemented.
- A leak was diagnosed in the Turbine Building Header and it was isolated.

- Conditions now are as follows:
  - Service Water Pumps 1A1 and 1B2 are currently running.
  - SW-3A and SW-3B are open.
  - SW-4A and SW-4B, SW header to Turb Bldg Header, are closed.
  - Service Water header A and B pressures are 106 psig.

What action is necessary?

a. Manually backwash traveling water screens.

b. Stop ONE Service Water Pump.

c. Manually backwash SW Pump strainers.

d. Depress Turb Bldg SW ESF Isol Reset pushbutton.

QUESTION: 045 (1.00)

Given the following:

- The plant is operating at 100% power.
- All equipment is in its normal alignment.
- A RAT lockout occurs due to a Sudden Pressure fault.
- Later in the shift, RXCP A trips due to overcurrent.
- All equipment operates per design.

What is the status of the 4160V system ONE minute after the trip of the RXCP?

a. 4160V Bus 5 is energized from its emergency diesel generator.

b. 4160V Bus 2 is energized from the MAT.

c. 4160V Bus 6 is de-energized.

d. 4160V Bus 1 is de-energized.

QUESTION: 046 (1.00)

Given the following:

- The plant is operating at 100% power.
- An internal fault cause a loss of Battery BRB-101 and associated DC distribution panels.

What will be the control room indication of this loss of DC?

a. Annunciator 47101-B BRB-102 DC VOLTAGE LOW.
Loss of Red and Green valve position indicating lights for SI-9B, Safety Injection to Reactor Vessel.

b. Reactor Trip Breaker A Green light ON.
Charging Pump A speed goes to minimum.

c. Annunciator 47034-C SFGRD A OR B CONTROL POWER FAILURE.
Loss of Red and Green breaker position indicating lights for Safety Injection Pump B.

d. Zero volts indicated on BRB-102 DC Bus Voltage indicator.
Loss of Red and Green valve position indicating lights for MS-102, T/D AFW Pump Main Steam Isol.

QUESTION: 047 (1.00)

Given the following:

- The plant is operating at 100% power.
- Annunciator 47091-C, DIESEL GENERATOR A ABNORMAL, is received.
- The NAO is dispatched to D/G A and reports the following conditions:
  - The diesel is NOT running.
  - Jacket Water temperature is 75°F.
  - Starting Air pressure is 225 psig.
  - Lube Oil temperature is 82°F.
  - SW-301A, Service Water from D/G A Heat Exchanger, has failed open.

Which of the following identifies the proper response to these conditions?

a. Turn off the Jacket Water heater and write a MWR.

b. Notify the US that the lube oil temperature is below the minimum temperature for D/G A OPERABILITY.

c. Start D/G A startup air compressor to restore pressure to 240 psig.

d. Manually close SW-301A, Service Water from D/G A Heat Exchanger and write a MWR.

QUESTION: 048 (1.00)

With the plant in its 100% power normal alignment, what is the power pathway to the Diesel Generator B Fuel Oil Priming Pump?

a. Bus 5 - Bus 52 - MCC 52A

b. BRB-108 - BRB-102 - BRB-104

c. Bus 6 - Bus 62 - MCC 62A

d. BRA-108 - BRA-102 - BRA-104

QUESTION: 049 (1.00)

Given the following:

- The plant has experienced a complete and sustained loss of Instrument Air.
- The reactor has been tripped.
- E-0, Reactor Trip or Safety Injection, has been implemented.
- E-AS-01, Loss of Instrument Air, has been implemented.

What is the reason a cooldown of the RCS may be necessary while experiencing a loss of Instrument Air?

a. To reduce RCS pressure before the Pressurizer PORV backup air accumulators are exhausted.

b. To reduce RCS temperature before the Condensate Storage Tanks are emptied.

c. To prevent the Pressurizer from going full due to seal injection flow.

d. To reduce RCS temperature before the Steam Generator PORV N2 backup supply is exhausted.

QUESTION: 050 (1.00)

Given the following:

- The plant is operating at 100% power.
- Two Circulating Water Pumps are in operation.
- Discharge of Waste Condensate Tanks is in progress per N-LWP-32A-3.
- Circulating Water Pump 1B trips on overcurrent.

What action is required in regards to the liquid waste discharge in progress?

a. Notify NAO to stop release due to the change in dilution flow.

b. Notify NAO that release was automatically terminated by trip of CW pump.

c. NO action is necessary as R-18, Liquid Waste Monitor will automatically terminate release if discharge limits are exceeded.

d. Notify Chemistry that dilution flow has changed and additional sampling of the release is required.

QUESTION: 051 (1.00)

Given the following:

- The plant is in COLD SHUTDOWN.
- Preparations for filling and venting the RCS are in progress.

In the Gaseous Waste System, what conditions must be established to receive gas from the PRT during the RCS fill and vent?

a. Gas decay tank selected for cover gas aligned to fill.

b. Gas decay tank with Oxygen concentration less than 2% aligned for fill.

c. Waste Gas Analyzer must be in operation.

d. Gas decay tank with Hydrogen concentration less than 2% aligned for fill.

QUESTION: 052 (1.00)

Given the following:

- The plant is operating at 100% power.
- RCS activity level is normal.
- A 10 gpm tube leak occurs in S/G B.

Which process radiation monitors will indicate the release of activity from S/G B to the environment?

a. R-33 Steam Line B, R-15 Air Ejector Exhaust, R-14 Aux Bldg Vent Exhaust, R-36 Aux Bldg Vent Stack.

b. R-34 Steam Line B, R-43 S/G B N-16 monitor, R-15 Air Ejector Exhaust, R-35 Aux Bldg Vent Stack.

c. R-33 Steam Line B, R-43 S/G B N-16 monitor, R-15 Air Ejector Exhaust, R-13 Aux Bldg Vent Exhaust.

d. R-34 Steam Line B, R-15 Air Ejector Exhaust, R-19 S/G Blowdown Liquid, R-13 Aux Bldg Vent Exhaust.

QUESTION: 053 (1.00)

Given the following:

- The plant is operating at 100% power.
- The TSC Diesel Generator is INOPERABLE.
- A Loss of All AC Power occurs.
- Efforts to manually and locally start Diesel Generator A and B are unsuccessful.
- ECA-0.0, Loss of All AC Power, is in progress.
- A Safety Injection signal has actuated and been reset.
- Repairs have been made to Diesel Generator B.
- Diesel Generator B is started and Bus 6 is energized.

What is the first load to be placed on Bus 6?

a. Safety Injection Pump B.

b. Charging Pump B.

c. Service Water Pump B1.

d. Containment Fan Coil Unit C.

QUESTION: 054 (1.00)

Given the following:

- The plant is operating at 100% power.
- A Service Water leak occurs on the supply line to Auxiliary Building Fan Coil Unit 1B.
- A-SW-02, Abnormal Service Water System Operation is implemented.
- SW-10B, Aux Bldg SW Header B Isolation, is closed to isolate the leak.
- The NCO reports that CC Heat Exchanger outlet temperature, computer point T0621A, is 105°F and increasing.

What action is required for these conditions?

a. Start the standby CC Pump.

b. Open SW-1300A, Comp Cooling Heat Exchanger A outlet.

c. Trip the reactor, and stop the Reactor Coolant Pumps.

d. Position LD-14, LD Demin High Temp Divert Valve, to VC TK position.

QUESTION: 055 (1.00)

Given the following:

- The plant is operating at 100% power.
- IA-101, Instrument Air to Containment Isol, inadvertently closes due to a failure.
- The GREEN indicating light bulb for IA-101 position indication is burned out, so the CLOSED position is NOT indicated.

What will alert the operator to this failure?

a. Charging flow decreases to ZERO due to CVC-11 failing closed.

b. Reactor Trip on Low Pressurizer Pressure.

c. Annunciator 47051-I, STATION AND INSTR AIR SYSTEM FAULT.

d. Low pressure is indicated on PI-4150103, Rx Bldg Header Pressure indicator.

QUESTION: 056 (1.00)

Given the following:

- The plant is operating at 100% power.
- Station and Instrument Air Compressor G is OOS.
- Air Compressor F is in service.
- Air Compressor F trips on high HP air temperature.
- Instrument Air header pressure decreases to 92 psig due to minor system leaks.

What is the status of the Instrument Air system for these conditions?

a. Compressors A, B, and C are running and loaded.
SA-200 and SA-400 (Station Air Header 1A and 1B Isolations) are partially closed.

b. Compressors B and C are running and loaded, and compressor A is running and unloaded.
SA-200 and SA-400 (Station Air Header 1A and 1B Isolations) are partially closed.

c. Compressors A, B, and C are running and loaded.
SA-200 and SA-400 (Station Air Header 1A and 1B Isolations) are fully open.

d. Compressors B and C are running and loaded, and compressor A is running and unloaded.
SA-200 and SA-400 (Station Air Header 1A and 1B Isolations) are fully closed.

QUESTION: 057 (1.00)

Hose stations in proximity to 4160V AC electrical switchgear are provided with...

a. fixed fog nozzles to reduce the potential for high-voltage shocks.

b. adjustable spray nozzles to provide flexibility for different fire types.

c. straight stream nozzles to improve the capability of fighting fires in close quarters.

d. foam nozzles to ensure bus bars and suspended cables are sprayed with an insulating coating.

QUESTION: 058 (1.00)

Given the following:

- The plant is operating at 100% power.
- A small instrument air leak inside Containment causes a slow rise in Containment pressure.
- Containment pressure is currently 1.7 psig.

In order to ensure adequate margin to Containment design pressure is maintained, what is the appropriate action to reduce Containment pressure ?

a. All Containment Fan Coil Units should be started or verified running.

b. One Containment vacuum breaker should be opened after obtaining a discharge permit.

c. The Containment should be vented using the Post-LOCA 2 inch vent lines.

d. The Containment should be vented using the 36 inch RBV valves.

QUESTION: 059 (1.00)

Which of the following operator monitored parameters ensure the safety analysis assumptions for Shutdown Margin, Ejected Rod Worth, and Power Distribution Peaking Factors are maintained? (Note: A list of abbreviations used in the answer selections is provided below.)

QPTR - Quadrant Power Tilt Ratio
DNBR - Departure From Nucleate Boiling Ratio
AFD - Axial Flux Difference
CHF - Critical Heat Flux

a. QPTR, DNBR, AFD, and Rod Insertion Limits.

b. Rod Misalignment Limitations, CHF, AFD, QPTR.

c. Rod Insertion Limits, AFD, QPTR, Rod Misalignment Limitations.

d. RCS Pressure, Rod Insertion Limits, Critical Boron Concentration, CHF.

QUESTION: 060 (1.00)

Given the following:

- The Shift Manager has required that a Valve Lineup Verification be completed on the Chemical and Volume Control System as a corrective action for some identified mis-positioning events coming out of the recent plant outage.
- One of the valves to be checked is in a Locked High Radiation Area that is also a Confined Space.
- The valve is a locked open component.

Which of the methods listed below is acceptable for independent verification of the locked valve position per GNP-03-30.06B, Verification Practices?

a. Entry into the area must be made by an operator so that actual position of the valve is verified.

b. With the approval of the Shift Manager, a verification of Radiation Protection records can be completed to ensure that no one entered the area since the last time the valve was positioned.

c. With the approval of the Shift Manager and the Work Group Supervisor, flow may be initiated through the system from the Control Room, and a verification of flow can be used to confirm the valve is in the proper position.

d. With the approval of the Manager Nuclear Operations, a review of the Confined Space Entry Permits can be completed to ensure no entries have been made to the area since the last time the valve was positioned.

QUESTION: 061 (1.00)

When clearing a tagout for the manual isolation valves for Charging Pump C, in non-emergency conditions, which of the following requirements is applicable?

a. Cards cleared should be turned over to the Work Order Holder.

b. The individual removing the tagout must be a qualified Auxiliary Operator.

c. The Shift Manager must review the sequence of restoration requirements for the tagout.

d. All cards used in the Aux Building RCA must be thrown out at the RPO.

QUESTION: 062 (1.00)

Given the following:

- The plant is being started up after a mid-cycle outage.
- The reactor is critical at 9.5 X 10^{-4}% power.
- Critical data has just been recorded on N-CRD-49B, Data Sheet 1.
- RCS Tavg is at the no-load value.
- RCS boron is 850 PPM.
- Control Bank D position is 105 steps.
- MSIVs are closed.

What actions will be taken to raise and stabilize reactor power at 2%?

a. Rods will be withdrawn to establish no more than a 0.5 DPM startup rate. Rod position will be at 105 steps with SG PORVs closed when power is stabilized.

b. Rods will be withdrawn to establish no more than a 0.5 DPM startup rate. Rod position will be at 105 steps with SG PORVs throttled open when power is stabilized.

c. Rods will be withdrawn to establish no more than a 1.0 DPM startup rate. Rod position will be above 105 steps with SG PORVs closed when power is stabilized.

d. Rods will be withdrawn to establish no more than a 1.0 DPM startup rate. Rod position will be below 105 steps with SG PORVs throttled open when power is stabilized.

QUESTION: 063 (1.00)

The following plant conditions exist:

- REFUELING OPERATIONS are in progress involving fuel movement within the core.
- Both SG levels are at 100% WR.
- The running RHR Pump A trips and locks out.
- Fuel movement is halted.
- RHR Pump B is started and aligned for shutdown cooling operation within a few minutes.

How are the REFUELING OPERATIONS affected?

a. Fuel movement CANNOT be resumed.
With the reactor vessel head removed, the SGs are NOT considered an OPERABLE heat sink.

b. Fuel movement CANNOT be resumed.
Both RHR pumps are required to be OPERABLE.

c. Fuel Movement may resume.
Either S/G meets the heat sink requirements for decay heat removal.

d. Fuel movement may resume.
Only one RHR pump is required to be operable.

QUESTION: 064 (1.00)

A valve located in Containment has the following radiation level readings:

- Bottom of valve: 2500 mR on contact, 1200 mR/hr @ 30 cm.
- Top of valve (bonnet area) - 100 mR/hr on contact and 48 mR/hr @ 30 cm.

This valve is located in the general area of Containment and NO enclosure exists.

What are the required radiological postings ?

a. The valve should be roped off and posted as a "High Radiation Area" with a flashing light.

b. The valve should be roped off and posted as a "High Radiation Area" without a flashing light.

c. NO posting is required as long as Containment is posted as "High Radiation Area."

d. Containment should be posted as a "Very High Radiation Area."

QUESTION: 065 (1.00)

Given the following:

- A discharge of Waste Condensate Tank A is in progress.
- R-18, Waste Discharge Liquid Monitor fails off-scale high.
- R-18 is taken out-of-service.

What action is NOT necessary to continue the release?

a. Establish TWO independent locations for grab sampling during the release.

b. Analyze at least TWO independent samples from the Waste Condensate Tank A.

c. Perform independent verifications of the discharge lineup by at least TWO technically qualified staff members.

d. Perform independent verifications of the release rate calculations by at least TWO technically qualified staff members.

QUESTION: 066 (1.00)

Given the following:

- Reactor trip and Safety Injection actuated 20 minutes ago.
- The trip was caused by a steam line break on Main Steam Header from S/G A.
- Power is 5 X 10^{-1}% power.
- Intermediate Range SUR indicates a stable negative 0.1 decades per minute.
- S/G A Yarway level reads 10%.
- S/G B Yarway level reads 55%.
- RCS cold leg temperature indicates 265°F.
- SI flow indicates 400 gpm.
- AFW flow is 250 gpm total.
- Containment pressure reads 27 psig.
- Transition from E-0, Reactor Trip or Safety Injection, is in progress.

What is the next procedure to be performed?

a. FR-S.1, Response to Nuclear Power Generation/ATWS

b. FR-H.1, Response to Loss of Secondary Heat Sink.

c. FR-P.1, Response to Imminent Pressurized Thermal Shock Condition.

d. FR-Z.1, Response to High Containment Pressure.

QUESTION: 067 (1.00)

Which of the following conditions would prompt a transition out of ES-1.3, Transfer to Containment Sump Recirculation, while performing step 11, Align train B RHR pump for recirculation?

a. Power is lost to buses 5 and 6.

b. SI-350B, CNTMT Sump B Supply to RHR Pump B, CANNOT be opened.

c. The STA reports that a RED path exists on the Core Cooling Status Tree.

d. SI Pump B is NOT available AND RCS pressure is above the shutoff head for the RHR pumps.

QUESTION: 068 (1.00)

Given the following:

- The plant is in REFUELING SHUTDOWN 300 hours after a normal shutdown.
- RCS draining per N-RC-36E, Draining the Reactor Coolant System is in progress and currently at a Hold Point.
- RCS pressure is stable at containment pressure.
- Pressurizer level is stable at 30% Cold Cal.
- RCS temperature is 140°F and increasing.
- Train A RHR is in operation.
- RHR-8A, RHR Flow Control Hx A Outl, is throttled 20% open.
- RHR Pump A discharge pressure is fluctuating between 25 and 100 psig.
- RHR flow is fluctuating from 1600 to 2000 gpm.
- RHR Pump A motor current is fluctuating.
- Component Cooling flow to the RHR system is normal.

What operator action(s) should be taken to correct these conditions?

a. Increase RHR flow to greater than 2000 gpm.

b. Stop RHR Pump A and establish an alternate method of decay heat removal.

c. Energize the Pressurizer heaters to raise RCS pressure to greater than 200 psig.

d. Align Train B RHR for cooling and start RHR Pump B. Once the RHR Pump B is running, stop RHR Pump A.

QUESTION: 069 (1.00)

Given the following:

- The plant was operating at 100% power.
- Reactor trip and Safety Injection occurred due to a Small Break LOCA.
- All Safeguards equipment is operating normally.
- The crew has transitioned to ES-1.2, Post-LOCA Cooldown and Depressurization.
- ES-1.2 directs starting two Charging Pumps and establishing maximum charging flow.

What is the purpose for operating the Charging Pumps? To provide . . .

a. seal cooling for the RXCPs.

b. sufficient makeup so that SI Pumps can be stopped.

c. Pressurizer Auxiliary Spray for RCS pressure control.

d. additional makeup to restore Pressurizer level.

QUESTION: 070 (1.00)

Given the following:

- The plant was at 100% power when a reactor trip and Safety Injection occurred.
- The crew has transitioned to FR-H.1, Response to Loss of Secondary Heat Sink.
- While attempting to restore AFW, the following conditions are noted:
  - Bus 5 is deenergized.
  - The Turbine Driven AFW Pump is tripped and a large amount of oil is leaking from the governor.
  - 47062-M, AFW PUMP B ABNORMAL, is in alarm.
  - SG A pressure is 75 psig and lowering.
  - SG B pressure is 700 psig and slowly lowering.
  - CST A and B levels read 92% each.
  - AFW alignment is normal for post-trip conditions.
  - The operator then takes AFW-2B, AFWP B Flow Control Valve, to the closed position.

What sequence of actions is required to start AFW Pump B based on the above conditions?

a. Take AFW Pump B control switch to STOP and then to START.

b. Reset breaker 1-604 timed overcurrent relays, and take AFW Pump B control switch to START.

c. Locally place the AFW Pump B Disch Press Trip Bypass Switch to BYPASS, and take AFW Pump B control switch to START.

d. Locally place the AFW Pump B Low Suction Press Trip Bypass Switch to BYPASS, and take AFW Pump B control switch to STOP and then START.

QUESTION: 071 (1.00)

A natural circulation cooldown is being conducted per ES-0.3, Natural Circulation Cooldown With Steam Void In Vessel.

While performing Step 3, Continue RCS Cooldown and Initiate Depressurization, the procedure places limitations on RCS subcooling, cooldown rate in the RCS cold legs, and temperature vs. pressure limitations of RD-11.1.

Which of the following RCS parameter combinations meet the requirements of this step? (RD-11.1.1, 11.1.2 and 11.1.3 provided)

	Cooldown Rate (°F/hour)	Temperature (°F)	Pressure (psig)
a.	110	300	800
b.	60	275	1600
c.	30	520	1300
d.	10	450	500

QUESTION: 072 (1.00)

Given the following:

- The plant tripped from 100% power due to a large break LOCA.
- A Bus Lockout occurred on Bus 6.
- E-1, Loss of Reactor or Secondary Coolant, has been implemented and the crew is performing Step 17 - Evaluate Plant Status.

The plant status is as follows:

- RCS pressure is 300 psig and decreasing slowly.
- Steam Generator pressure is 900 psig and stable.
- RWST level is 47% and decreasing slowly.
- Residual Heat Removal Pump A tripped on overcurrent.
- Containment pressure peaked at 25 psig and is currently 20 psig and decreasing slowly.
- Containment radiation is 12 R/hr and stable.
- All other equipment is operating normally.

What action will be taken based on the current plant status?

a. The ICS alignment will checked in FR-Z.1, Response to High Containment Pressure.

b. Train A SI Recirculation flow will be established in ES-1.3, Transfer To Containment Sump Recirculation.

c. Refill of the RWST will be initiated in ECA-1.1, Loss Of Emergency Coolant Recirculation.

d. The SGs will be rapidly depressurized to 300 psig to minimize RCS inventory loss in ES-1.2, Post LOCA Cooldown And Depressurization.

QUESTION: 073 (1.00)

Given the following:

- The plant was operating at 100% power.
- Reactor Trip has occurred.
- Safety Injection has occurred.
- Both SGs are depressurizing uncontrollably.
- ECA-2.1, Uncontrolled Depressurization of Both Steam Generators, is implemented.
- SI has been reset.
- RCS pressure is 200 psig.
- ECA-2.1 directs isolation of the Safety Injection Accumulators.

What is the purpose of isolating the SI Accumulators?

a. Prevent Integrity CSF challenge from the SI Accumulator cold leg injection flow.

b. To allow a reduction in RCS pressure to establish RHR flow.

c. Prevent nitrogen injection into RCS after the discharge of the Accumulator liquid contents.

d. Prevent gas binding of the SI Pumps by accumulator nitrogen coming out of solution.

QUESTION: 074 (1.00)

Given the following:

- The plant experienced a spurious Reactor Trip from 100% power.
- FW-7A, SG A Main Feedwater Flow Control Valve, failed open and is mechanically stuck.
- All other equipment and systems functioned as designed.

Under these conditions, which of the following will prevent an overpressurization of Steam Generator A?

a. Condenser Steam Dump actuation.

b. SG A Safety Valves relieving at set pressure.

c. Feedwater Isolation actuation.

d. SD-3A, SG A PORV relieving at set pressure.

QUESTION: 075 (1.00) **QUESTION DELETED**

Given the following:

- The plant was operating at 100% power.
- A LOCA inside containment has occurred.
- E-1, Loss of Reactor or Secondary Coolant is in progress.
- Containment pressure is 2.5 psig.
- Containment Spray Pumps have been stopped.
- Containment radiation is 13 R/hr.
- Decision is made to transition to FR-Z.3, Response to Containment High Radiation Level.

What action should be taken to address the high containment radiation?

a. Verify RHR is supplying containment spray to reduce containment pressure to atmospheric.

b. Start Containment Spray Pumps to provide Iodine scrubbing of containment atmosphere.

c. Start Post-LOCA Hydrogen Control System to dilute containment airborne radioactivity.

d. Start Containment Fancoil Units to provide some filtration of containment particulate radioactivity.

QUESTION: 076 (1.00)

Given the following:

- The plant is in COLD SHUTDOWN with RHR Pump A in operation.
- RCS is solid at 390 psig.
- RCS temperature is 180°F and stable.
- RHR-1A, RCS Loop A Supply to RHR Pumps, inadvertently closes and will NOT re-open.

Which of the following correctly identifies the Technical Specification ACTION applicable to the condition above?

a. Technical Specification 3.1.a.2.B, Decay Heat Removal Capability, is NOT satisfied. Verify S/G levels and start at least one RXCP.

b. Technical Specification 3.1.a.4, Pressure Isolation Valves, is NOT satisfied. Close RHR-2A and lock its associated MCC breaker OFF, and locally close RHR-4A, RHR Pump 1A Inlet Isolation.

c. Technical Specification 3.1.b.4, Overpressure Protection for Low Temperature Operation, is NOT satisfied. Verify RHR-1B and RHR-2B open and lock their associated MCC breakers OFF.

d. Technical Specification 3.6.b, Containment Isolation Valves, is NOT satisfied. Close RHR-2A and log its associated MCC breaker OFF.

QUESTION: 077 (1.00)

Given the following:

- The plant is at 100% power.
- At 0830, Diesel Generator B is INOPERABLE due to governor repairs.
- At 0900, Bkr 15204, Bus 52 Supply to MCC-52E trips.
- Actions are initiated to investigate Bkr 15204 trip.
- Diesel Generator B is restored to OPERABLE status at 0930.

Determine the reportability requirements for this event at the current time. (EPIP-AD-02, GNP 11.08.04 Table 1, and MCC-52E loads provided).

a. 1 hour notification per 50.72 (a)(1)(i) declaration of UNUSUAL EVENT from Chart F

b. 4 hour notification per 50.72 (b)(2)(i) due to initiation of TS required shutdown.

c. 8 hour notification per 50.72(b)(3)(ii), event or condition that results in a serious degradation of plant safety.

d. A report is NOT required since the condition is addressed in Technical Specifications and NO action time was exceeded.

QUESTION: 078 (1.00) **QUESTION DELETED**

Given the following:

- The plant is operating at 100% power with normal conditions established.
- A 138KV Transmission line failure causes a turbine load reduction.
- Bus 6 lockout also occurs just as the load reduction begins.
- Plant conditions following the transient are:
- Reactor power is 97%.
- Control Bank D position is 198 steps.
- Control Rod Bank Selector is in MANUAL.

What actions are required based on the given plant conditions following the transient? (Figure RD 4.1 and Technical Specifications pages 3.10-5 and 3.10-6 provided.)

a. Restore Control Rods above LOW-LOW insertion limit within 2 hours.

b. Verify position of control rods using incore moveable detectors within 4 hours.

c. Trip the reactor and emergency borate 360 gallons for each non-indicating control rod.

d. Restore inoperable IRPI indications within 12 hours or reduce power to less than 50%.

QUESTION: 079 (1.00)

Given the following:

- The plant was initially operating at 100% power with all parameters at normal expected values.
- Charging Pump B is Out of Service.
- 480V Bus 1-52 is then lost.
- Letdown flow is isolated.
- RXCP A Bearing Water temperature is 200°F and stable.
- RXCP A #1 Seal Leakoff temperature is 185°F and stable.
- RXCP B Bearing Water temperature is 205°F and stable.
- RXCP B #1 Seal Leakoff temperature is 195°F and stable.

What procedure or specification will be the FIRST that requires a plant shutdown or reactor trip for the above situation?

a. Technical Specification 3.2, Chemical and Volume Control System.

b. A-RC-36C, Abnormal RXCP Operation.

c. Technical Specification 3.7, Auxiliary Electrical System.

d. Annunciator Response Procedure 47043-F, PRESSURIZER LEVEL LOW.

QUESTION: 080 (1.00)

Given the following:

- Reactor Trip and Safety Injection have occurred.
- A LOCA has occurred.
- RHR Pump A has failed.
- ES-1.3, Transfer to Containment Sump Recirculation is being implemented.
- CC-400B, Component Cooling to RHR HX B will NOT open.
- Efforts are in progress to locally open CC-400B.
- It is estimated that repair of CC-400B will take 90 minutes.

What is the impact of these conditions upon establishing Containment Sump Recirculation and upon removal of Core Decay Heat?

a. Containment Sump Recirculation can be established without CCW.
Core decay heat is transferred to the Containment and will be removed by Containment Fan Coil Units.

b. Containment Sump Recirculation can be established without CCW.
Transition to Core Cooling FR Procedures to provide Core Cooling.

c. Containment Sump Recirculation can NOT be established without CCW.
Place RHR in service per A-RHR-34B, Residual Heat Removal Split-Train Mode to provide Core Cooling.

d. Containment Sump Recirculation can NOT be established without CCW.
Transition to ECA-1.1, Loss of Emergency Coolant Recirculation to provide Core Cooling.

QUESTION: 081 (1.00)

What is the LCO for containment pressure and the associated basis for this limit?

a. Maintain internal pressure of the reactor containment vessel less than or equal to 2 psi. This ensures that the Containment internal vacuum would NOT be reduced to less than 0.8 psi upon actuation of Internal Containment Spray actuation.

b. Maintain internal pressure of the reactor containment vessel less than or equal to 2 psi. This provides for a margin between the Containment design pressure and the postulated internal pressure in the event of a design-basis steamline break.

c. Maintain internal pressure of the reactor containment vessel less than or equal to 4 psi. This ensures that the Containment internal vacuum would NOT be reduced to less than 0.8 psi upon actuation of Internal Containment Spray actuation.

d. Maintain internal pressure of the reactor containment vessel less than or equal to 4 psi. This provides for a margin between the Containment design pressure and the postulated internal pressure in the event of a design-basis steamline break.

QUESTION: 082 (1.00)

Given the following:

- The plant is in REFUELING Mode.
- A spent fuel assembly is in the Manipulator Crane in transit to the Upender.
- Annunciator 47033-43, TLA-18 RHR SYSTEM MONITOR ABNORMAL alarms.
- Refueling Water Level WR on PPCS is 66% and decreasing.
- Decreasing water level in the Refueling Cavity is observed.
- R-2, Containment Area Monitor and Manipulator Crane Radiation Monitor are reading normal.

What are the appropriate actions to be taken by the Refueling SRO?

a. Direct Containment Refueling Operator to lower assembly into transfer sump and unlatch. Verify Containment Integrity is set.

b. Direct Containment Refueling Operator to lower assembly to any available location in core and do NOT unlatch. Direct SFP Refueling operator to close Fuel Transfer System Gate Valve.

c. Direct Containment and SFP Refueling Operators to stop all fuel movement. Evacuate ALL personnel from Containment.

d. Direct Containment Refueling Operator to lower assembly in RCC Change Fixture and unlatch. Direct SFP Refueling Operator to close Fuel Transfer System Gate Valve.

QUESTION: 083 (1.00)

Given the following:

- A SGTR has occurred.
- Actions of E-3, Steam Generator Tube Rupture are in progress.
- Both Circ Water Pumps tripped on Forebay low-low level and will NOT restart.
- Operators have identified and isolated ruptured S/G A.
- Preparations are being made to initiate RCS cooldown to establish desired subcooling.

What operator action is required to cooldown the RCS?

a. Dump steam at maximum rate from S/G B using its PORV.

b. Direct an operator to locally fully open all Atmospheric Steam Dump valves.

c. Momentarily place the Main Steam Dump Control Mode Selector to RESET, and then dump steam at maximum rate to the condenser.

d. Momentarily place either Steam Dump Interlock Selector to BYPASS, and then dump steam at maximum rate to the condenser.

QUESTION: 084 (1.00)

Given the following:

- The plant tripped from 100% power at 0336 due to an unisolable steam leak from Steam Generator B.
- Safety Injection has actuated.
- Steam Generator B is isolated per E-2, Faulted Steam Generator Isolation.

The time is now 0406 and the following plant conditions exist:

- RCS Cold Leg temperature is 298°F and stable.
- RCS pressure is 1450 psig and increasing.
- Pressurizer level is 88% and increasing.
- Source Range SUR is ZERO.

What condition requires IMMEDIATE crew action to mitigate based on current plant conditions?

a. Loss of Core Shutdown due to RCS cooldown.

b. Thermal Shock to the Reactor Vessel wall due to RCS cooldown.

c. Pressurizer overfill and challenge to the Pressurizer PORVs due to continued SI flow.

d. Steam Generator Tube Primary-to-Secondary differential pressure limit exceeded due to continued SI flow.

QUESTION: 085 (1.00)

Given the following:

- The plant is operating at 100% power.
- ONLY the following annunciators are in alarm:
- 47104-A, BATTERY CHARGER A TROUBLE
- 47101-A, BRA-102 DC VOLTAGE LOW

What actions are required based on these conditions?

a. Go to E-EDC-38A, Loss of Train A DC Power.

b. Declare D/G A inoperable.

c. Verify BRA-102 voltage greater than 105VDC for battery OPERABILITY.

d. Cross-connect BRA-102 and BRB-102 per A-EDC-38.

QUESTION: 086 (1.00)

Given the following:

- The plant was operating at 100% power.
- A total Loss of Feedwater occurred.
- The reactor was tripped.
- All Auxiliary Feedwater Pumps failed to start.
- FR-H.1, Response to Loss of Secondary Heat Sink was implemented.
- RCS Bleed and Feed was initiated.
- Pressurizer PORV PR-2B failed to open.
- RCS Wide Range Hot Leg temperatures and Core Exit Thermocouple temperatures are INCREASING.
- SG A Wide Range level indicates 2%.
- SG B Wide Range level indicates 3%.
- Repairs have made Feedwater Pump A available.
- SI is reset.

What mitigation strategy is required?

a. Reset FW Isolation,
Open FW Isolation Valves,
Fast start Main FW Pump A,
Open FW-10A and B, SG A and B Main Feedwater Bypass Flow Control Valve to establish 60 to 100 gpm feed flow.

b. Open FW isolation Valves,
Fast start Main FW Pump A,
Open FW-10A or FW-10B, SG A or B Main Feedwater Bypass Flow Control Valve to establish maximum feed flow to both SGs.

c. Open FW Isolation Valves,
Fast start Main FW Pump A,
Open FW-10A and B, SG A and B Main Feedwater Bypass Flow Control Valves to establish 60 to 100 gpm feed flow.

d. Reset FW Isolation,
Open FW Isolation Valves,
Fast start Main FW Pump A,
Open FW-10A or B, SG A or B Main Feedwater Bypass Flow Control Valve to establish maximum feed flow.

QUESTION: 087 (1.00)

Given the following:

- A fire in the control room has resulted in the implementation of E-0-06, Fire In Alternate Fire Zone.
- The procedure has been implemented to the point that the RCS has been borated to the Cold Shutdown boron concentration in preparation for RCS cooldown.

While the plant conditions are being maintained stable, the Unit Supervisor identifies the following conditions:

- Bus 3 is de-energized.
- Bus 4 is de-energized.
- Bus 5 is energized by Diesel Generator A.
- Bus 6 is de-energized and Diesel Generator B is running.

Which of the following correctly describes the conditions observed by the US?

a. This is the expected electrical alignment required by the procedure.

b. The electrical alignment is as expected, except Diesel Generator B should NOT be running.

c. The alignment is as expected, except Bus 6 should be energized by the Diesel Generator B.

d. The alignment is as expected, except Bus 3 and Bus 4 should be energized, and the Diesel Generator B should NOT be running.

QUESTION: 088 (1.00)

Given the following:

- The plant is operating at 100% power.
- A fire in the Safeguards Bus 51 and Bus 52 switchgear area is reported.
- E-FP-08, Emergency Operating Procedure-Fire is implemented.

What reference will provide the information to determine what systems and components are affected by the fire, and to shutdown ventilation systems for the affected areas to prevent the spread of fire or smoke?

a. E-0-07, fire in Dedicated Fire Zone.

b. Fire Protection Program Plan.

c. Fire area strategies Book.

d. E-FP-08 Appendix C - Potential local actions for fire in any Alternate Zone.

QUESTION: 089 (1.00)

Given the following:

- The plant is operating at 100% power.
- Annunciator 47013-H, RXCP A OIL LEVEL HIGH/LOW, is in alarm.
- A-RC-36C, Abnormal RXCP Operation, has been implemented.
- A containment entry is necessary to locally determine RXCP A oil level.

Which of the following is NOT a requirement for performing the containment entry?

a. Confined Space Entry requirements are met.

b. Containment pressure is less than 2 psig.

c. An approved Radiation Work Permit.

d. A minimum of TWO persons to make the entry.

QUESTION: 090 (1.00)

Given the following:

- The plant is operating at 100% power.
- A Steam Generator tube leak occurs.
- E-O-14, Steam Generator Tube Leak is implemented.
- UNUSUAL EVENT is declared
- The Emergency Response Organization is activated.

Under these conditions, what individual is allowed access to the Control Room without restriction?

a. Work Week Coordinator.

b. Site Protection Director.

c. Event Operations Director.

d. Radiation Protection Manager.

QUESTION: 091 (1.00)

Given the following:

- The plant is operating at 100% power.
- SP-36-082, Reactor Coolant Leak Rate Check, has just been completed.
- Based on VCT level change, the total RCS leak rate is indicated at 1.11 gpm.
- Annunciator 47015-L, RXCP B STANDPIPE HIGH/LOW has alarmed.
- The NCO has determined that Standpipe level is HIGH.
- Reactor Coolant Pump B #1 Seal Leakoff is 2.8 gpm.
- Auxiliary Operator reports that RCDT level increased from 20% to 34% in ONE hour.
- Auxiliary Operator reports that RCDT level normally increases 3% over 4 hours.

What is the required course of action for the above conditions? (Operator Aid 89-6 provided.)

a. NO additional action is required since the unidentified RCS leakage is less than 1 gpm.

b. Leakage to the RCDT must be evaluated as safe for continued operation, and the investigation into source of the unidentified leakage must continue.

c. The maximum allowed leakage rate is exceeded, the reactor is to be placed in HOT SHUTDOWN.

d. The reactor must be shutdown, and the plant taken to COLD SHUTDOWN due to a non-isolable fault.

QUESTION: 092 (1.00)

Given the following:

- A safety-related component is in an OPERABLE But Degraded condition.
- The repair of the component is scheduled for the next refueling outage.
- Concerns have been raised about a failure of the component prior to the scheduled repair.

What conditions must be satisfied to allow a voluntary entry into the Limiting Conditions for Operations to perform corrective maintenance?

a. Probabilistic Risk Assessment results in Core Damage Frequency = 8.68×10^{-5}, 10CFR 50.59 evaluation.

b. Probabilistic Risk Assessment results in Core Damage Frequency = 2.1×10^{-3}, all spare parts physically verified available.

c. Probabilistic Risk Assessment results in Core Damage Frequency = 2.1×10^{-3}, Director Nuclear Station (O&M) approval.

d. Probabilistic Risk Assessment results in Core Damage Frequency = 8.68×10^{-5}, planned work time does NOT exceed 50% of LCO time.

QUESTION: 093 (1.00)

Which of the following activities is required to be performed under the direction or observation of the SRO assigned to fuel handling operations?

I. Flushing of the Reactor Cavity with DI water during performance of N-FH-53E, Reactor Cavity Draining with Fuel or Upper Internals Installed.

II. Control rod drive shaft latching following refueling during performance of RF-04.09, RCCA Drive Shaft Latch.

III. Retraction of the incore flux thimble tubes prior to Reactor Vessel Head removal during performance of RF-02.04, Incore Flux Thimble Tube Retraction.

a. ONLY I.

b. ONLY II.

c. ONLY I and II.

d. ONLY II and III.

QUESTION: 094 (1.00)

Given the following:

- LOCA outside of Containment has occurred.
- GENERAL EMERGENCY has been declared.
- The Emergency Response Organization has NOT yet been staffed.
- It has been determined that the release path can be isolated in the RHR A Heat Exchanger Room.
- Radiation Protection has measured the general area dose rate at 20 REM/HR in the RHR Heat Exchanger Room.

Using Emergency Exposure Limits, what is the MAXIMUM stay time for an operator entering the area to isolate the leak?

a. 15 minutes.

b. 45 minutes.

c. 75 minutes.

d. 90 minutes.

QUESTION: 095 (1.00) **QUESTION DELETED**

Given the following:

- The plant is in REFUELING SHUTDOWN.
- Irradiated fuel movement is in progress.
- Containment Purge is in service
- Annunciator 47013-A, RAD MONITOR SAMPLING FLOW HIGH/LOW is alarming.
- R11/12, Containment Particulate/Gas Monitor, Sample Pump has stopped and will NOT restart.

What action is required?

a. Verify Containment Ventilation Isolation Train A has occurred.

b. Restore R11/12 Sample flow to normal within 4 hours or stop the Containment Purge.

c. Verify R21 is operating and aligned to sample Containment.

d. Immediately suspend fuel movement.

QUESTION: 096 (1.00)

Given the following:

- A GENERAL EMERGENCY has been declared due to LOCA conditions, ECCS failure and potential containment failure.
- You are the acting Emergency Director.
- ARTO Met Data is unavailable.
- PPCS Meteorological Data from TSC 2 Environmental / Radiation page displays the following information:

-	WIND DIRECTION	15 min avg	10 m	303 deg
-		15 min avg	60 m	307 deg
-	WIND SPEED	15 min avg	10 m	10 mpg
-		15 min avg	60 m	12 mpg
-	DELTA	15 min avg	-5.0 deg	

Based on these conditions, what Initial Protective Action Recommendations should be made?

(EP-AD-19 and EPIPF AD-07-01, NARS Form provided.)

a. Evacuate ALL sectors out to 5 miles, shelter downwind sectors EFGH from 5 miles out to 10 miles.

b. Evacuate ALL sectors out to 5 miles, shelter downwind sectors FGH from 5 miles out to 10 miles.

c. Evacuate ALL sectors out to 2 miles, evacuate downwind sectors EFGH out to 5 miles, shelter downwind sectors EFGH from 5 miles out to 10 miles.

d. Evacuate ALL sectors out to 2 miles, evacuate downwind sectors FGH out to 5 miles, shelter downwind sectors FGH from 5 miles out to 10 miles.

QUESTION: 097 (1.00)

Given the following:

- A reactor trip and Safety Injection occurred.
- The crew has implemented ECA-1.2, LOCA Outside Containment.
- The crew has closed the first of four valves, SI-302A, RHR Pump A Injection to Reactor Vessel.
- RCS pressure is 1150 psig and decreasing.

What is the correct action to be taken for these conditions?

a. Leave SI-302A closed and transition to E-1, Loss of Reactor or Secondary Coolant.

b. Re-open SI-302A and transition to ECA-1.1, Loss of Emergency Coolant Recirculation.

c. Leave SI-302A closed and transition to ES-0.0, Rediagnosis.

d. Re-open SI-302A and continue in ECA-1.2 LOCA Outside Containment.

QUESTION: 098 (1.00)

Given the following:

- A Loss of All AC Power occurred.
- ECA-0.0, Loss of All AC Power has been implemented.
- At step 18, while performing actions to prepare to tie Bus 52 to Bus 46, Maintenance reports DG B is ready for starting.
- Diesel Generator B has been manually started.
- Bus 6 has been energized.

The NCO reports Core Exit Thermocouples are reading 725°F and increasing. The NCO requests that Safety Injection Pump B be started to restore Core Cooling.

What is the proper action?

a. Wait until it is directed in FR-C.2, Response to Degraded Core Cooling.

b. Direct the start of Safety Injection Pump B.

c. Wait until it is directed by ECA-0.2, Loss of All AC Power Recovery with SI Required.

d. Direct manual initiation of Safety Injection, and verify Safety Injection Pump B starts.

QUESTION: 099 (1.00)

Given the following:

- The plant tripped from 100% power due to a loss of Bus 1 and 2.
- Natural Circulation Cooldown is in progress per ES-0.2, Natural Circulation Cooldown.
- RCS pressure is 1500 PSIG and decreasing slowly.
- RCS cooldown rate of 25°F/hr has been established.
- Unexpected large variations in Pressurizer level are occurring between 35% and 25%.
- RVLIS RXCP OFF indication is 90%.
- Circumstances require that the cooldown and depressurization continue.

What action is required?

a. Increase RCS cooldown rate to collapse the steam voids and continue in ES-0.2.

b. Manually initiate Safety Injection and go to E-0, Reactor Trip or Safety Injection.

c. Transition to ES-0.3, Natural Circulation Cooldown with Steam Void in Vessel.

d. Increase charging flow to increase RVLIS RXCP OFF indication, and continue in ES-0.2.

QUESTION: 100 (1.00)

Given the following:

- The plant experienced a LOCA at 0949.
- At 1034, the following plant conditions exist:
  - Source Range Count Rate is 20,000 cps.
  - Source Range SUR is negative.
  - Containment pressure is 48 psig.
  - RCS Cold Leg temperature reads Loop A at 312°F & Loop B at 298°F.
  - Highest Core Exit Thermocouple reads 734°F.
  - Steam Generator Narrow Range levels read SG A at 12% & SG B at 8%.
  - Total Auxiliary Feedwater flow is 245 gpm.
  - RCS pressure is 380 psig.

What procedure should be implemented?

a. FR-Z.1, Response to High Containment Pressure.

b. FR-P.1, Response to Imminent Pressurized Thermal Shock.

c. FR-H.1 Response to Loss of Secondary Heat Sink.

d. FR-C.2, Response to Degraded Core Cooling.

(********** END OF EXAMINATION **********)

ANSWER: 001 (1.00)
d.
REFERENCE:
A-RC-36D, step 4.1
A-CVC-35C, step 2
Contingency Action
HIGHER
BANK
036002A2.0 ..(KA's)

ANSWER: 002 (1.00)
d.
REFERENCE:
A-CC-31, step 14 A-RC-36C, step 8
HIGHER
NEW
031003A4.0 ..(KA's)

ANSWER: 003 (1.00)
b.
REFERENCE:
A-CRD-49, step 7 47042-P
FUNDAMENTAL
NEW
049003AK3. ..(KA's)

ANSWER: 004 (1.00)
c.
REFERENCE:
PT08S Thermal Hydraulics, Determination of Natural Circulation Flow
HIGHER
NEW
036003K5.0 ..(KA's)

ANSWER: 005 (1.00)
b.
REFERENCE:
System Description 35, 3.2.14 USAR Section 9.2, page 9.2-13
FUNDAMENTAL
BANK
2.1.28 035004 ..(KA's)

ANSWER: 006 (1.00)
c.
REFERENCE:
E-2023 OPERXK-100-36
HIGHER
NEW
035004K1.2 ..(KA's)

ANSWER: 007 (1.00)
a.
REFERENCE:
N-RHR-34, steps 4.1.4 - 4.1.14
FUNDAMENTAL
NEW
034005K5.0 ..(KA's)

ANSWER: 008 (1.00)
DELETED
REFERENCE:
A-SI-33, step 4.3.5.h
Technical Specifications, bases for TS 3.3.b.5
FUNDAMENTAL
NEW
033006K6.0 ..(KA's)

ANSWER: 009 (1.00)
d.
REFERENCE:
E-1638 E-2001
OPERXK-100-10
HIGHER
NEW
036007A3.0 ..(KA's)

ANSWER: 010 (1.00)
c.
REFERENCE:
UG-0, 6.3.2.a and 6.4 E-0, steps 1-4 Technical Specification 2.3.a.2.B
HIGHER
NEW
007EA2.04 ..(KA’s)

ANSWER: 011 (1.00)
b.
REFERENCE:
E-2026 A-CC-31 step 6
Contingency Action 4.a)
A-RC-36F, step 4.4
N-CVC-35B, CAUTION step 4.1.2.4
HIGHER
NEW
036008A2.0 ..(KA's)

ANSWER: 012 (1.00)
b.
REFERENCE:
System Description 36, Rev. 4, 3.6.6 & 3.6.8, page 33
HIGHER
NEW
036008AK2. ..(KA's)

ANSWER: 013 (1.00)
c.
REFERENCE:
E-2045
FUNDAMENTAL
BANK
031008K4.0 ..(KA's)

ANSWER: 014 (1.00)
c.
REFERENCE:
BKG E-1, page 6 - 13
FUNDAMENTAL
BANK
036009EK2. ..(KA's)

ANSWER: 015 (1.00)
d.
REFERENCE:
ARP 47041-C E-2038
HIGHER
BANK
010K3.03 ..(KA's)

ANSWER: 016 (1.00)
c.
REFERENCE:
A-RC-36D, step 4.1.6 AO # 02-21,
HIGHER
MODIFIED Provided Reference: Operator Aid 02-21, Pressurizer Level Conversion
036011A1.0 ..(KA's)

ANSWER: 017 (1.00)
b.
REFERENCE:
A-RC-36C, step 3 Contingency Action d.
System Description 36, 3.5.3, page 23
FUNDAMENTAL
BANK
011EK3.14 ..(KA's)

ANSWER: 018 (1.00)
c.
REFERENCE:
BKG FR-S.1, step 2
FUNDAMENTAL
BANK
005012A2.0 ..(KA's)

ANSWER: 019 (1.00)
d.
REFERENCE:
System Description 55, 3.9 page 15 WPS-ESF6 (0808)
FUNDAMENTAL
NEW
055013A3.0 ..(KA's)

ANSWER: 020 (1.00)
b.
REFERENCE:
E-1604 E-1635 Containment Pressure XK-100-559
FUNDAMENTAL
BANK
055013K6.0 ..(KA's)

ANSWER: 021 (1.00)
c.
REFERENCE:
RO4-05-LP006, page 8. Technical Specification Bases, Reactor Coolant Flow
HIGHER
MODIFIED
036015/017 ..(KA's)

ANSWER: 022 (1.00)
c.
REFERENCE:
System Description 48, 3.1.3
FUNDAMENTAL
NEW
048015K6.0 ..(KA's)

ANSWER: 023 (1.00)
c.
REFERENCE:
A-CP-46, Attachment C, C.6 A-NI-48, Step 2 Contingency Action a.
HIGHER
NEW
046017K1.0 ..(KA's)

ANSWER: 024 (1.00)
a.
REFERENCE:
Steam Tables
HIGHER
BANK
018022K3.0 ..(KA's)

ANSWER: 025 (1.00)
a.
REFERENCE:
E-CVC-35, step 4.4 RD-6.6 RF-6.7
HIGHER
NEW
2.4.45 035024A ..(KA's)

ANSWER: 026 (1.00)
b.
REFERENCE:
A-RHR-34, Attachment A
HIGHER
BANK Provided Reference: A-RHR-34, ATTACHMENT A
034025AK1. ..(KA's)

ANSWER: 027 (1.00)
c.
REFERENCE:
FR-Z.1, step 3.b System Description 23, Rev. 5, sections 1.5, 3.1 & 3.6
FUNDAMENTAL
NEW
023026K4.0 ..(KA's)

ANSWER: 028 (1.00)
c.
REFERENCE:
N-RC-36C, 4.2.3 7 4.2.2 System Description 36, 2.0. 3.6.2, 3.6.3 & 3.7.1
HIGHER
BANK
036027AK3. ..(KA's)

ANSWER: 029 (1.00)
c.
REFERENCE:
FR-S.1, step 6, CAUTION step 21. BKG FR-S.1 section 3.1
HIGHER
NEW
029EA2.01 ..(KA's)

ANSWER: 030 (1.00)
b.
REFERENCE:
ECA-0.0, steps 31 & 32 BKG ECA-0.0, step 32
HIGHER
BANK
032AK3.02 ..(KA'S)

ANSWER: 031 (1.00)
b.
REFERENCE:
XK-100-554 System Description 05A, 3.13.5
FUNDAMENTAL
BANK
05A035K4.0 ..(KA's)

ANSWER: 032 (1.00)
c.
REFERENCE:
E-FH-53B, Attachment A, A.2
FUNDAMENTAL
NEW
053036AK1. ..(KA's)

ANSWER: 033 (1.00)
d.
REFERENCE:
BKG E-3, step 22
HIGHER
NEW
038EA1.04 ..(KA's)

ANSWER: 034 (1.00)
c.
REFERENCE:
A-FW-05B, steps 11 Contingency Action g. & 12 Contingency Action 1.c E-0, step 14 Contingency Action 1.c.
MEMORY
NEW
05B039K3.0 ..(KA's)

ANSWER: 035 (1.00)
a.
REFERENCE:
E-1612
FUNDAMENTAL
BANK
011045K3.0 ..(KA's)

ANSWER: 036 (1.00)
b.
REFERENCE:
BKG E-2
HIGHER
BANK
006054AK1. ..(KA's)

ANSWER: 037 (1.00)
c.
REFERENCE:
ECA-0.0, CAUTION 1, step 7 and NOTE, step 33.
FUNDAMENTAL
NEW
2.4.20 ..(KA's)

ANSWER: 038 (1.00)
c.
REFERENCE:
A-GE-84A,step 2 System Description No. 38, 1.8 and 3.1 E-253
HIGHER
NEW
2.1.14 040056A ..(KA's)

ANSWER: 039 (1.00)
b.
REFERENCE:
A-ELV-40, NOTE step 3.2.1. A-EDC-38, Attachment B Various GMPs to support above
FUNDAMENTAL
NEW
038057AA1. ..(KA's)

ANSWER: 040 (1.00)
b.
REFERENCE:
System Description 5A, 3.2 E-1624
FUNDAMENTAL
BANK
05A059K4.1 ..(KA's)

ANSWER: 041 (1.00)
d.
REFERENCE:
E-3745 A-RM-45, 3.1
HIGHER
NEW
045061AK2. ..(KA's)

ANSWER: 042 (1.00)
a.
REFERENCE:
DNOS- 0301 Individual Annunciator Response Sheets
HIGHER
NEW
2.4.45 05B061 ..(KA's)

ANSWER: 043 (1.00)
a.
REFERENCE:
47064-E System Description 05B, 3.3 E-1602 E-1624
HIGHER
BANK
05B061K1.0 ..(KA's)

ANSWER: 044 (1.00)
c.
REFERENCE:
A-SW-02, step 28 N-SW-02, 4.2.2
HIGHER
NEW
2.1.32 002062A ..(KA's)

ANSWER: 045 (1.00)
d.
REFERENCE:
N-O-02, 4.37.2 A-EHV-39, 3.1.1 and 3.1.3.b
HIGHER
BANK
039062K2.0 ..(KA's)

ANSWER: 046 (1.00)
c.
REFERENCE:
E-233 E-EDC-38B, 2.1 and APPENDIX A
HIGHER
NEW
038063A3.0 ..(KA's)

ANSWER: 047 (1.00)
b.
REFERENCE:
N-DGM-10A, 2.2
HIGHER
NEW
2.1.33 010064 ..(KA's)

ANSWER: 048 (1.00)
b.
REFERENCE:
E-233 DC Electrical Cross-Reference, BRB-104 ckt 10
FUNDAMENTAL
NEW
010064K2.0 ..(KA's)

ANSWER: 049 (1.00)
c.
REFERENCE:
E-AS-01, 4.7
FUNDAMENTAL
NEW
01065AK3.0 ..(KA's)

ANSWER: 050 (1.00)
a.
REFERENCE:
E-CW-04, step 4 Contingency Action
FUNDAMENTAL
MODIFIED
032A068A4. ..(KA's)

ANSWER: 051 (1.00)
d.
REFERENCE:
N-GWP-32B, 2.6
FUNDAMENTAL
NEW
2.1.32 032B071 ..(KA's)

ANSWER: 052 (1.00)
c.
REFERENCE:
E-O-14, 2.5, 2.6 & 2.8 A-RC-36D, 2.8 E-2021 OPERM-212 OPERM-601
HIGHER
NEW
045073A1.0 ..(KA's)

ANSWER: 053 (1.00)
c.
REFERENCE:
ECA-0.0, CAUTION 2 step 7 BKG ECA-0.0, CAUTION 2 step 7
HIGHER
MODIFIED
002075K2.0 ..(KA's)

ANSWER: 054 (1.00)
b.
REFERENCE:
A-SW-02, step 16 Contingency Action a.
HIGHER
NEW
02076A1.02 ..(KA's)

ANSWER: 055 (1.00)
a. & d.
REFERENCE:
E-AS-01, step 4.1 M-213-6
FUNDAMENTAL
NEW
001078A4.0 ..(KA's)

ANSWER: 056 (1.00)
a.
REFERENCE:
A-AS-01, 3.1.4
FUNDAMENTAL
BANK
001078K1.0 ..(KA's)

ANSWER: 057 (1.00)
a.
REFERENCE:
Fire Protection Plan, Section 11.4.5, page 26.
FUNDAMENTAL
BANK
008086K5.0 ..(KA's)

ANSWER: 058 (1.00)
c.
REFERENCE:
N-RBV-18B, 2.3 Technical Specifications 3.6.d
HIGHER
BANK
018103A1.0 ..(KA's)

ANSWER: 059 (1.00)
c.
REFERENCE:
Technical Specification 3.10 Bases. COLR, 2.8
FUNDAMENTAL
BANK
2.1.10 ..(KA's)

ANSWER: 060 (1.00)
c.
REFERENCE:
GNP-03.30.06B, Section 6.2
FUNDAMENTAL
BANK
2.1.29 ..(KA's)

ANSWER: 061 (1.00)
b.
REFERENCE:
NAD-03.03, 3.20 & 3.12
GNP-03.03.02, 6.6.2.g
FUNDAMENTAL
BANK
2.2.13 ..(KA's)

ANSWER: 062 (1.00)
b.
REFERENCE:
PR08S, Reactor Operational Physics, Intermediate Range Operations, pages 28-29
N-O-02, 2.3 and 4.15.
HIGHER
MODIFIED
2.2.2 ..(KA's)

ANSWER: 063 (1.00)
d.
REFERENCE:
Technical Specification 3.8.a.4 Technical Specification 3.1.a.2.B
HIGHER
BANK
2.2.22 ..(KA's)

ANSWER: 064 (1.00)
a.
REFERENCE:
HP-01.019, Step 6.11.1 & 6.11.3
FUNDAMENTAL
BANK
2.3.1 ..(KA's)

ANSWER: 065 (1.00)
a.
REFERENCE:
Off-site Dose Calculation Manual, Rev. 9, Spec 3.1,Table 3.1.
FUNDAMENTAL
BANK
2.3.11 032A ..(KA's)

ANSWER: 066 (1.00)
c.
REFERENCE:
UG-0, 6.14 F-0.4 Critical Safety Function Status Tree - Integrity.
HIGHER
BANK
2.4.21 ..(KA's)

ANSWER: 067 (1.00)
a.
REFERENCE:
ECA-0.0, ES-1.3, CAUTION Step 1.
HIGHER
BANK
2.4.4 ..(KA's)

ANSWER: 068 (1.00)
b.
REFERENCE:
A-RHR-34 N-RHR-34, 2.6
HIGHER
MODIFIED
034 2.4.9 ..(KA's)

ANSWER: 069 (1.00)
b.
REFERENCE:
BKG ES-1.2,
HIGHER
NEW
2.1.27 ..(KA's)

ANSWER: 070 (1.00)
a.
REFERENCE:
ARP 47062-M, COMMENTS A-FW-05B, step 10.d & e Contingency Actions FR-H.1, step 2.c E-1602,
HIGHER
MODIFIED
05BW/E05EK ..(KA's)

ANSWER: 071 (1.00)
c.
REFERENCE:
ES-0.3, step 3.c RD-11.1.3, Rev. 12/20/04
HIGHER
BANK
Provided Reference:
RD-11.1.1, Kewaunee RCS Composite Pressure/Temperature Limitations RD-11.1.2, Kewaunee Reactor Coolant System Heatup and Cooldown Limitations RD-11.1.3, Kewaunee RCS Composite Pressure/Temperature Limitations
W/E10EA2.2 ..(KA's)

ANSWER: 072 (1.00)
c.
REFERENCE:
E-1, step 17 a ECA-1.1, 1.1 and 2.1.a
HIGHER
MODIFIED
W/E10EA2.2 ..(KA's)

ANSWER: 073 (1.00)
c.
REFERENCE:
BKG ECA-2.1, step 35
FUNDAMENTAL
NEW
05BW/E12EK ..(KA's)

ANSWER: 074 (1.00)
c.
REFERENCE:
BKG FR-H.2, 2.0 E-1625
HIGHER
BANK
05AW/E13EK ..(KA's)

ANSWER: 075 (1.00)
DELETED
REFERENCE:
FR-Z.3, Step 2.
FUNDAMENTAL
NEW
018W/E16EA ..(KA's)

ANSWER: 076 (1.00)
c.
REFERENCE:
Technical Specifications 3.1.b.4 N-RHR-34, 2.11
HIGHER
NEW
034005A2.0 ..(KA's)

ANSWER: 077 (1.00)
c.
REFERENCE:
GNP-11.08.04 Table 1 EPIP-AD -02. Charts
HIGHER
NEW Provided Reference:
GNP-11.08.04 table 1 EPIP-AD-02 Charts MCC Book pages for MCC-52E
2.4.30 119006 ..(KA's)

ANSWER: 078 (1.00)
DELETED
REFERENCE:
Technical Specifications 3.10.f A-CRD-49, Step 8 Contingency Action d.
HIGHER
NEW
049014A2.0 ..(KA's)

ANSWER: 079 (1.00)
d.
REFERENCE:
ARP 47043-F Operator Aid 02-21
HIGHER
NEW
035022AA2. ..(KA's)

ANSWER: 080 (1.00)
a.
REFERENCE:
Technical Specification 3.3 bases BKG ES-1.3, step 5 USAR 9.3
HIGHER
NEW
2.2.25 031026 ..(KA's)

ANSWER: 081 (1.00)
b.
REFERENCE:
N-RBV-18B, P&L 2.1 Technical Specification Basis -Containment Pressure, TS B3.6-5)
FUNDAMENTAL
MODIFIED
2.2.25 018029 ..(KA's)

ANSWER: 082 (1.00)
b.
REFERENCE:
E-FH-53B,
HIGHER
MODIFIED
053034A1.0 ..(KA's)

ANSWER: 083 (1.00)
a.
REFERENCE:
E-3, Rev. Y, Step 10 BKG E-3, Rev. E, Step 10
HIGHER
BANK
006038EA2. ..(KA's)

ANSWER: 084 (1.00)
b.
REFERENCE:
N-O-01, 2.3.5 BKG FR-P.1, 2. pages 3-5
HIGHER
NEW
006038EA2. ..(KA's)

ANSWER: 085 (1.00)
c.
REFERENCE:
A-EDC-38, step 4.1.2 USAR page 8.26
FUNDAMENTAL
NEW
038058AA2. ..(KA's)

ANSWER: 086 (1.00)
d.
REFERENCE:
FR-H.1, step 26
HIGHER
NEW
059A2.04 ..(KA's)

ANSWER: 087 (1.00)
b.
REFERENCE:
E-O-06, steps 15, 16, 29, and 38
HIGHER
BANK
2.4.48 010062 ..(KA's)

ANSWER: 088 (1.00)
c.
REFERENCE:
KPS Fire Plan, 10.3 E-FP-08, 4.13 NAD 02.10, 5.6.5
FUNDAMENTAL
NEW
008067AA2. ..(KA's)

ANSWER: 089 (1.00)
b.
REFERENCE:
N-CCI-56, 2.4
FUNDAMENTAL
NEW
56103A2.02 ..(KA's)

ANSWER: 090 (1.00)
c.
REFERENCE:
DNOS-0303 GNP-03.30.02, section 6.21 KPS Emergency Plan, Appendix A
FUNDAMENTAL
MODIFIED
1192.1.13 ..(KA's)

ANSWER: 091 (1.00)
a. & b.
REFERENCE:
Technical Specification 3.1.d.1, 3.1.d.3, and 3.1.d.4
Operator Aid 89-6 SP-36-082
HIGHER
NEW
Provided Reference:
Operator Aid 89-6
2.1.25 ..(KA's)

ANSWER: 092 (1.00)
d.
REFERENCE:
NAD 08.02, 4.2.1, 4.2.2.1 & 4.2.3.1
FUNDAMENTAL
NEW
2.2.19 ..(KA's)

ANSWER: 093 (1.00)
c.
REFERENCE:
NAD-02.07, 4.2 (SRO Responsibilities) RF-01.00, 3.6 (P&L); 5.2.13
N-FH-53-CLE, 2.7
FUNDAMENTAL
MODIFIED
2.2.26 ..(KA's)

ANSWER: 094 (1.00)
c.
REFERENCE:
EP-AD-11, 5.1.4 & Table 5.1b
HIGHER
BANK
2.3.4 ..(KA's)

ANSWER: 095 (1.00)
DELETED
REFERENCE:
N-RM-45, steps 9.a & 110.a
A-RM-45, steps 12.a and 13.a Contingency Actions
ODCM, Table 3.2, 1.b
HIGHER
NEW
2.3.9 ..(KA's)

ANSWER: 096 (1.00)
c.
REFERENCE:
EP-AD-19 NARS Form EPIPF-AD-07-01
HIGHER
NEW Provided Reference:
EP-AD-19, NARS FORM EPIPF-AD-07-01
2.4.38 ..(KA's)

ANSWER: 097 (1.00)
d.
REFERENCE:
ECA-1.2, step 2 & 3 Contingency Actions a.
HIGHER
NEW
2.4.48 ..(KA's)

ANSWER: 099 (1.00)
c.
REFERENCE:
ES-0.2, step 15 Contingency Action
HIGHER
NEW
2.4.4 ..(KA's)

ANSWER: 100 (1.00)
a.
REFERENCE:
F-0.5
HIGHER
MODIFIED
W/E14EA2.1 ..(KA's)

ANSWER: 098 (1.00)
c.
REFERENCE:
ECA-0.0, NOTE 1 step 1, step 36, & step 40 (transition)
ECA-0.2, NOTE step 1 & step 5
FUNDAMENTAL
NEW
2.1.2 ..(KA's)

(********** END OF EXAMINATION **********)

Re-Take Written Examination Provided References

Steam Tables

Operator Aid, AO # 02-21, PZR LEVEL CONVERSION

RD 6.6 Cycle 27, 1.642% Shutdown HZP

RD 6.7 Cycle 27, 1% Cold Shutdown CZP

A-RHR-34, ATTACHMENT A MAKEUP FLOW REQUIRED vs TIME SHUT DOWN

RD 11.1.1 KEWAUNEE RCS Composite Pressure/Temperature Limitations

RD 11.1.2 Kewaunee Reactor Coolant System Heatup and Cooldown Limitations

RD 11.1.3 Kewaunee RCS Composite Pressure/Temperature Limitations

GNP-11.08.04, Table 1 Reportability Determination Matrix

EPIP-AD-02, Table 2-1, Emergency Action Level Charts

MCC-52E Layout

RD 4.1 Control Bank Insertion Limits

Technical Specifications pages 3.10.5 & 3.10.6

Operator Aid 89-6, Reactor Coolant Drain Tank

EPIP-AD-19, Determining Protective Action Recommendations

EPIPF-AD-07-01, Event Notice (NARS FORM)

A N S W E R K E Y
MULTIPLE CHOICE

001	d	021	c	041	d	061	b	081	b
002	d	022	c	042	a	062	b	082	b
003	b	023	c	043	a	063	d	083	a
004	c	024	a	044	c	064	a	084	b
005	b	025	a	045	d	065	a	085	c
006	c	026	b	046	c	066	c	086	d
007	a	027	c	047	b	067	a	087	b
008	deleted	028	c	048	b	068	b	088	c
009	d	029	c	049	c	069	b	089	b
010	c	030	b	050	a	070	a	090	c
011	b	031	b	051	d	071	c	091	a & b
012	b	032	c	052	c	072	c	092	d
013	c	033	d	053	c	073	c	093	c
014	c	034	c	054	b	074	c	094	c
015	d	035	a	055	a & d	075	deleted	095	deleted
016	c	036	b	056	a	076	c	096	c
017	b	037	c	057	a	077	c	097	d
018	c	038	c	058	c	078	deleted	098	c
019	d	039	b	059	c	079	d	099	c
020	b	040	b	060	c	080	a	100	a

(********** END OF EXAMINATION **********)