U.S. Nuclear Regulatory Commission
Site-Specific
Written Examination

Applicant Information	
Name: MASTER	Region: III
Date: June 14, 2002	Facility/Unit: DRESDEN STATION / U2, U3
License Level: SRO	Reactor Type: 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. The passing grade requires a final grade of at least 80.00 percent. Examination papers will be collected five hours after the examination starts.

Applicant Certification

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

_____
Applicant's Signature

Results		
Examination Value	100.0	Points
Applicant's Score	_____	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 asking 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.

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 nor given assistance in completing the examination.

2. To pass the examination, you must achieve a grade of 80.00 percent or greater; 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 six hours; extensions will be considered under extenuating circumstances.

4. You may bring pens, pencils, and calculators into the examination room. Dark pencil should be used 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. Use only the answer sheets provided. If you decide to change your original answer, erase your selected answer completely and enter the desired answer. If the examiner is unable to determine which of the marks on your answer sheet is your selected answer because of poor erasure, the question will be marked incorrect and no credit will be given.

7. If you have any questions concerning the intent or the initial conditions of a question, do *not* hesitate asking them before answering the question. Ask questions of the NRC examiner or the designated facility instructor *only.* 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. 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 use the restroom.

9. When you complete the examination, assemble a package including the examination cover sheet you have to sign and the answer sheets. 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. Your examination will be turned over to the station's training department for review/retention/destruction.

10. After you have turned 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.

11. Do you have any questions?

QUESTION: 001 (1.00)

The following events occurred in sequence from rated conditions on Unit 2:

- 125 VDC control power to Bus 22 was lost.
- A full reactor scram signal was received.
- Control rods were inserted by actuation of ARI

Which ONE of the following describes the expected response to the ARI initiation?

The ARI valves in:

a. division 1 energized.

b. division 2 energized.

c. both divisions energized.

d. both divisions DE-energized.

QUESTION: 002 (1.00)

After taking the shift, it is noticed that the Rod Worth Minimizer for control rod F-6 is displaying a rod position of 28 in GREEN. This indicates that the rod...

a. has an insert error.

b. is in an unknown position.

c. is in the current latched step.

d. has an alternate limit assigned.

QUESTION: 003 (1.00)

Unit 2 is operating at rated conditions when the following events occur:

- The disc inside 2-3713 B-500 (2A RECIRC PMP OUTER SEAL CLR RBCCW INLET VLV) separates from the stem.
- Alarm "2A RECIRC PP SEAL CLG WTR FLOW LO" comes in.
- All other RBCCW parameters are normal.

If no operator actions are taken the...

a. 2A Recirc pump seals and bearings could be damaged within one minute.

b. TCVs on the RBCCW system will open to lower the RBCCW temperature.

c. 2A Recirc pump seals will operate normally as long as CRD flow is maintained.

d. RWCU system could isolate since cooling is lost to the non-regenerative heat exchanger.

QUESTION: 004 (1.00)

The recirculating pumps are operating in the Master Manual mode at 75% speed when the Speed Controller for the 3A pump saturates high. Because of this, the 3A...

a. pump increases to 85% speed and stops.

b. pump increases to the high speed electrical stop.

c. pump increases to the high speed mechanical stop.

d. scoop tube will lock out due to a failed control signal.

QUESTION: 005 (1.00)

The amount of oil inside the impeller casing of the MG Set fluid coupler is at a _____ quantity when the reactor is at maximum thermal power.

a. Maximum

b. Minimum

c. slightly below average

d. slightly above average

QUESTION: 006 (1.00)

For which of the following events or conditions must the Plant Manager be notified according to OP-AA-106-101 "Significant Event Reporting"?

a. Failure of SPDS.

b. An automatic isolation of the RWCU system.

c. Condensate chemistry sample results indicate Action Level 1 parameters.

d. A contractor is found to be contaminated when going through the monitor at the gatehouse.

QUESTION: 007 (1.00)

Which of the following is the LOWEST reactor water level that the Shutdown Cooling system will normally operate at on Unit 3?

a. +9 inches

b. +2 inches

c. 0 inches

d. -8 inches

QUESTION: 008 (1.00)

A scram occurred on Unit 2 and the following conditions exist:

- Feedwater is NOT available.
- Reactor level: -10" and dropping slowly.
- HPCI running in the pressure control mode.
- HPCI discharge pressure: 1100 psig constant.
- Reactor pressure: 850 psig and rising slowly.
- The Isolation Condenser is isolated due to a tube leak.

Shortly after the Unit Supervisor directs the NSO to raise level with HPCI, the following occurs:

- HPCI flow increased rapidly.
- Reactor level quickly rose to +55".
- Annunciator 902-3 A9, HPCI TURB TRIPPED, alarmed.

Which of the following describes the cause of these conditions?

a. The NSO throttled open the 2-2301-10 (test return valve) prior to injecting with HPCI.

b. The HPCI Flow Controller output failed low (zero output) while HPCI was injecting into the vessel.

c. The MSC failed to the HSS. Turbine speed increased rapidly resulting in increased flow to the reactor.

d. The NSO failed to reduce HPCI discharge pressure to below reactor pressure prior to opening the 2-2301-8 (HPCI injection) valve.

QUESTION: 009 (1.00)

Given the following conditions;

- The plant is on line at 80% power
- A HPCI operability surveillance was in progress.
- HPCI was pumping 5200 gpm to the CST through the test line.
- The NSO shut the 2301-6 valve, HPCI CST suction valve
- Annunciator 902-3 A-11, "HPCI BOOST PP SUCT PRESS LO" has just alarmed.

Which of the following describes the response of the HPCI system?

a. The HPCI turbine will trip on low booster pump suction pressure.

b. The Flow Controller will decrease turbine speed until flow is zero.

c. HPCI will continue to operate but pump flow will eventually drop to zero.

d. The Flow Controller will increase turbine speed until it trips on overspeed.

QUESTION: 010 (1.00)

The following conditions exist:

- A complete loss of offsite power to BOTH units
- A DBA LOCA on Unit 3

With NO operator action, what is the power supply to the 3A Core Spray pump?

a. U2 EDG

b. U3 EDG

c. U2/3 EDG

d. U2 SBO DG

QUESTION: 011 (1.00)

While at rated conditions the following events occur:

- 01:28, 2A-2 is lost due to a switching error.
- 01:30, 2B-1 is lost due to an electrical fire.
- 01:44, DBA LOCA occurs on Unit 2.

Which of the following will occur?

a. U-2 EDG starts

b. U-2/3 EDG starts

c. CAM System B starts

d. SBO Feed at Bus 24 trips

QUESTION: 012 (1.00)

During an Anticipated Transient Without a Scram on Unit 3, operators have lowered level to -140 inches. When the SBLC tank level has decreased to 39%, operators commence raising reactor water level per DEOP 400-5, Failure to Scram. While increasing reactor water level plant conditions are as follows:

- -operators are increasing reactor water level with Reactor Feed Pumps
- -reactor pressure is 920 psig and constant
- -reactor power is steadily increasing on IRMs

Select the reason that reactor power increased when reactor water level was raised and what action needs to be taken.

	REASON	ACTION
a.	Insufficient boron has been injected into the core to maintain shutdown conditions in reactor.	Terminate and prevent all injection with the exception of boron and CRD.
b.	Insufficient boron has been injected into the core to maintain shutdown conditions in reactor.	Continue to raise level to 8 inches and hold level between 8 and 48 inches.
c.	The water injected into the vessel flushed some of the boron from the core area.	Terminate and prevent all injection with the exception of boron and CRD.
d.	The water injected into the vessel flushed some of the boron from the core area.	Continue to raise level to 8 inches and hold level between 8 and 48 inches.

QUESTION: 013 (1.00)

Given the following conditions:

- Rod H-8 is selected.
- Reactor power is 40%.
- APRM Channel 3 fails "Downscale".
- APRM Channel 3 has NOT been bypassed.

Due to this, the Rod Block Monitor (RBM) Channel 7...

a. is NOT affected.

b. is automatically bypassed.

c. generates a rod withdrawal block.

d. shifts to the alternate reference APRM.

QUESTION: 014 (1.00)

The SRM "DRIVE IN" push button needs to be ___(1)___ in order to drive the SRM detectors in to the core. The SRM "DRIVE OUT" push button needs to be __(2)__ in order to drive the SRM detectors out of the core.

	1	2
a.	continually	held continually held
b.	continually held	momentarily depressed
c.	momentarily depressed	continually held
d.	momentarily depressed	momentarily depressed

QUESTION: 015 (1.00)

During a normal unit shutdown, while preparing to shift the Rx mode switch out of RUN, the following conditions exist:

- APRM 1 = 2%
- APRM 2 = 4%
- APRM 3 = 2%
- APRM 4 = 4%
- APRM 5 = 4%
- APRM 6 = 2%
- Rx Pressure = 922 psig
- A "whisker" on IRM channel 17 detector causes indication to go to full UPSCALE.

This will cause a...

a. reactor scram.

b. rod block only.

c. rod block and 1/2 scram on RPS channel A only.

d. rod block and 1/2 scram on RPS channel B only.

QUESTION: 016 (1.00)

Unit 2 is at rated conditions when the following occurs:

- Indications on Wide Range level indicator (263-113) on the 902-4 panel are lost.
- Indications on Wide Range digital level indicator (263-112) on the 902-5 panel are lost.

These symptoms indicate a loss of...

a. Instrument Bus.

b. Essential Service Bus.

c. 125 VDC panel 2B-1.

d. 125 VDC RBX Distribution panel.

QUESTION: 017 (1.00)

At 10:44 the following conditions exist on Unit 2:

- A steam line break occurred in the drywell
- The MSIVs are closed.
- HPCI is operating and injecting into the vessel.
- Reactor water level is -45" and trending down at two inches per minute.
- Reactor pressure is 900 psig and steady.
- Drywell pressure is 1.5 psig and trending up at 0.2 psig per minute.

At 10:47 the following 902-3 panel annunciators alarm:

- "ADS PERMISSIVE DW PRESS HI" (E-15)
- "ADS TIMER START" (B-13)
- "LPCI/CS PP AT PRESS" (H-13)
- "ADS INHIBIT" (G-11)

What is the state the reactor at 10:54?

a. Reactor water level is still trending down.

b. HPCI is now maintaining level in the vessel.

c. All five relief valves are open as required by ADS actuation.

d. LPCI AND Core Spray pumps are running and injecting water into the vessel.

QUESTION: 018 (1.00)

The Reactor is operating at 70% power when a LOCA condition develops in the Drywell. The following is a timeline of ADS associated events:

- 17:15:00, Division I, High Drywell Pressure
- 17:15:30, Division I, Low Low Reactor Water Level
- 17:15:35, Division II, ECCS Discharge Permissive
- 17:15:55, Division II, Low Low Reactor Water Level
- 17:16:01, Division I, ECCS Discharge Permissive

At what time will the FIRST 120 second Automatic Depressurization time delay time-out?

a. 17:17:30

b. 17:17:35

c. 17:17:55

d. 17:18:01

QUESTION: 019 (1.00)

During torus cooling, after LPCI pump flow has stabilized, the LPCI / CCSW Heat Exchanger should have...

a. 3500 gpm of LPCI flow for each LPCI pump.

b. 5000 gpm of CCSW flow for each CCSW pump.

c. a differential pressure of 20 psid with LPCI system pressure greater than CCSW pressure.

d. a differential pressure of 20 psid with CCSW pressure greater than LPCI system pressure.

QUESTION: 020 (1.00)

Unit 3 is at rated conditions with the following:

- Drywell pressure is 1.0 psig.
- Torus pressure is 1.5 psig.
- Reactor Building pressure is -0.25 inches of water (0 psig).

Which of the following would the operator observe?

a. NO Vacuum Breakers open.

b. Torus to Drywell Vacuum Breakers open.

c. Torus to Reactor Building Vacuum Breakers open.

d. Drywell to Reactor Building Vacuum Breakers open.

QUESTION: 021 (1.00)

Given the following conditions:

- HPCI test is in progress in accordance with DOS 2300-3 and is operating at full flow through the test line with suction from the CST.
- A small steam leak develops in the HPCI room.
- Temperature in the room is 210°F and increasing at 5°F per minute.
- The HPCI system flow remains constant.

As a result of this the...

a. reactor must be shutdown.

b. steam supply to the HPCI system must be isolated.

c. HPCI system will isolate when room temperature reaches 300°F.

d. HPCI room cooler will trip and Standby Gas Treatment will auto start.

QUESTION: 022 (1.00)

Given the following information:

- A Loss of Coolant Accident (LOCA) has occurred inside the drywell.
- The break has also caused a rupture in the RBCCW supply line resulting in a loss of RBCCW flow and pressure.

The drywell atmosphere is prevented from entering the Reactor Building through the RBCCW system by....

a. the RBCCW expansion tank.

b. check valves in the RBCCW piping.

c. manually isolating the RBCCW system at the 923-1 panel.

d. an automatic isolation by the Primary Containment Isolation System.

QUESTION: 023 (1.00)

A station blackout has occurred with the following events on Unit 2:

- The 2/3 Diesel Generator auto started and loaded.
- The U2 Diesel Generator could NOT be started.
- The SBO Diesel Generators have NOT been started yet.

At this time, the LPCI pumps available for containment spray are....

a. LPCI Pumps 2A and 2B.

b. LPCI Pumps 2A and 2C.

c. LPCI Pumps 2B and 2D.

d. LPCI Pumps 2C and 2D.

QUESTION: 024 (1.00)

The reason the LPCI pump discharge piping has a keep fill system is to...

a. provide an indication of the LPCI pump integrity.

b. minimize corrosion in the Torus and Drywell spray lines.

c. prevent the LPCI/CCSW heat exchanger from becoming air bound.

d. minimize the effects of water hammer on the system and pipe hangers.

QUESTION: 025 (1.00)

One hour ago a small LOCA developed on Unit 2 and the following conditions exist:

- RPV level is 30 inches and stable.
- Drywell pressure is 2.5 psig and steady.
- Drywell temperature is 210°F and trending down slowly.
- LPCI is being used for Torus cooling and spray.
- Torus level is 14 feet and rising slowly.

Subsequently:

- Discharge pressure and flow on the LPCI pumps started fluctuating
- The following annunciators alarm:
  - "2A LPCI HDR FLOW LOW"
  - "2B LPCI HDR FLOW LOW"

This indicates that.....

a. The ECCS keepfill pump has tripped.

b. The LPCI pump suctions have auto swapped over to the CST.

c. The ECCS ring header suction strainers have become clogged.

d. The EDGs have started and are now supplying power to the LPCI pumps.

QUESTION: 026 (1.00)

Fuel movements are being performed in the Unit 2 core. The Unit 2 NSO and Fuel Handlers cannot agree as to which move is to be performed next.

According to Unit 2 Master Refueling Procedure, DFP 800-1, which ONE of the following personnel is to be contacted?

a. Unit 3 NSO

b. Fuel Handling Foreman

c. Nuclear Materials Custodian

d. Control Room Nuclear Observer

QUESTION: 027 (1.00)

Unit 3 is at rated conditions when the following occur:

Instrument Air header pressure rapidly goes to 0 psig.

This would result in..

a. the FRVs failing closed.

b. the inboard MSIVs starting to close.

c. the outboard MSIVs starting to close.

d. the FRVs immediately locking up in their current position.

QUESTION: 028 (1.00)

Given the following conditions on Unit 3

- Reactor Power is 35%
- The Main Turbine/Main Generator is on line.

A fault occurs that causes the Main Generator field breaker to open.

Which of the following occur?

a. A load reject scram occurs.

b. Reactor pressure goes down.

c. Reactor scrams on high pressure.

d. The bypass valves control reactor pressure.

QUESTION: 029 (1.00)

While operating at rated conditions, which of the following signals will cause the Unit 2 FWLC system to transfer from 3-Element to 1- Element control, AND what action should the operator take? SIGNAL ACTION

a. 2A Feed Flow instrument fails "BAD QUALITY" Take manual control of the FRVs

b. 2A Steam Flow instrument fails "BAD QUALITY" Depress the "1-ELEM" pushbutton

c. "A" NR level instrument fails to "BAD QUALITY". Take manual control of the FRVs

d. "A" NR level instrument fails to "BAD QUALITY". Depress the "1-ELEM" pushbutton

QUESTION: 030 (1.00)

The following indications are present for the FWLC system.

- "1-ELEM" is white
- "AUTO" is amber
- "3-ELEM" is flashing amber

These are an indication that the operator selected....

a. 3 Element control and the system is still operating in 3 Element control.

b. 3 Element control and the system automatically switched to 1 Element control.

c. 1 Element control and the system is still operating in 1 Element control.

d. 1 Element control and the system automatically switched to 3 Element control.

QUESTION: 031 (1.00)

Unit 3 is in coastdown in preparation for a refueling outage with the following conditions:

- Reactor power is 50%
- Total core flow is 85%
- Flow Converter #1 is downscale due to Instrument Maintenance performing calibration.
- No LCO actions are in effect.

Flow Converter #2 fails to 102%.

Which, if any, of the APRMs are now considered INOPERABLE?

a. APRMs 1, 2, and 3

b. APRMs 4, 5, and 6

c. All APRMs

d. None of the APRMs

QUESTION: 032 (1.00)

The following condition exist on Unit 2:

- 2/3A SBGT is running due to an auto initiation.
- 2/3B SBGT is in STBY

Then the following occurs:

- "STBY GAS TRT SYS A TROUBLE" annunciator alarms.
- The 2/3A AIR HEATERS indicate OFF.

What is the potential problem and what action should the operator take to correct the problem?

Problem Action

a. Moisture could enter the charcoal, which decreases the charcoal filtration efficiency. Verify the 2/3B SBGT starts

b. The charcoal is NOT warm enough to adsorb the radioactive iodine. Verify the 2/3B SBGT starts

c. Moisture could enter the charcoal, which decreases the charcoal filtration efficiency. Reenergize the heaters on the 2/3A SBGT

d. The charcoal is NOT warm enough to adsorb the radioactive iodine. Reenergize the heaters on the 2/3A SBGT

QUESTION: 033 (1.00)

The Unit 2 Reserve Aux Transformer NORMALLY receives power from...

a. TR-81 through the 138kV switchyard.

b. TR-83 through the 138kV switchyard.

c. TR-81 through the 345kV switchyard.

d. TR-83 through the 345kV switchyard.

QUESTION: 034 (1.00)

Unit 2 just completed a refueling outage.

- Start up is in progress.
- The Mechanical Vacuum pump is in operation.
- "A" Main Steam Line radiation monitor has failed upscale.

Then the following occurs:

- "ESS UPS TROUBLE" annunciator alarm.
- "ESS UPS ON DC OR ALTERNATE AC" annunciator alarm.
- "120/240V ESS BUS VOLT LO" annunciator alarm.
- The NLO reports from the AEER that the ESS Bus voltage is zero.

As a result of this the....

a. mechanical vacuum pump trips.

b. refuel floor rad monitors fail downscale.

c. 24/48 VDC system battery chargers lose power.

d. Reactor Feed Pump minimum flow valve fails closed.

QUESTION: 035 (1.00)

The NSO is performing a EDG surveillance:

To prevent a reverse power trip of the output breaker, after closing the output breaker the NSO must _____(1)_____ load using the _____(2) _____ control switch in accordance with DOS 6600-01, Diesel Generator Surveillance Tests.

	1	2
a.	raise	GOVERNOR
b.	raise	VOLTAGE REG
c.	lower	GOVERNOR
d.	lower	VOLTAGE REG

QUESTION: 036 (1.00)

The Off Gas Charcoal adsorbers are required to be in service above 30% reactor power to allow for...

a. monitoring using the Flux Tilt Monitor.

b. the recombination of hydrogen and oxygen.

c. proper mixing prior to discharge out the chimney.

d. the decay of gaseous radioactive nuclides to particulate.

QUESTION: 037 (1.00)

Unit 3 is at rated conditions when the following occur:

- A small LOCA develops inside the drywell
- Drywell pressure is 1.5 psig and rising slowly

What will be the impact as drywell pressure continues to rise and what actions are necessary?

	IMPACT	ACTION
a.	Reactor Building ventilation isolates	Restart Reactor Building ventilation
b.	Reactor Building ventilation isolates	Verify SBGT system operating
c.	Turbine Building ventilation isolates	Restart Turbine Building ventilation
d.	Turbine Building ventilation isolates	Verify SBGT system operating

QUESTION: 038 (1.00)

Prior to returning to two loop operation from one loop operation which of the following limits must be met and what is the reason for that limit? LIMIT REASON

a. The temperature difference between the bottom head coolant and the recirc loop coolant in the loop to be started is < 145°F. To prevent a violation of the RPV pressure and temperature limitation that minimize the chances of brittle fracture from occurring.

b. The temperature difference between the recirc loop coolant in the loop to be started and the reactor vessel coolant is < 50 deg F. To prevent a violation of the RPV pressure and temperature limitation that minimize the chances of brittle fracture from occurring.

c. The temperature difference between the bottom head coolant and the recirc loop coolant in the loop to be started is < 145°F. To prevent damage to the fuel cladding that would result from the sudden increase in power due to the injection of cold water.

d. The temperature difference between the recirc loop coolant in the loop to be started and the reactor vessel coolant is < 50 deg F. To prevent damage to the fuel cladding that would result from the sudden increase in power due to the injection of cold water.

QUESTION: 039 (1.00)

Unit 3 is at rated conditions.

Which ONE of the following would require LCO action?

a. Reactor Steam Dome Pressure is 900 psig.

b. Secondary Containment at -0.1 inches H2O.

c. Reactor Coolant System identified leakage is 2 gpm.

d. One of the Turbine Building to Reactor Building Interlock Doors is closed but unable to be opened.

QUESTION: 040 (1.00)

What is the bases for the LCO that states "Two recirculation loops with forced flow shall be in operation."

a. Prevent entering the "Instability Region" of core flow.

b. To prevent excessive vibrations of the jet pump risers.

c. Natural circulation will not remove the heat generated by the fuel.

d. To ensure that the assumptions of the LOCA analysis are satisfied.

QUESTION: 041 (1.00)

Unit 2 is at rated conditions when the following occurs:

- Annunciator 902-7 B-15 "SCREEN WASH CONTROL PANEL TROUBLE" alarms
- The NLO reports the following:
- A large buildup of fish on the inlet side of the traveling screens.
- There is a 14 inch level difference across the traveling screens.

15 minutes later the following occurs:

- The NSO reports vacuum starting to trend down at 0.5 inches Hg per minute.
- The NLO reports the level difference is getting worse as more fish are accumulating on the traveling screens.

Based on these reports, which of the following actions must be performed, AND what is the reason for the action?
Action Reason

a. Depress the manual scram pushbuttons protect the condenser from over pressure and maintain heat sink available

b. Dial down the master recirc flow controller and leave only one Circulating Water pump running maintain vacuum and CCSW system available

c. Depress the manual scram pushbuttons maintain vacuum and CCSW system available

d. Dial down the master recirc flow controller and leave only one Circulating Water pump running protect the condenser from over pressure and maintain heat sink available

QUESTION: 042 (1.00)

A reactor cooldown is in progress on Unit 2 using the BYPASS VALVE-OPENING JACK.

The circulating water pumps trip.

What will occur?

a. The MSIVs will isolate on low pressure.

b. The rupture disk on the LP turbine will blow out.

c. The bypass valves will close on low main condenser vacuum.

d. Turbine exhaust hood spray will initiate on high backpressure.

QUESTION: 043 (1.00)

Unit 2 is at 40% power when the following alarms annunciate:

- 4KV MAIN FEED BKR TRIP
- 4KV BUS 23-1/24-1 VOLT LO
- 4KV BUS 24-1 VOLTAGE DEGRADED

Upon investigation, you notice:

- the Main Feed Breaker for Bus 24-1 is tripped.
- Bus 24-1 is de-energized.
- Unit 2 Emergency Diesel Generator is NOT running.

What actions, if any, are required?

a. Be in cold shutdown condition within 7 days.

b. Attempt to manually start the U2 Diesel Generator from the 902-8 panel.

c. Leave Bus 24-1 de-energized while the Maintenance Department repairs the Diesel Generator.

d. No action required since no ECCS signal is present (the Diesel Generator is NOT supposed to auto start)

QUESTION: 044 (1.00)

Given the following:

- Unit 2 is at 40% power.
- The electric plant is in a normal line up.
- The Unit 3 EDG is OOS for repairs to the governor.

A fault develops on Bus 23 causing it to de-energize.

As a result of this...

a. Bus 25 will be picked up by Bus 27.

b. Bus 26 or 27 will be picked up by Bus 25.

c. Bus 28 will stay tied to Bus 23-1 and be energized when the EDG starts and closes on Bus 23-1.

d. Bus 28 will be load shed from Bus 23-1 and will have to be reclosed on Bus 23-1 after the EDG starts and closes on Bus 23-1.

QUESTION: 045 (1.00)

During performance of DOP 6900-06 125 VDC GROUND DETECTION - UNIT 2, the following ground detection meter indications are observed:

- the meter reads +40 volts with no buttons pushed
- the negative button is pushed and the meter goes to -60 volts
- the positive button is pushed and the meter goes to +100 volts

The NLO then opens the U2 125 VDC TURB. BLDG. RESERVE BUS 2B-2 breaker on RESERVE BUS 2B. There is a known ground of +10 volts on RESERVE BUS 2B-2.

How will Unit 2 ground detection indication respond and what is the reason for the response?

a. All Unit 2 ground detection is lost because of the opened breaker.

b. Unit 2 grounds stay the same because the deenergized bus is powered from Unit 3.

c. The Unit 2 ground detector goes to +30 with no buttons pushed because of the known ground.

d. The Unit 2 ground detector goes to +50 with no buttons pushed because of the known ground.

QUESTION: 046 (1.00)

A manual scram occurred on Unit 2 and the following conditions are noted:

- The Main Turbine Stop Valves, Control Valves and Intercept Valves are closed.
- MWe on the 902-5 panel indicates -18 MWe
- There are no alarms up on the 923-2 panel

Two minutes later conditions are the same.

Based on these conditions the NSO will...

a. start the Emergency Bearing Oil Pump.

b. open the Main Generator OCB's.

c. open the Turbine Vacuum Breaker.

d. depress the Main Turbine trip pushbutton.

QUESTION: 047 (1.00)

The fuel is protected from damage during a Main Turbine Generator trip by maintaining...

a. MCPR greater than one.

b. MCPR less than one.

c. MAPLHGR greater than one.

d. MAPLHGR less than one.

QUESTION: 048 (1.00)

Unit 3 is shutdown with the following conditions:

- No recirc pumps are running.
- Drywell temperature is 115°F.
- RPV pressure is 0 psig
- SDC pumps are secured.

Which of the following is the lowest usable level indication available at the 903-5 panel to the NSO?

a. -39 inches

b. -51 inches

c. -60 inches

d. -295 inches

QUESTION: 049 (1.00)

The feed pumps trip on high reactor level to prevent....

a. jet pump damage due to steam carryunder.

b. HPCI turbine damage due to moisture carryover.

c. feed pump damage due to cavitation and/or runout.

d. main turbine damage due to moisture carryover.

QUESTION: 050 (1.00)

Unit 3 is a rated conditions when a transient occurs resulting in the following:

- Total Steam flow is 9.8 Mlbm/hr
- Total Feed flow is 8.7 Mlbm/hr
- Reactor Water Level is currently at 27 inches.

What is the expected trend for Reactor Water Level and what procedure will be required to be entered if operator actions to correct the problem are UNSUCESSFUL?

	LEVEL	PROCEDURE
a.	Trending up	DEOP 100, RPV Control
b.	Trending up	DOA 600-1, Transient Level Control
c.	Trending down	DEOP 100, RPV Control
d.	Trending down	DOA 600-1, Transient Level Control

QUESTION: 051 (1.00)

Following a station blackout event the STA reports the following parameters to the Unit Supervisor.

- RPV level -35 inches.
- drywell temperature of 325°F
- drywell pressure of 6 psig

Which of the following action should be taken and what is the reason for that action? ACTION REASON

a. Spray the Drywell Convection cooling of the Drywell is needed to prevent over pressure condition in the drywell.

b. Spray the Drywell Evaporative cooling of the Drywell is needed to prevent over pressure condition in the drywell.

c. Blowdown Evaporative cooling would result in drywell pressure reducing to less than 2 psig and possible implosion of the Drywell.

d. Blowdown Convection cooling would result in drywell pressure reducing to less than 2 psig and possible implosion of the Drywell.

QUESTION: 052 (1.00)

Unit 2 is at rated conditions with the 902-36 back-panel recorder TIRS 2-1640-200A, TORUS TEMP MON DIV I OOS due to a failed power supply and all appropriate Technical Specifications have been entered.

TIRS 2-1640-200B currently indicates the following:

Point 1	112°F	Point 5	85°F
Point 2	95°F	Point 6	85°F
Point 3	90°F	Point 7	87°F
Point 4	85°F	Point 8	90°F

What actions (if any) are required based on the current readings?

a. No actions are required at this time.

b. Immediately place the Mode Switch in Shutdown.

c. Enter DEOP 200-1 because two readings satisfy the entry requirement.

d. Enter DEOP 200-1 because the average readings satisfy the entry requirement

QUESTION: 053 (1.00)

A startup is in progress on Unit 3 with the following conditions:

- Reactor pressure is 170 psig.
- One bypass valve is full open.
- Control rods are being withdrawn to achieve two bypass valves open.
- IRMs are between 30 and 70 on range 8

Which of the following would be expected to occur if all bypass valves were to fail closed with no operator action?

a. The reactor would scram due to high flux.

b. The reactor would scram due to high pressure.

c. Reactor power would increase and stabilize due to the change in void fraction.

d. Reactor power would decrease and stabilize due to the change in void fraction.

QUESTION: 054 (1.00)

The basis for the RBM rod block function is to prevent exceeding the:

a. MCPR Limit during a single rod withdrawal error.

b. MCPR Limit during multiple rod withdrawal errors.

c. LHGR Limit for a fuel node during a single rod withdrawal error.

d. LHGR Limit for a fuel node during multiple rod withdrawal errors.

QUESTION: 055 (1.00)

Unit 3 was at rated conditions when the NSO reports:

- Immediate actions for responding to a reactor water level of -4 inches are complete.
- All rods are in.
- The A and B RPS solenoid group lights are lit.

Which of the following lists or identifies the HIGHEST level of notification that is required to be made for this condition?

a. Illinois EMA per EP-AA-114 Notifications

b. Plant Manager per OP-AA-106-101 Significant Event Reporting

c. Illinois EMA AND Grundy County Sheriff per EP-AA-114 Notifications

d. Plant Manager AND Site Vice President per OP-AA-106-101 Significant Event Reporting

QUESTION: 056 (1.00)

An automatic scram occurred on Unit 3

Control rods did not fully insert and reactor power decreased to 10%

Containment parameters will require an emergency depressurization within fifteen minutes if trends are not changed.

Opening the bypass valves now to rapidly reduce reactor pressure should....

a. be performed to allow for the reduction of reactor power.

b. be performed to anticipate an emergency depressurization.

c. NOT be performed since the pressure reduction will add significant positive reactivity.

d. NOT be performed since the pressure reduction will result in removal of boron from the RPV.

QUESTION: 057 (1.00)

During the performance of DSSP 0100-CR "Control Room Evacuation" it is reported that the Isolation Condenser Make-up Pumps will not start.

According to the UFSAR this is a concern because _____(1)_____ and this is prevented by _____(2)_____ .

	1	2
a.	damage will occur to the Isolation Condenser tubes	isolating the Isolation Condenser from the reactor vessel
b.	damage will occur to the Isolation Condenser tubes	adding make up to the Isolation Condenser from another source
c.	inventory in the vessel will be lost	isolating the Isolation Condenser from the reactor vessel
d.	inventory in the vessel will be lost	adding make up to the Isolation Condenser from another source

QUESTION: 058 (1.00)

DSSP 0100-CR "Control Room Evacuation" is in progress.

How is the Bus 29-28 Tie breaker closed?

a. Depress the manual close pushbutton on the front of the breaker.

b. Plug in the local pushbutton control station and depress the close button.

c. Place the two hooks of the operating handle in the lower portion of the cubicle and push down on the operating tool.

d. Place the ratchet type maintenance tool on the shaft that protrudes from the breaker and operate the handle until the breaker closes.

QUESTION: 059 (1.00)

Which ONE of the following conditions will cause a Reactor Building Ventilation Isolation?

a. A 10 R/hr radiation level in the drywell.

b. A 10 mR/hr radiation level on the refuel floor.

c. An upscale trip on one Reactor Building ventilation radiation monitor.

d. A downscale trip on one Reactor Building ventilation radiation monitor.

QUESTION: 060 (1.00)

Instrument Air on Unit 3 has been lost to the Scram Discharge Volume (SDV) vent and drain valves.

Unit 3 remains at 100% power.

It is expected that the SDV vent and drain valves will fail....

a. CLOSED and be INOPERABLE since the SDV would be isolated from the scram outlet header.

b. CLOSED and be INOPERABLE since proper venting and draining of the SDV could NOT be assured.

c. CLOSED and remain OPERABLE since the reactor coolant system would be isolated from the containment.

d. OPEN and be INOPERABLE since the reactor coolant system could NOT be isolated from the containment.

QUESTION: 061 (1.00)

What effect will the loss of Instrument Air have on the HPCI system?

a. HPCI Turbine Exhaust Pot Bypass Valve (2301-28) will fail closed.

b. HPCI Steam Line Drain Trap Bypass Valve (2301-31) will fail open.

c. Turbine Steam Supply Line Drain Valves (2301-29, -30) will fail open.

d. Turbine Stop Valve Above Seat Drain Valves (2301-64, -65) will fail closed.

QUESTION: 062 (1.00)

Unit 3 was at rated conditions with ALL equipment available when the following events occurred:

- The running CRD pump tripped.
- Two peripheral control rod "ACCUMULATOR TROUBLE" alarms are received.

The following additional information is provided:

- The two controls rods are at notch 48
- Accumulator pressure for the alarming accumulators is 925 psig.

Which of the following describes the NEXT action that should be performed and the reason for the action?

	ACTION	REASON
a.	Scram the reactor	To prove the ability of the CRD system to scram the reactor without the reliance on the CRD drive water.
b.	Scram the reactor	To ensure Shutdown Margin requirements are met should the controls rods associated with the failed accumulators fail to insert.
c.	Start the standby CRD pump and verify charging water header pressure is at least 940 psig	To prove the ability of the CRD system to supply drive water pressure to insert the control rods without the accumulators.
d.	Start the standby CRD pump and verify charging water header pressure is at least 940 psig	To prevent damage to the control rod drive mechanisms due to overheating.

QUESTION: 063 (1.00)

Unit 2 is in a refueling outage when the refuel floor radiation alarm sounds.

The AUX NSO reports the Refuel Floor ARM indicates 110 mrem/hr.

Which of the following actions must be taken?

a. Evacuate the Refuel Floor only.

b. Evacuate the Refuel Floor and the Reactor Building.

c. Notify the Fuel Handling Supervisor that the alarm is erroneous.

d. Notify the Fuel Handling Supervisor that the alarm is valid and work may continue with caution.

QUESTION: 064 (1.00)

The reactor building overhead crane and the refueling bridge crane are being used to move equipment during a refueling outage when radiation levels reach 40 mrem / hr on the refuel floor.

What are the consequences of the radiation level?

a. Standby Gas Treatment will auto start.

b. The Reactor Building Ventilation system will isolate.

c. The refueling bridge crane will be prevented from raising fuel.

d. The reactor building overhead crane hoist raise function is inhibited.

QUESTION: 065 (1.00)

Unit 2 is at rated conditions when the following occurs:

A design basis Loss of Coolant Accident (LOCA). A Drywell to Torus Vacuum Breaker fails open.

This will FIRST result in drywell pressure...

a. equalizing with Reactor Building pressure.

b. exceeding the design pressure of the containment.

c. dropping rapidly since the cooling effectiveness of the torus has been greatly improved.

d. staying below the design pressure since there are a number of redundant vacuum breakers installed.

QUESTION: 066 (1.00)

The following conditions exist on Unit 3:

- RPV level is 26 inches and rising.
- RPV pressure is 1070 and steady.
- All rods are in.
- EHC pressure is 0 psig.
- The MSIVs are OPEN and the bypass valves are CLOSED.

With these indications the operating team should FIRST enter...

a. DEOP 100-1, RPV Control, and restore level using HPCI.

b. DEOP 100-1, RPV Control, and initiate the Isolation Condenser.

c. DOA 600-1, Transient Level Control, and restore level by starting the standby Condensate/condensate booster pumps.

d. DOA 5650-2, Pressure Regulator Failure, and reduce reactor pressure with pressure set.

QUESTION: 067 (1.00)

Given the following conditions on Unit 3:

- The plant had been operating at 100% for 6 months.
- A Group 1 isolation occurred ten minutes ago.
- All AC power has been lost to Unit 3.

Which of the following systems is designed to provide reactor pressure control/cooling under these conditions?

a. HPCI

b. Isolation Condenser

c. Main steam line drain valves

d. Automatic Depressurization System

QUESTION: 068 (1.00)

Unit 3 is experiencing a LOCA. The following conditions exist:

- reactor is shutdown
- drywell pressure is 10 psig
- drywell temperature is 350°F (point 9)
- reactor pressure is 75 psig
- reactor water level is -45 inches
- reactor building temperature is 105°F
- Fuel Zone level indication is OOS

Which ONE of the following is the reason that RPV water level indication may NOT be reliable?

a. Drywell pressure is excessive.

b. Drywell temperature is excessive.

c. Reactor Building temperature is excessive.

d. RPV level is below minimum usable indicating levels.

QUESTION: 069 (1.00)

Unit 3 was at rated conditions when a LOCA occurred.

The Aux NSO makes the following report to the Unit Supervisor, " Torus level rose to 20 feet immediately after the LOCA occurred then returned to a level of 15 feet 3 to 5 seconds later."

This report indicates that...

a. DEOP 400-2 should be entered due to high Torus level.

b. the Unit is experiencing a LOCA outside the design bases.

c. an NLO must be dispatched to locally determine Torus level.

d. "Pool Swell" has occurred as described in the design bases.

QUESTION: 070 (1.00)

The following conditions exist on Unit 3.

- Torus level is -4.4 inches
- Drywell to Torus dP is 1.6 psig
- Annunciator "TORUS NARROW RANGE WTR LVL LO" 903-4 C-23 is alarming.

Which of the following procedures must be entered?

a. DEOP 100 "RPV Control"

b. DEOP 200-1 "Primary Containment Control"

c. DOP 1600-1 "Normal Pressure Control of the Drywell and Torus" to vent the Torus

d. DOS 1600-2 "Torus Level Verification using Local Sightglass" to validate the control room indicator.

QUESTION: 071 (1.00)

Unit 2 is at rated conditions when the following occurs:

- A transient occurs that causes the following RPV level indication:
- Narrow Range A indicates -2 inches.
- Narrow Range B indicates +1 inches.
- Medium Range A indicates -1 inches.

- A Reactor Scram does NOT occur.

What is the response of the FWLC system?

a. Stays in Master Auto and attempts to restore level.

b. Sets RPV level setpoint to +5 inches immediately.

c. Ramps RPV level setpoint to +5 inches at 10 inches/min.

d. Enters Master Manual and the operator must restore level.

QUESTION: 072 (1.00)

Unit 2 is at rated conditions when the following occurs:

- Annunciator "CHANNEL A MN STM TUNN TEMP HI" 902-5 D-9 alarms.
- The NSO reports the Shutdown Cooling Pump Room temperature is 190°F and rising slowly.

The Unit Supervisor should direct the NSO to...

a. increase TBCCW flow to the X-Area coolers.

b. manually scram the reactor and perform a blowdown.

c. manually scram the reactor and shut the MSIVs.

d. secure Reactor Building ventilation and start SBGT.

QUESTION: 073 (1.00)

After a trip of Reactor Building ventilation it has been determined that Reactor Building ventilation needs to be restarted per DEOP 300-1, Secondary Containment Control, to lower Reactor Building temperature.

What must be done to restart Reactor Building ventilation?

a. Two vent fans must be started first.

b. Two exhaust fans must be started first.

c. Install jumpers to bypass High Reactor Building Temperature isolation.

d. Fan control switch must be held in CLOSE for a minimum of five seconds.

QUESTION: 074 (1.00)

Given the following conditions:

- The 902-3 A-1 "RX BLDG RAD HI" annunciator has alarmed.
- The ARM in alarm is still above its alarm setpoint.

The annunciator will be able to be reset...

a. ONLY when that ARM’s RESET button is depressed on the 902-11 panel Indicator and Trip Unit.

b. after the ARM BYPASS SWITCH for the ARM in alarm has been placed in the BYPASS position.

c. ONLY when that ARM’s SILENCE button has been depressed locally at the auxiliary unit.

d. after acknowledging the 902-3 panel annunciator and then by depressing the 902-3 panel Reset pushbutton.

QUESTION: 075 (1.00)

Unit 3 was at rated conditions when a transient occurred.

- An Isolation Condenser steam leak occurred and was isolated.
- Isolation Condenser area temperature is 170°F and is too high for personnel access.
- Valid Reactor Building Ventilation isolations are present on each of the following parameters:
- Drywell Pressure
- Reactor Building Exhaust Radiation
- Reactor Water Level Restarting the Reactor Building Ventilation would allow safer access to the Isolation Condenser area...

a. but is NOT allowed due to the Drywell Pressure isolation.

b. but is NOT allowed due to the Reactor Building Exhaust Radiation isolation.

c. but is NOT allowed due to the Reactor Water Level isolation.

d. and may be performed after bypassing the isolation signals.

QUESTION: 076 (1.00)

Why do the Reactor Building Ventilation supply fans trip on high Reactor Building pressure?

a. To prevent an auto initiation of SBGT.

b. To prevent actuation of the Reactor Building blowout panels.

c. To ensure that airflow is from high contamination to low contamination.

d. To prevent damage to the Reactor Building Ventilation supply fans butterfly dampers.

QUESTION: 077 (1.00)

The following conditions exist:

- A transient has occurred on Unit 2.
- The Unit Supervisor has ordered both SBLC pumps started for injection into the reactor.
- After placing the INJECTION CONTROL switch to the SYS 1&2 position, the operator observes the following indications:
- The SQUIB A and SQUIB B lights are lit.
- The Pump 1 and Pump 2 lights are lit.

Which ONE of the following is the proper course of action in order to attempt to get full initiation of BOTH SBLC subsystems?

a. Dispatch an NLO to start the SBLC pumps locally.

b. Dispatch an NLO to manually open the SQUIB valves.

c. Position the INJECTION CONTROL switch to the SYS 1 position.

d. Position the INJECTION CONTROL switch to the SYS 2&1 position.

QUESTION: 078 (1.00)

When flooding the RPV during a Failure to Scram condition, why must injection into the RPV be increased slowly?

a. To minimize the amount of hydrogen produced by the zirconium-steam reaction.

b. To prevent a large power transient that may cause core damage.

c. To allow the operators time to ensure the Main Steam lines do not become flooded.

d. To ensure the reactor does not pressurize uncontrollably when the reactor goes solid.

QUESTION: 079 (1.00)

Unit 2 is at rated conditions when the "LIQUID PROCESS RAD MONITOR HI" 902-3 G-1 annunciator alarms.

Where can the operator determine the actual RBCCW effluent monitor levels?

a. 902-10 panel - control room backpanel

b. 923-7 panel - SPING panel

c. Rad Waste Control Room

d. at the RBCCW expansion tank

QUESTION: 080 (1.00)

The following conditions exist at Dresden.

- A Tornado Warning is in effect for the area that includes Dresden.
- Reactor Building crane lifts are in progress to move material from the 517 foot level of the reactor building to the refuel floor.
- Dresden Security personnel have sighted a tornado.

Which of the following must be performed as a result of these conditions?

a. Start EDGs in anticipation of a loss of off-site power.

b. Verify blowout panels are in place on both Unit 2 and 3 Reactor Buildings.

c. Open Unit 2 and 3 Turbine Building rollup doors to equalize building pressure.

d. Stop crane lifts ONLY if a local assessment determines the tornado will hit on site.

QUESTION: 081 (1.00)

During performance of DOS 1500-02 the following pump flow values were recorded:

Unit 2:
- 2A CCSW pump 3610 gpm

Unit 3
- 3A CCSW pump 3590 gpm

Based on these indications....

a. Neither pump is operable because both pumps require 3621 gpm.

b. Both pumps are operable because only 3500 gpm is required for each pump.

c. 2A is operable but 3A is NOT because Unit 3 pumps must also supply cooling to the Control Room ventilation.

d. 3A is operable but 2A is NOT because Unit 2 pumps must also supply cooling to the Control Room ventilation.

QUESTION: 082 (1.00)

During power operation, the drywell and torus are normally inerted to ...

a. allow detection of Iodine gas more readily.

b. prevent the occurence of a flammable mixture in the primary containment.

c. control temperatures of the containment during Loss of Coolant Accidents.

d. limit the amount of oxygen generated during a LOCA so an explosive mixture is NOT achieved.

QUESTION: 083 (1.00)

Nitrogen purging of the primary containment without venting while performing the actions of DEOP 200-2 Hydrogen Control will...

a. NOT reduce the hydrogen concentration.

b. increase the pressure in the containment.

c. make the hydrogen monitoring indications unreliable.

d. increase the oxygen concentration in the primary containment.

QUESTION: 084 (1.00)

Unit 3 is operating at rated power.

Torus temperature has increased to 112°F

Operators are required to _____(1)_____ to ensure that _____(2)_____ during a DBA LOCA.

	1	2
a.	scram the reactor and emergency depressurize	the peak primary containment pressures and temperatures do NOT exceed maximum allowable values
b.	scram the reactor and emergency depressurize	sufficient net positive suction head is maintained for ECCS pumps
c.	scram the reactor	the peak primary containment pressures and temperatures do NOT exceed maximum allowable values
d.	scram the reactor	sufficient net positive suction head is maintained for ECCS pumps

QUESTION: 085 (1.00)

What is the MINIMUM level of authority that may authorize an assignment of a security access status that allows entry into the security areas?

a. Unit Supervisor

b. Shift Manager

c. Any Security Personnel

d. Nuclear Security Manager

QUESTION: 086 (1.00)

The following conditions exist on Unit 2:

- The MODE Switch is in the Shutdown position.
- Reactor coolant temperature is 200°F.
- Mechanical Maintenance has detensioned two reactor vessel closure bolts.

The Reactor is in Mode...

a. 2 "STARTUP"

b. 3 "HOT SHUTDOWN"

c. 4 "COLD SHUTDOWN"

d. 5 "REFUEL"

QUESTION: 087 (1.00)

Unit 3 is at rated conditions.

Local adjustment of Reactor Recirculation pump 3A speed is required.

Which of the following describes the MINIMUM requirements to perform this evolution?

a. Communication with any on shift Operator prior to adjustment.

b. Communication between the Control Room and a licensed Operator at the motor generator.

c. Communication between the Control Room and on shift Operator at the motor generator with no physical restriction which would prohibit solo operations at the motor generator.

d. Communication between the Control Room and an active licensed Operator at the motor generator with no license restriction which would prohibit solo operations at the motor generator.

QUESTION: 088 (1.00)

While performing a reactor startup, the IRMs should be ranged up when indicating between:

a. 5/125 and 15/125 of full scale.

b. 25/125 and 50/125 of full scale.

c. 25/125 and 75/125 of full scale.

d. 50/125 and 100/125 of full scale.

QUESTION: 089 (1.00)

During core alterations that potentially affect core reactivity which of the following conditions must be met?

a. The Control Room Nuclear Observer is in the Control Room.

b. Radiation Protection Personnel have placed a high radiation area lock on AND posted the access ladders to the Drywell above the first floor indicating: NO ENTRY FUEL TRANSFER IN PROGRESS.

c. A SRO or an SROL is directly supervising and in line of sight of fuel handling operations on the Refueling Platform.

d. A Qualified Nuclear Engineer verifies SRM reading are as expected after each step of the Nuclear Component Transfer List.

QUESTION: 090 (1.00)

Unit 2 is at 2975 MWth with recirc flow of 94.2 Mlb/hr Unit 3 is at 2521 MWth with recirc flow of 96.7 Mlb/hr

Unit _____(1)_____ is operating outside of design because _____(2)_____ is too high.

	1	2
a.	2	thermal power
b.	2	recirc flow
c.	3	thermal power
d.	3	recirc flow

QUESTION: 091 (1.00)

Unit 2 is near the end of an operating cycle with a startup in progress.

Reactor coolant temperature has lowered 30°F below the value that was used to calculate the ECP.

Who is REQUIRED to recalculate the ECP?

a. Nuclear Station Operator

b. Unit Supervisor

c. Shift Technical Advisor

d. Qualified Nuclear Engineer

QUESTION: 092 (1.00)

A systems engineer brings a "Special Procedure" for the Control Rod Drive system to the WEC.

How can it be determined if the "Special Procedure" contains any unreviewed safety questions?

a. The signature on the procedure by the system engineer approving the special procedure.

b. The Shift Manager informed the crew at turnover the special procedure was scheduled to be performed.

c. The special procedure has been screened in accordance with OP-AA-101-304 "Evaluation of Special Tests or Evolutions".

d. The documentation of a 50.59 review being conducted on the special procedure is included with the special procedure.

QUESTION: 093 (1.00)

A Non-Licensed Operator has an Out Of Service that requires independent verification.

For which of the following conditions can the Shift Manager waive independent verification?

An OOS card to be hung on...

a. a drain valve on the #2 Main Turbine Stop Valve at rated power.

b. the south instrument air cross-connect valve 8 feet off the floor in the turbine building 517 level.

c. the 2/3 Diesel Air Start motor that was just replaced.

d. the 2/3A SBGT Charcoal Filter that was just replaced.

QUESTION: 094 (1.00)

Per RP-AA-203, Exposure Review and Authorization, workers at Dresden have an administrative exposure control level of _____(1)_____ mrem TEDE per year. This can be raised to ____(2)_____ mrem TEDE by the Radiation Protection Manager.

	1	2
a.	1000	3000
b.	1000	5000
c.	2000	3000
d.	2000	5000

QUESTION: 095 (1.00)

DOP 2000-110, Attachment 1: Waste Surge Tank Radioactive Discharge to River Card, contains the calculation for determining the _____(1)_____ flowrate and radiological monitor alarm setpoints, and must be verified by _____(2)_____.

	1	2
a.	discharge	Field Supervisor
b.	discharge	Shift Manager or designee
c.	dilution	Field Supervisor
d.	dilution	Shift Manager or designee

QUESTION: 096 (1.00)

The drywell is being vented to control H_2 and O_2.

The following values were noted prior to initiating venting:

Torus level is 31 feet.

	Drywell	Torus
Hydrogen	7%	7%
Oxygen	7%	7%

After some period of time, it is determined that drywell hydrogen and oxygen cannot be controlled with SBGT and Nitrogen Purge.

In this condition, which of the following is the proper response?

a. Immediately spray the torus

b. Begin simultaneous venting of the torus AND drywell.

c. Vent and purge the containment per DEOP 500-4 "Containment Venting", Attachment 4.

d. Vent and purge the containment per DEOP 500-4 "Containment Venting", Attachment 5.

QUESTION: 097 (1.00)

Unit 2 was at rated conditions when "ANNUN DC PWR FAILURE" alarms are received on several panels simultaneously. A bell inside 902-4 sounds Which of the following describes the expected operator actions?

a. Scram the reactor due to the loss of annunciators. The Shift Manager should evaluate for a possible GSEP condition.

b. Verify that the normal AC power supply is still available by performing an annunciator checks on each effected panel. Notification of the Shift Manager is NOT required.

c. Verify that the normal AC power supply is still available by performing an annunciator checks on each effected panel. Notification of the Shift Manager is required.

d. Determine the cause of the loss of annunciators. The Shift Manager should evaluate for a possible GSEP condition.

QUESTION: 098 (1.00)

In order to vent the overpiston area of the control rod drive, the operator will need a hose, adjustable wrench and a CRD vent valve tool.

Tools and/or equipment required to perform this task are located in the...

a. DEOP equipment cart

b. Reactor building ground floor at the CO2 gas bottle rack.

c. Reactor building second floor in the DEOP storage locker.

d. Turbine building second floor in the DEOP storage locker.

QUESTION: 099 (1.00)

During normal plant operations, an annunciator alarms which has a RED backlight.

What is the significance of this RED backlight?

a. Identifies a parameter which could cause a unit scram.

b. Identifies a parameter which causes a critical change in plant status.

c. Identifies a condition that requires immediate entry into the DOA's or DEOP's.

d. Informs the operators of annunciators that are expected to alarm due to maintenance being performed.

QUESTION: 100 (1.00)

DEOP 200-01 requires emergency depressurization if torus water level cannot be maintained above 11 ft.

What is the reason for this action?

a. T-Quenchers are uncovered at 10.8 ft

b. The loss of HPCI requires Low Pressure ECCS injection

c. Reject energy from the vessel while the suppression pool is still available

d. Torus water level instrumentation is NOT accurate below this level

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

ANSWER: 001 (1.00)
a.
REFERENCE:
SDM 212002 BANK High
201001K205 ..(KA's)

ANSWER: 002 (1.00)
c.
REFERENCE:
SDM 201006 Modified
20106S0181 Memory
201006A305 ..(KA's)

ANSWER: 003 (1.00)
a.
REFERENCE:
DOA 3700-01 and DAN
902(3)-4 G-3 NEW High
202001K602 ..(KA's)

ANSWER: 004 (1.00)
a.
REFERENCE:
SDM 202002 BANK High
202002K405 ..(KA's)

ANSWER: 005 (1.00)
a.
REFERENCE:
SDM202001 BANK High
202002K501 ..(KA's)

ANSWER: 006 (1.00)
b.
REFERENCE:
OP-AA-106-101 New Memory
204000 2.1.14 ..(KA's)

ANSWER: 007 (1.00)
a.
REFERENCE:
SDM 205000 New Memory
205000K403 ..(KA's)

ANSWER: 008 (1.00)
d.
REFERENCE:
DOP 2300-03 BANK
20600S0341 High
206000A106 ..(KA's)

ANSWER: 009 (1.00)
a.
REFERENCE:
SDM 206000 DAN
902(3)-A11 BANK High
206000K609 ..(KA's)

ANSWER: 010 (1.00)
c.
REFERENCE:
SDM 209001 SDM 264001
Modified 20901S0031 High
209001K110 ..(KA's)

ANSWER: 011 (1.00)
b.
REFERENCE:
SDM 209001 BANK
20901S0262 High
209001K303 ..(KA's)

ANSWER: 012 (1.00)
a.
REFERENCE:
295L-S8 Bank 29502S1051
High
2110002.4. ..(KA's)

ANSWER: 013 (1.00)
b.
REFERENCE:
SDM 215002 BANK
21502S0053 High
215002K101 ..(KA's)

ANSWER: 014 (1.00)
c.
REFERENCE:
SDM215004 Modified
Memory
215004A404 ..(KA's)

ANSWER: 015 (1.00)
d.
REFERENCE:
SDM215005 BANK
21505S0371 High
215005A307 ..(KA's)

ANSWER: 016 (1.00)
a.
REFERENCE:
SDM 216000 BANK
21600S0111 Memory
216000K601 ..(KA's)

ANSWER: 017 (1.00)
a.
REFERENCE:
DAN 902(3) B13, E-15, G-11,
and H-13, 218L-S1 NEW
High
218000K301 ..(KA's)

ANSWER: 018 (1.00)
a.
REFERENCE:
SDM 218000 Modified
21800S0211 High
218000K401 ..(KA's)

ANSWER: 019 (1.00)
d.
REFERENCE:
DOP 1500-2 BANK 21900S0021 Memory 219000A102 ..(KA's)

ANSWER: 020 (1.00)
b.
REFERENCE:
SDM 223001 Modified 22301S0211 High 223001A302 ..(KA's)

ANSWER: 021 (1.00)
b.
REFERENCE:
SDM 223005, SDM 206000, and DEOP 300-1 NEW High. 2.4.4 223002 ..(KA's)

ANSWER: 022 (1.00)
c.
REFERENCE:
SDM208000 Modified 20800S0081 Memory 223002K119 ..(KA's)

ANSWER: 023 (1.00)
a.
REFERENCE:
SDM 203000 and SDM 264001 Last years NRC Exam #34 High 226001K202 ..(KA's)

ANSWER: 024 (1.00)
d.
REFERENCE:
SDM 203000 and ITS Bases 3.5.1 Modified 29900S0241 Memory 226001K502 ..(KA's)

ANSWER: 025 (1.00)
c.
REFERENCE:
SDM203000, 209001 and NRC bulletin 93-02 NEW High 230000K605 ..(KA's)

ANSWER: 026 (1.00)
d.
REFERENCE:
DFP 0800-1 Bank 23400S011 Memory 2.1.2 234000 ..(KA's)

ANSWER: 027 (1.00)
c.
REFERENCE:
DOA 4700-1 Modified 03000S0541 High 239001K506 ..(KA's)

ANSWER: 028 (1.00)
d.
REFERENCE:
SDM212001 and DOA 5600-1 New High 245000K302 ..(KA's)

ANSWER: 029 (1.00)
b.
REFERENCE:
SDM 259002 and DAN 902-5 G-8 Modified 25902S0391 High 259002A201 ..(KA's)

ANSWER: 030 (1.00)
b.
REFERENCE:
SDM259002 NEW High 259002A406 ..(KA's)

ANSWER: 031 (1.00)
b.
REFERENCE:
ITS Bases 3.3.1.1.2.b and SDM 215005 New High 2.2.22 215005 ..(KA's)

ANSWER: 032 (1.00)
a.
REFERENCE:
SDM 261000 and DAN 923-5 A-6 New High 261000A204 ..(KA's)

ANSWER: 033 (1.00)
b.
REFERENCE:
SDM 262003 and 262001 Modified 26203S0141 Memory 262001K201 ..(KA's)

ANSWER: 034 (1.00)
a.
REFERENCE:
SDM262006 and 272002 NEW High 262002K317 ..(KA's)

ANSWER: 035 (1.00)
a.
REFERENCE:
DOS 6600-01, Diesel Generator Surveillance Tests. New Memory 264000A109 ..(KA's)

ANSWER: 036 (1.00)
d.
REFERENCE:
SDM27100 Modified Memory 271000K507 ..(KA's)

ANSWER: 037 (1.00)
b.
REFERENCE:
DAN 902-5 G5 and 923-5 A1 New High
288000A201 ..(KA's)

ANSWER: 038 (1.00)
b.
REFERENCE:
DOP 0202-01, ITS section 3.4.9 and 3.2 New Memory
2.1.32 290002 ..(KA's)

ANSWER: 039 (1.00)
b.
REFERENCE:
ITS 3.6.4.1 New Memory
2.1.33 288000 ..(KA's)

ANSWER: 040 (1.00)
d.
REFERENCE:
ITS Bases 3.4.1 New Memory
2.2.25 295001 ..(KA's)

ANSWER: 041 (1.00)
a.
REFERENCE:
DOA 4400-06 and Tech Spec Bases 3.3.1.1 New High
2.4.49 295002 ..(KA's)

ANSWER: 042 (1.00)
c.
REFERENCE:
SDM 275001 and SDM 241000 Modified
24501S0401 High
295002AK20 ..(KA's)

ANSWER: 043 (1.00)
b.
REFERENCE:
DOA 6600-01 Bank
26400S0011 High
295003A103 ..(KA's)

ANSWER: 044 (1.00)
c.
REFERENCE:
SDM 262001 NEW High
295003K203 ..(KA's)

ANSWER: 045 (1.00)
b.
REFERENCE:
SDM 263002 and DOP 6900-06 New High
295004K302 ..(KA's)

ANSWER: 046 (1.00)
b.
REFERENCE:
DGP 2-3 Modified
03000S0421 High
295005A104 ..(KA's)

ANSWER: 047 (1.00)
a.
REFERENCE:
COLR, ITS 3.2.2 and GP lesson plan Core thermal limits. New Memory
295005AK10 ..(KA's)

ANSWER: 048 (1.00)
d.
REFERENCE:
SDM 216000 and Figures A, B and C of the DEOPs New High
295031A201 ..(KA's)

ANSWER: 049 (1.00)
d.
REFERENCE:
SDM259L-S1, SDM223004, DAN 902(3)-3-6 F-7 and 902(3)-3 A-9 Modified
25600S0051 Memory
295008K304 ..(KA's)

ANSWER: 050 (1.00)
c. & d.
REFERENCE:
DOA 600-1 and DEOP 100 New High
295009A202 ..(KA's)

ANSWER: 051 (1.00)
c.
REFERENCE:
DEOP 200-1 and BWROG EPGs New High
295010A206 ..(KA's)

ANSWER: 052 (1.00)
a.
REFERENCE:
295L-S2 and ITS 3.6.2.1 Bank High
295013A201 ..(KA's)

ANSWER: 053 (1.00)
a.
REFERENCE:
DGP 01-01 page 19 Last years NRC Exam #72 High
295014K201 ..(KA's)

ANSWER: 054 (1.00)
a.
REFERENCE:
SDM215002 Modified
21502S0164 Memory
295014K302 ..(KA's)

ANSWER: 055 (1.00)
a.
REFERENCE:
EALs MS3 and MA3, EP-AA-114, OP-AA-106-101 New High
2.4.30 295015 ..(KA's)

ANSWER: 056 (1.00)
c.
REFERENCE:
295L-S1 Last years NRC exam #99 Memory
295015K104 ..(KA's)

ANSWER: 057 (1.00)
d.
REFERENCE:
DSSP 100-CR and UFSAR section 5.4.6.3 New Memory
295016 2.1.32 ..(KA's)

ANSWER: 058 (1.00)
d.
REFERENCE:
DSSP 100-CR New Memory
295016A104 ..(KA's)

ANSWER: 059 (1.00)
c.
REFERENCE:
DOA 5750-01 Modified
288801S011 Memory
295017K204 ..(KA's)

ANSWER: 060 (1.00)
b.
REFERENCE:
DOA 4700-01 and ITS 3.1.8 Bases Last years NRC exam #104 High
295019A202 ..(KA's)

ANSWER: 061 (1.00)
d.
REFERENCE:
SDM206000 New Memory
295019K217 ..(KA's)

ANSWER: 062 (1.00)
c.
REFERENCE:
DOA 300-01 Modified High
295022A201 ..(KA's)

ANSWER: 063 (1.00)
a.
REFERENCE:
DFP 0850-03 New High
2.1.14 295023 ..(KA's)

ANSWER: 064 (1.00)
d.
REFERENCE:
DFP 850-03 New High
295023A103 ..(KA's)

ANSWER: 065 (1.00)
b.
REFERENCE:
SDM223001 Bank 22301S0311 High
295024K101 ..(KA's)

ANSWER: 066 (1.00)
b.
REFERENCE:
DEOP 100-1 New High
2.4.4 295025 ..(KA's)

ANSWER: 067 (1.00)
b.
REFERENCE:
SDM 207000 Bank 20700S0401 High
295025K304 ..(KA's)

ANSWER: 068 (1.00)
b.
REFERENCE:
DEOP 100 Figure A and B Modified 29502S0881 High
295028K102 ..(KA's)

ANSWER: 069 (1.00)
d.
REFERENCE:
UFSAR section 6.2.1.3.4.1.1 New High
295029A203 ..(KA's)

ANSWER: 070 (1.00)
b.
REFERENCE:
DEOP 200-1 and DOP 1600-2 New High Rev 3
295030A204 ..(KA's)

ANSWER: 071 (1.00)
b.
REFERENCE:
DOA 600-1 and SDM 259002 New High
295031K216 ..(KA's)

ANSWER: 072 (1.00)
c.
REFERENCE:
DEOP 300-1 New High
2.4.49 295032 ..(KA's)

ANSWER: 073 (1.00)
d.
REFERENCE:
DEOP 500-2 New Memory
295032A103 ..(KA's)

ANSWER: 074 (1.00)
b.
REFERENCE:
SDM 272001 Bank 27201S0061 Memory
295033A101 ..(KA's)

ANSWER: 075 (1.00)
b.
REFERENCE:
295L-S3 Last years NRC Exam #97 Memory
295034K101 ..(KA's)

ANSWER: 076 (1.00)
b.
REFERENCE:
SDM 288001 and 223001 and LP 288S-L1 New Memory
295035K302 ..(KA's)

ANSWER: 077 (1.00)
d.
REFERENCE:
SDM211000 Modified 21100S0171 High.
295037A104 ..(KA's)

ANSWER: 078 (1.00)
b.
REFERENCE:
295L-S4 Bank 35900S0081 Memory
295037K102 ..(KA's)

ANSWER: 079 (1.00)
a.
REFERENCE:
DAN 902(3)-3 G-1 New Memory
295038A103 ..(KA's)

ANSWER: 080 (1.00)
b.
REFERENCE:
DOA 0010-02 Tornado Warning / Severe Winds New Memory
295038K103 ..(KA's)

ANSWER: 081 (1.00)
d.
REFERENCE:
ITS 3.7.1 Bases and DOS 1500-02 New High
400000 2.1.33 ..(KA's)

ANSWER: 082 (1.00)
b.
REFERENCE:
223L-S3 Modified 22301S0241 Memory
500000K209 ..(KA's)

ANSWER: 083 (1.00)
b.
REFERENCE:
DEOP 500-4 New Memory
500000K301 ..(KA's)

ANSWER: 084 (1.00)
c.
REFERENCE:
ITS 3.6.2.1 step D and Bases Bank High
2.1.11 ..(KA's)

ANSWER: 085 (1.00)
d.
REFERENCE:
SY-AA-103-511 New Memory Rev 3
2.1.13 ..(KA's)

ANSWER: 086 (1.00)
d.
REFERENCE:
ITS Table 1.1-1 New High
2.1.22 ..(KA's)

ANSWER: 087 (1.00)
d.
REFERENCE:
DOP 0202-12 Modified Memory
2.1.8 ..(KA's)

ANSWER: 088 (1.00)
c.
REFERENCE:
DOP 0700-02 Bank 21503B0021 Last years NRC Exam #112 Memory
2.2.2 ..(KA's)

ANSWER: 089 (1.00)
c.
REFERENCE:
DFP 800-1 and TRM 3.9.a New Memory
2.2.26 ..(KA's)

ANSWER: 090 (1.00)
a.
REFERENCE:
LP 299L-S5 and EPU change letter to the license. New Memory
2.2.3 ..(KA's)

ANSWER: 091 (1.00)
d.
REFERENCE:
DGP 1-1 New Memory
2.2.34 ..(KA's)

ANSWER: 092 (1.00)
d.
REFERENCE:
LS-AA-999 Section A
Purpose New Memory
2.2.8 ..(KA's)

ANSWER: 093 (1.00)
a.
REFERENCE:
HU-AA-101 Modified Last years NRC exam #117 High
2.3.2 ..(KA's)

ANSWER: 094 (1.00)
c.
REFERENCE:
RP-AA-203 New Memory Rev 3
2.3.4 ..(KA's)

ANSWER: 095 (1.00)
b.
REFERENCE:
268N-03, DOP 2000-110 Last years NRC exam #119 Memory
2.3.6 ..(KA's)

ANSWER: 096 (1.00)
c.
REFERENCE:
DEOP 200-2 and 500-4 Modified last years SRO only NRC exam #127 High
2.3.9 ..(KA's)

ANSWER: 097 (1.00)
d.
REFERENCE:
DAN 902(3)-5 H-3 Last years NRC exam #122 High Rev 3
2.4.32 ..(KA's)

ANSWER: 098 (1.00)
d.
REFERENCE:
DEOP 500-05 Bank 29502S0521 Memory
2.4.35 ..(KA's)

ANSWER: 099 (1.00)
b.
REFERENCE:
Operator Aid #84 Bank 29902S0401 Memory
2.4.45 ..(KA's)

ANSWER: 100 (1.00)
c.
REFERENCE:
295L-S2 Bank 29502S0271 Memory
2.4.7 ..(KA's)

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

A N S W E R K E Y
MULTIPLE CHOICE

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

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