QUESTION# 001
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 2.2.34
QUESTION
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 Estimated Critical Position (ECP).

The Shift Manager has directed the ECP to be recalculated.

Who is REQUIRED to recalculate the ECP per OP-AA-300, REACTIVITY MANAGEMENT?

a. Unit Supervisor

b. Shift Technical Advisor

c. Nuclear Station Operator

d. Qualified Nuclear Engineer

ANSWER
d.
REFERENCE
OP-AA-300, DGP 1-1
MEMORY
BANK

QUESTION# 002
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 203000K2.01
QUESTION
Unit 2 was operating at near rated power, with TR-86 Out Of Service, when the following occurred:

Time 0 seconds: Drywell pressure increased to +3.8 psig.
Time +15 seconds: annunciator "4 KV BUS 24-1 OVERCURRENT" alarms.
Time +19 seconds: 138kv BT 1-2 CB, 138kv L0904 CB, AND 138kv L1205 CBs open due to an electrical storm.

What is the expected status of the Unit 2 LPCI pumps at time +33 seconds?

a. NO pumps running.

b. A & B pumps ONLY running.

c. C & D pumps ONLY running.

d. ALL pumps running.

ANSWER
b.
REFERENCE
12E-2303 sh 2
HIGHER
BANK
EXPLANATION
TR-86 OOS, div 2 power is coming from Bus 1 in the 138 yard. With DW pressure reaching >2 psig, a scram occurs and the generator (div 1) goes away making all power on Div 2 (138 yard). When 138kv Bus 1 goes away (breakers tripped), there is a LOOP, and all power comes from the EDGs. When Bus 24-1 goes overcurrent, only Bus 23-1 (Div 1) is available.

QUESTION# 003
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 264000A4.05
QUESTION
Unit 2 is operating at near rated power, with DOS 6600-01 DIESEL GENERATOR SURVEILLANCE TEST, in progress for the Unit 2 Diesel. The NSO is ready to synchronize the Diesel to Bus 24-1.

In accordance with the surveillance, the synchroscope should rotate 1 revolution every ___(1)___ seconds in the ___(2)___ direction.

a. (1) 30 (2) SLOW

b. (1) 30 (2) FAST

c. (1) 60 (2) SLOW

d. (1) 60 (2) FAST

ANSWER
b.
REFERENCE
DOS 6600-01
MEMORY
NEW
EXPLANATION
When synchronizing the Diesel Generator the synchroscope should rotate one revolution in approximately 30 seconds in the FAST direction. The breaker should be CLOSED just before the pointer reaches the vertical position. This is to prevent high transient current in the generator or a reverse power trip.

QUESTION# 004
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 2.4.1
QUESTION
Unit 3 was operating at near rated power when a steam leak occurred inside the Drywell. The following conditions exist:

- Drywell pressure is 3.7 psig and increasing.
- All control rods fully inserted EXCEPT F-5, which remained at position 24.

Which of the DEOPs below are required to be entered?

1) DEOP 100, RPV CONTROL
2) DEOP 200-1, PRIMARY CONTAINMENT CONTROL
3) DEOP 300-1, SECONDARY CONTAINMENT CONTROL
4) DEOP 400-5, FAILURE TO SCRAM

a. 1 and 2

b. 1 and 3

c. 2 and 3

d. 2 and 4

ANSWER
a.
REFERENCE
DEOPs 100 and 200-1
MEMORY
NEW
EXPLANATION
DEOP 100 and 200-1 are entered, based on drywell pressure >2.0#. DEOP 400-5 is not needed to be entered, based on only one rod being >04, and SDM states the reactor will remain shutdown without boron.

QUESTION# 005
Exam Date 20080303
Facility Dresden Station
Exam Level RO
K/A 295028K1.01
QUESTION
Unit 2 was operating at near rated power, when a LOCA occurred. The following conditions exist:

- RPV pressure is 200 psig and lowering slowly.
- Indicated Wide Range RPV water level is -10 inches and steady.
- Drywell pressure is 5.5 psig and rising slowly.
- Drywell temperature is 425°F and steady.

Wide Range Reactor Level Instrumentation is . . .

a. accurate AND can be used for trending.

b. NOT accurate and CANNOT be used for trending.

c. NOT accurate BUT can be used for trending. Actual Reactor water level is lower than -10 inches.

d. NOT accurate BUT can be used for trending. Actual Reactor level is higher than -10 inches.

ANSWER
b.
REFERENCE
DEOP 100 table 'A', EPG B-5-3
HIGH
BANK
REQUIRED REFERENCE
DEOP charts, with the entry conditions blanked out.
EXPLANATION
Utilizing DEOP 100 chart B, the parameters are above the line, so the instruments would be inaccurate in this situation, AND the instrument could not be used to determine the level trend. Changes in instrument run temperatures can produce on-scale readings on some instruments even when the actual level is below their variable leg taps. Since DP is not affected by level changes below the variable leg tap, the indicated level would then no longer reflect changes in actual level.

QUESTION# 006
Exam Date 20080303
Facility Dresden Station
Exam Level RO
K/A 295024K2.15
QUESTION
Unit 2 is experiencing a small break LOCA, with the following set of initial conditions:

- RPV water level is +30 inches.
- Drywell pressure is 1.18 psig.

As Drywell pressure starts to RISE, the Drywell Spray valves are interlocked closed at ___(1)___ psig, but the interlock may be overridden via the use of ___(2)___ keylock switch(es) in each division.

a. (1) 1.5; (2) a single

b. (1) 1.5; (2) two

c. (1) 2; (2) a single

d. (1) 2; (2) two

ANSWER
c.
REFERENCE
DAN 902-3 A-13
DOP 1500-03
FUNDAMENTAL
NEW
EXPLANATION
ECCS initiation logic on high Drywell pressure of 2 psig causes the Drywell Spray valves to be interlocked closed. The interlock may be overridden via the 316 A&B switches (one in each division). The second switch (317 A&B) would only be required IF RPV water level were also below 2/3 core height.

QUESTION# 007
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 256000K2.01
QUESTION
Unit 2 was operating at near rated power when the following occurred:

- TIme 12:00:00 the TR-22 Sudden Pressure Relay device activated.
- Time 12:00:01 the Aux Power system "fast transfer" FAILED to occur.

At time 12:00:05, which Condensate/Condensate Booster pumps (if any) would currently have electrical power available?

a. NONE

b. Only "A" and "B"

c. Only "C" and "D"

d. ALL

ANSWER
b.
REFERENCE
Electrical Print 12E-2370
HIGHER
NEW
EXPLANATION
The student must recognize that a Sudden Pressure Relay actuation on TR-22 will cause it to de-energize. With failure of aux power to transfer, Div 2 power is lost. With only Div 1 powered, "A" and "B" are the only pumps powered.

QUESTION# 008
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 245000K6.05
QUESTION
Unit 3 was operating at near rated power when the following 903-7 panel annunciators are received:

- C-3, TU-B STATOR COOLANT RUNBACK.
- C-10, STATOR CLG PANEL TROUBLE.

The Turbine will runback to approximately ___(1)___ stator amps within 2 minutes. If the stator amps do NOT reach this value, the Turbine will trip ___(2)___ later.

a. (1) 6350; (2) immediately

b. (1) 6350; (2) 1 minute later

c. (1) 7350; (2) immediately

d. (1) 7350; (2) 1 minute later

ANSWER
d.
REFERENCE
DAN 902-7 C-3
MEMORY
BANK
EXPLANATION
Turbine load runs back to 7380 in 2 minutes or turbine trip will occur in 3 minutes.

QUESTION# 009
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 2.4.10
QUESTION
An annunciator has been alarming intermittently over several shifts. Who's concurrence, AT A MINIMUM, is required to stop ANNOUNCING the alarm, per OP-AA-103-102 WATCHSTANDING PRACTICES?

a. The Unit Supervisor AND Shift Manager.

b. The Reactor Operator AND Shift Manager.

c. The Reactor Operator AND Unit Supervisor.

d. The Reactor Operator, Unit Supervisor, AND Shift Manager.

ANSWER
c.
REFERENCE
OP-AA-103-102
MEMORY
BANK
EXPLANATION
Per above procedure

QUESTION# 010
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 214000.K3.03
QUESTION
Unit 3 is in startup, with rod pulls in progress. The NSO is single notching a Control Rod out from position 12 to position 14, when annunciator 903-5 G-3, RPIS SYS INOP, is received.

What effect does this have on the RMCS?

a. A rod drift will occur.

b. The rod will drive in position to 00.

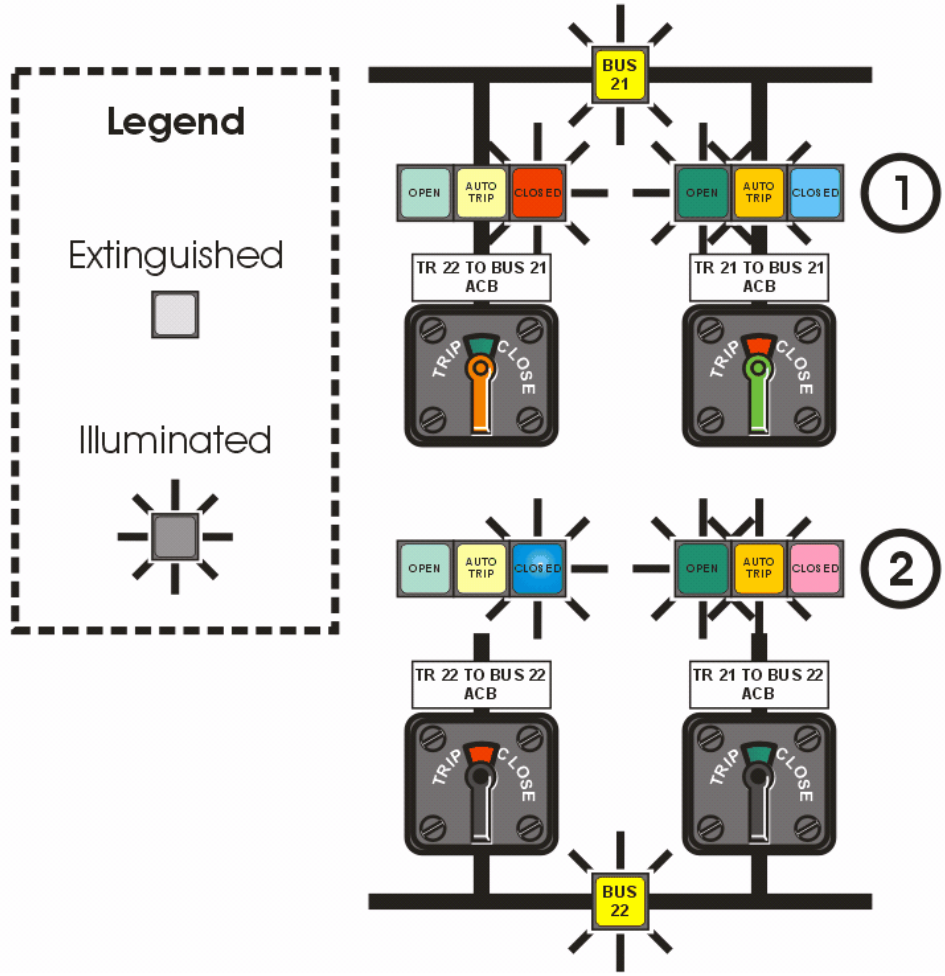
c. The rod will drive in position to 12.

d. A rod select block will be generated.

ANSWER
d.
REFERENCE
DAN 902-5 G-3
MEMORY
BANK
EXPLANATION
This will cause a Rod Select block. The RMCS sequence timer will complete the single notch withdrawal movement then de-select the rod.

QUESTION# 011
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295005A1.07
QUESTION
Unit 2 was operating at near rated power, when a Reactor scram occurred.

On the drawing below, the indication for the breakers in Group 1 is ___(1)___ and the indication for the breakers in Group 2 is ___(2)___ .



a. (1) Correct; (2) Correct

b. (1) Correct; (2) Incorrect

c. (1) Incorrect; (2) Correct

d. (1) Incorrect; 2) Incorrect

ANSWER
b.
REFERENCE

DOA 6000-01
HIGHER
BANK
EXPLANATION
The candidate must have the knowledge that in a full power lineup, the UAT (TR-21) supplies Buses 21 and 23, while the RAT (TR-22) supplies Buses 22 and 24. When a Turbine/Generator trip occurs, the MFBs (from TR-21) on Buses 21 and 23 trip open and subsequently the RFBs (from TR-22) close into Buses 21 and 23 (fast transfer).
On the drawing:

The lineup for Bus 21 (breaker lineup 1) is correct because TR-21 feed would have tripped and TR-22 feed would have closed in (fast transfer).

The lineup for Bus 22 (breaker lineup 2) is only half correct because the TR-21 feed is not normally closed and would NOT be tripped, but the TR-22 feed would be NORMALLY closed in.

QUESTION# 012
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295036K3.04
QUESTION
The following plant conditions exist after a transient with both units at power:

- Unit 2 West Corner Room Sump Level Hi alarm is received.
- Unit 3 East Corner Room Sump Level Hi alarm is received.
- Unit 2 HPCI Room Floor Drain Sump Level Hi alarm is received.

Area Temperatures and Radiation Levels for all ECCS Rooms on both units are normal.

NLOs are dispatched and provide the following reports:

- There is 1 inch of water on the Unit 2 HPCI Room floor - Water level is steady.
- The Unit 2 West Corner room floor is covered in water (< 1 inch and level is steady).

Why are the sump pumps operated under these conditions per DEOP 300-1?

a. To maintain equipment operability.

b. To control the spread of contamination and air borne radioactivity.

c. To quantify the leakage rate to determine Tech Spec required actions.

d. To ensure environmental conditions are maintained for EQ Instrumentation.

ANSWER
a.
REFERENCE
DAN 902-4 C-19
DOA 0040-02
DEOP 300-1 Bases B-8-2
MEMORY
BANK
EXPLANATION
The basis for pumping the sumps on high water level in Secondary Containment is to maintain operability of equipment in the area, and to maintain the areas in a condition permitting safe entry by personnel. The normal water level in the corner rooms is 'none', i.e., dry floors. The Max Safe level is 8 inches. Water level above Max Safe will jeopardize equipment and prevent personnel entry as electrical conduit and junction boxes will be submerged. Although pumping the sumps will control spread of contamination, it is not the DEOP 300-1 basis. The leakage cannot be quantified via the sumps, and water level does not put the EQ instruments at risk (those that need to operate in high humidity are leak tight).

QUESTION# 013
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 207000K4.02
QUESTION
Unit 2 was operating at near rated power when the following sequence of events occurred:

Time = 0 seconds: A spurious Group 1 signal occurs.
Time = 5 seconds: RPV pressure peaks at 1070 psig.
Time = 12 seconds: RPV pressure drops to 1025 psig.

The Reactor scrammed on ___(1)___ and the Isolation Condenser ___(2)___ initiated to control RPV pressure.

a. (1) MSIV closure; (2) automatically

b. (1) MSIV closure; (2) was manually

c. (1) High RPV pressure; (2) automatically

d. (1) High RPV pressure; (2) was manually

ANSWER
b.
REFERENCE
Electrical Prints 12E-2502A, 12E-2506, 12E-2507, 12E-2512
HIGHER
BANK
EXPLANATION
The IC does not initiate until RPV pressure is sustained above setpoint (1047 to 1063) for nominal time of 15 seconds. Pressure reaches 1070 within 5 seconds, then goes below 1047 within the next 7 seconds - therefore no automatic initiation - standby lineup. Scram caused by MSIV closure BEFORE the high RPV pressure signal was received as a result of the group 1 isolation.

QUESTION# 014
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 215004A3.03
QUESTION
Given the following:

- An extended Refueling and Maintenance Outage is in progress.
- All four of the RPS Shorting Links are removed from the 902-15 and -17 Panels.

Then SRM 21 spikes to a full scale indication.

What response is expected from the RPS system under these conditions?

a. No RPS actuation.

b. 1/2 scram on RPS channel A ONLY.

c. 1/2 scram on RPS channel B ONLY.

d. Full scram.

ANSWER
d.
REFERENCE
LP DRE212LN001
MEMORY
BANK
EXPLANATION
With shorting links removed, logic is one out of eighteen taken once (i.e., an RPS trip from any neutron monitoring instrument-SRM, IRM, or APRM-Results in a full scram).

QUESTION# 015
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 239002K6.03
QUESTION
Unit 2 was operating at near rated power when the output from the Instrument Bus was lost.

If the NSO placed the 2B Electromatic Relief Valve (ERV) control switch to the MANUAL position, the ERV will . . . . .

a. remain closed.

b. open and its position could be confirmed by acoustic monitoring ONLY.

c. open and its position could be confirmed by tailpipe temperature ONLY.

d. open and its position could be confirmed by BOTH tailpipe temperature AND acoustic monitoring.

ANSWER
b.
REFERENCE
DOA 6800-01
HIGHER
BANK
EXPLANATION
Valve control power is 125 VDC. Tailpipe temperature monitoring is powered by the Instrument Bus AC power. Acoustic monitor is powered by the ESS Bus AC power.

QUESTION# 016
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 261000K3.05
QUESTION
Unit 2 was operating near rated power when a primary system leak caused Drywell pressure to reach 44 psig. The team started venting the Drywell through the 'A" SBGT train.

Which of the following leaks associated with 'A' SBGT train would result in increased contamination levels in the turbine building?

a. Packing leak on MO 2/3-7505A, INLET DAM.

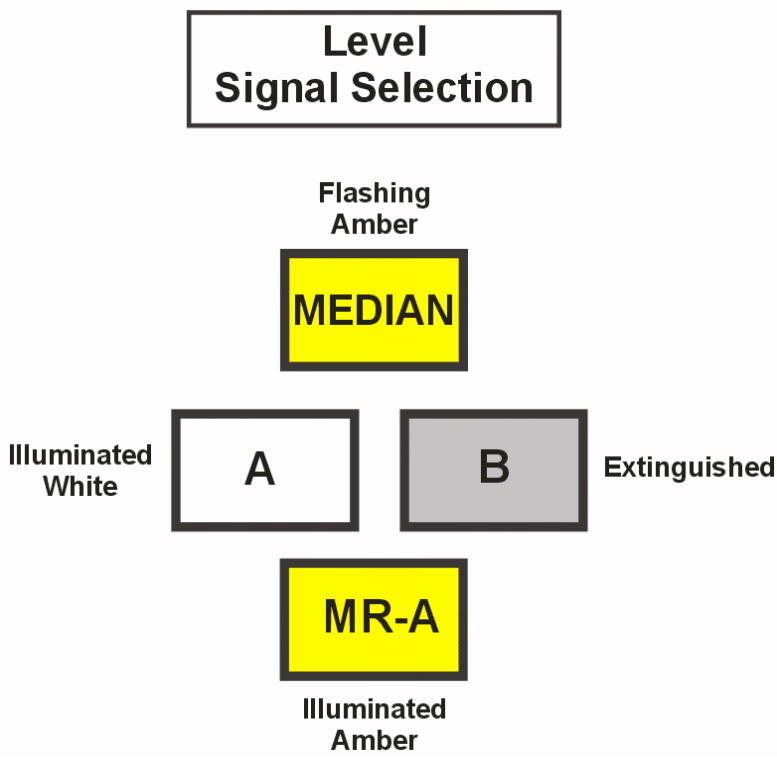
b. Seal leak on the High Efficiency Prefilter door.

c. Seal leak on the High Efficiency Afterfilter door.

d. Packing leak on MO 2/3-7507A, 2/3A FAN DISCH DAMPER.

ANSWER
d.
REFERENCE
P&ID M-49
HIGHER
BANK
EXPLANATION
In the SBGT system, the fan draws the Reactor Building atmosphere through the system. The Inlet damper, the High Efficiency Prefilter housing and High Efficiency After filter housing are before the fan so they would be at a vacuum, not at pressure, so air would leak into the system and NOT out. The fan discharge damper is after the other components and would be at a positive pressure and would leak any contamination out.

QUESTION# 017
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 216000A4.02
QUESTION
The NSO observes the following 902-5 Panel indication:



Which of the following describes the condition of the FWLC RPV level instrumentation?

a. Narrow Range "A" is available
Narrow Range "B" is NOT available
Medium Range "A" is available
Median Level Control is in control

b. Narrow Range "A" is in control
Narrow Range "B" is available
Medium Range "A" is available
Median Level Control is NOT available

c. Narrow Range "A" is in control
Narrow Range "B" is NOT available
Medium Range "A" is NOT available
Median Level Control is NOT available

d. Narrow Range "A" is in control
Narrow Range "B" is available

Medium Range "A" is NOT available
Median Level Control is NOT available

ANSWER
d.
REFERENCE
DOP 0600-06
HIGHER
BANK
EXPLANATION
Illuminated = selected/In-control
Extinguished = available BUT not selected/in-control
Amber = NOT available
Flashing Amber = was previously selected AND is no longer selected AND is not available

QUESTION# 018
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 219000A2.04
QUESTION
Unit 3 was operating at near rated power, when the following occurred:

- An automatic scram occurred, with an ATWS resulting.
- Reactor Power is currently 42%.
- Drywell pressure is 1.30 psig and trending up.
- RPV water level was terminated and prevented, to -55 inches per DEOP 400-5.
- Maximum Torus Cooling has been established.

Then Drywell pressure reaches > 2.0 psig.

What effect does this have on Torus Cooling, if any, AND what must be done to re-establish Max Torus Cooling, if anything?

a. None, because the HX BYPASS VLVs will be interlocked closed; no manipulations are required.

b. None, until RPV pressure drops below 350 psig, at which time the HX BYPASS VLVs will open; the HX BYPASS VLVs are required to be re-closed after they have opened.

c. cooling will be reduced, because the HX BYPASS VLVs will open and be interlocked open for 30 seconds; the HX BYPASS VLVs are required to be re-closed after interlock has timed out.

d. Cooling will be reduced, because the HX BYPASS VLVs will open and be interlocked open until RPV pressure drops below 350 psig; the HX BYPASS VLVs are required to be re-closed after they have opened.

ANSWER
c.
REFERENCE
DOP 1500-02 attach C
HIGH
BANK
EXPLANATION
The HX BYPASS VLVs were closed to establish Max Torus Cooling - there was no initiation signal present. When DW pressure exceeds the ECCS initiation setpoint, the valves receive an open signal, and are interlocked open for 30 seconds. After interlock times out, the valves are re-closed via the control switch to re-establish max torus cooling. Drywell pressure initiation logic does not use RPV pressure (used by low-low level initiation logic).

QUESTION# 019
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295026A2.02
QUESTION
Which of the following set of parameters would require an Emergency RPV Depressurization, with an initial ATWS power of 4%?

a. Reactor Pressure: 450 psig
Suppression Pool Temperature: 170°F
Suppression Pool Level: 12.5 feet

b. Reactor Pressure: 600 psig
Suppression Pool Temperature: 165°F
Suppression Pool Level: 15 feet

c. Reactor Pressure: 650 psig
Suppression Pool Temperature: 170°F
Suppression Pool Level: 15 feet

d. Reactor Pressure: 800 psig
Suppression Pool Temperature: 160°F
Suppression Pool Level: 18 feet

ANSWER
c.
REFERENCE
DEOP 200-1
HIGHER
BANK
REQUIRED REFERENCES
DEOP charts, with the entry conditions blanked out.
EXPLANATION
Utilizing the DEOP 200-1 Heat Capacity Temperature Limit (HCTL) curve (table M) it can be determined if the curve is being violated, which would require a blowdown.

QUESTION# 020
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295001K1.03
QUESTION
Unit 3 was operating at near rated power, when the 3A Recirc pump tripped. The Shift Manager has decided to remain in single loop operation while trouble shooting the cause on the pump trip.

Which of the following Thermal Limits are required to have correction factors implemented with in 24 hours?

a. LHGR and MCPR ONLY

b. LHGR and MAPLHGR ONLY

c. MAPLHGR and MCPR ONLY

d. LHGR, MCPR, AND MAPLHGR

ANSWER
d.
REFERENCE
DGP 3-3
MEMORY
BANK
EXPLANATION
DGP 03-03 require MAPLHGR, LHGR, and MCPR limits to be adjusted for single loop operation within 24 hours.

QUESTION# 021
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 230000A1.09
QUESTION
Unit 3 was operating at near rated power, when the following occurred:

- 05:27:00 Drywell pressure reaches 4 psig.
- 05:28:00 Torus sprays are initiated.
- 05:33:10 TR 32 trips AND Unit 3 and 2/3 Emergency Diesel Generators re-energize their associated busses.

Which of the following times is the EARLIEST that Torus Spray flow will be re-established?

a. 05:33:15

b. 05:33:23

c. 05:33:38

d. 05:34:10

ANSWER
a.
REFERENCE
UFSAR
HIGH
BANK
EXPLANATION
When drywell pressure went above 2 psig, the Unit 3 and 2/3 EDGs auto started. When the LOOP occurred all 4 LPCI pps tripped. The EDGs close onto Buses 33-1 and 34-1. When the UV relays reset, the first 2 LPCI pps (one per division) restart, 5 seconds later the second set of LPCI pps restart. The torus spray vlvs never closed, therefore torus sprays will be at full flow.

QUESTION# 022
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295030 2.1.25
QUESTION
Unit 3 was operating at near rated power, when annunciator 903-4 C-23, TORUS NARROW RANGE WTR LVL LO is received. The following parameters are reported:

- Torus level is -4.4 inches.
- Drywell to Torus dP is 1.6 psig.

Which of the following procedure(s) are required to be entered?

a. DEOP 100 RPV CONTROL ONLY

b. DEOP 200-1 PRIMARY CONTAINMENT CONTROL ONLY

c. DEOP 100 RPV CONTROL AND DEOP 200-1 PRIMARY CONTAINMENT CONTROL

d. DEOP 100 RPV CONTROL, DEOP 200-1 PRIMARY CONTAINMENT CONTROL AND DEOP 400-2 EMERGENCY DEPRESSURIZATION

ANSWER
b.
REFERENCE
DEOP 200-1
DOP 1600-2
HIGHER
NEW
REQUIRED REFERENCES
DOP 1600-02
EXPLANATION
This is not a listed entry condition on DEOP 200-1, however in DOP 1600-2 Torus Water Level Control states that if dP and level are not within the curves on Attachment A DEOP 200-1 must be entered.

QUESTION# 023
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 290003K4.01
QUESTION
Given the following information regarding the Control Room HVAC system:

- "B" AHU is running.
- A" AHU control switch has a GREEN-TARGET.
- The NSO takes the CRM ISOL switch to the "ISOLATE" position, on 923-5 panel.

Which one of the following describes the Control Room Ventilation system response?

a. "B" AHU continues to run, system dampers line-up for the smoke purge mode.

b. "B" AHU continues to run, system dampers line-up for the isolation/recirculation mode.

c. "B" AHU is tripped, "A" AHU auto starts, system dampers line-up for the isolation/recirculation mode.

d. "B" AHU is tripped, "A" AHU and the AFU auto start, and dampers line-up for the isolation/pressurization mode.

ANSWER
b.
REFERENCE
DOP 5750-05
DOA 5750-01
DOA 5750-04
HIGHER
BANK
EXPLANATION
At the 923-5 panel, selection of control switch to "isolate" places the CREV system in isolation/recirculation mode for the train that is currently operating. There is no auto-start feature for "A" train, therefore both ANSWERs with "A" train starting are incorrect. Smoke Purge operation is not an "isolation" mode of operation.

QUESTION# 024
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295006A2.04
QUESTION
Unit 2 was operating at near rated power when a Group 1 isolation occurred.

At time 05:50:00 RPV pressure was 1010 psig and increasing at a rate of 10 psig/minute.

What is the EARLIEST time that the Isolation Condenser would be in service?

a. 05:51:00

b. 05:54:00

c. 05:57:00

d. 06:00:00

ANSWER
c.
REFERENCE
DAN 902-4 A-15
HIGHER
NEW
EXPLANATION
The Iso Condenser initiates at an RPV pressure of 1055 psig for ~13 seconds. With the rate of change in the RPV pressure, the pressure would reach 1055, at time 05:54:30. Then 13 seconds later (05:54:43) the Iso Condenser would initiate, making 05:57:00 the EARLIEST time.

QUESTION# 025
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295021A2.05
QUESTION
The Unit 3 Reactor was in Hot Shutdown when the Shutdown Cooling system tripped. RPV pressure is currently 100 psig.

What is the MINIMUM vessel flange temperature that would meet the Technical Specification LCO limit?

a. 75°F

b. 85°F

c. 100°F

d. 125°F

ANSWER
b.
REFERENCE
T.S. 3.4.9 Tables
HIGHER
BANK
REQUIRED REFERENCES
T.S. 3.4.9 figures 1, 2, & 3 only.
EXPLANATION
Figure 2 needs to be utilized because the plant is in a cooldown. The upper vessel curve needs to be utilized, instead of the bottom head curve.

QUESTION# 026
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 2.3.04
QUESTION
An accident has occurred at the station and you have volunteered to perform an evolution to protect valuable property. The dose rate in the area you will be entering is 30 Rem/hr.

What is the MAXIMUM time you can spend in the area performing your task without violating TEDE Radiation Exposure Limits per RP-AA-203 EXPOSURE CONTROL AND AUTHORIZATION?

a. 10 minutes.

b. 20 minutes.

c. 30 minutes.

d. 60 minutes.

ANSWER
b.
REFERENCE
RP-AA-203
HIGHER
BANK
EXPLANATION
The exposure limit for protecting valuable property is 10 TEDE. Based on 30 REM in the area, the stay time would be 20 minutes.

QUESTION# 027
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 2.3.04
QUESTION
Unit 2 was operating at near rated power when the annunciator 902-4 E-12, RWCU SYS AFTER NON-REGEN HX TEMP HI, was received.

Which of the following is an all inclusive list of the valves that would indicate CLOSED?

- 2-1201-1 RX OUTLET ISOL
- 2-1201-1A RX OUTLET BYP
- 2-1201-2 INLET ISOL
- 2-1201-3 AUX PP SUCT
- 2-1201-7 RX RETURN

a. 2-1201-1;
2-1201-1A;
2-1201-2

b. 2-1201-1;
2-1201-2;
2-1201-3;
2-1201-7

c. 2-1201-1;
2-1201-1A;
2-1201-2;
2-1201-3

d. 2-1201-1;
2-1201-1A;
2-1201-2;
2-1201-3;
2-1201-7

ANSWER
c.
REFERENCE
DAN 902-4 E-12
MEMORY
BANK
EXPLANATION
A high temperature on the outlet of the NR HX will cause the outlets, inlet, and aux pump suction to close.

QUESTION# 028
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 262002A3.01
QUESTION
Unit 3 was operating at near rated power when the following occurred:

The Bus 39 feed breaker opened on a fault.

Which of the following ESS indication(s) in the Main Control Room would alert the Operator to this fault?

a. 903-8 E-8, ESS UPS ON DC OR ALTERNATE AC, annunciator in alarm ONLY.

b. 903-8 E-10, 120/240V AC ESS BUS ON EMERG SPLY, annunciator in alarm ONLY.

c. 903-8 E-8, ESS UPS ON DC OR ALTERNATE AC, annunciator in alarm AND a momentary loss of power to the ESS loads.

d. 903-8 E-10, 120/240V AC ESS BUS ON EMERG SPLY, annunciator in alarm AND a momentary loss of power to the ESS loads.

ANSWER
a.
REFERENCE
DAN 903-8 E-8
MEMORY
BANK
EXPLANATION
DAN 903-8 E-8, ESS UPS ON DC OR ALTERNATE AC, warns the operator that the ESS UPS is no longer being powered from Bus 39. The static switch automatically transfers between its two feeds without missing a cycle, thus making a bumpless transfer. DAN 903-8 E-10, 120/240V AC ESS BUS ON EMERG SPLY, indicates that the ABT has transferred and the ESS Bus is being supplied from MCC 38-2.

QUESTION# 029
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295018 2.1.14
QUESTION
Unit 3 was operating at near rated conditions when the following occurred:

- The 3A RBCCW pump tripped.
- The 3B RBCCW pump was successfully started.

There is no indication of an electrical trip on the breaker for the 3A RBCCW pump.

What is the lowest level of authority that must AUTHORIZE a restart of the 3A RBCCW pump?

a. Only the Unit Supervisor

b. The Shift Manager and Engineering

c. The Shift Manager and Electrical Maintenance

d. The Unit Supervisor and Electrical Maintenance

ANSWER
a.
REFERENCE
DOA 6500-10
MEMORY
NEW
EXPLANATION
Per the DOA with no electrical damage only the US permission is needed to restart.

QUESTION# 030
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 2.1.10
QUESTION
In order to return a Licensee to ACTIVE status from INACTIVE status, the Licensee must . . . . .

a. obtain special permission from the NRC Regional office for reactivation.

b. at a minimum, have received a passing grade on a special reactivation exam.

c. participate in a complete plant tour as part of a minimum of 40 hours of shift functions.

d. complete a minimum of 60 hours of shift functions under the direction of an operator or senior operator and in the position to which the individual will be assigned.

ANSWER
c.
REFERENCE
OP-AA-105-102
10 CFR 55.53
MEMORY
HIGHER
EXPLANATION
Before resumption of functions authorized by a license issued under this part, an authorized representative of the facility licensee shall certify the following:
That the licensee has completed a minimum of 40 hours of shift functions under the direction of an operator or senior operator as appropriate and in the position to which the individual will be assigned. The 40 hours must have included a complete tour of the plant.

QUESTION# 031
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 262001 .2.1.27
QUESTION
What is the purpose and/or function of the Auxiliary Power System?

a. To supply electrical power to systems and equipment required to ensure Reactor shutdown.

b. To supply sufficient power sources and redundant buses to provide reliable electrical power during station operation ONLY.

c. To supply electrical power required for safe shutdown on one unit and limit the consequences of a Designed Based Accident on the other unit.

d. To supply sufficient power sources and redundant buses to provide reliable electrical power during all modes of station operation AND shutdown conditions.

ANSWER
d.
REFERENCE
UFSAR
MEMORY
BANK
EXPLANATION
Per the UFSAR, the function is to supply sufficient power sources and redundant buses to provide reliable electrical power during all modes of station operation and shutdown conditions.

QUESTION# 032
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295002K2.06
QUESTION
Unit 3 is operating at near rated power, when the following occurs:

- Main Condenser vacuum begins degrading.

The temperature of the Unit 3 Condensate system will ___(1)___ a manual Scram may be required due to the loss of ___(2)___ .

a. (1) increase, and (2) Feedwater Heating

b. (1) increase, and (2) Steam Jet Air Ejectors

c. (1) NOT change, but (2) Feedwater Heating

d. (1) NOT change, but (2) Steam Jet Air Ejectors

ANSWER
b.
REFERENCE
DOA 3300-02
DOA 4400-01
DGP 3-1
HIGHER
BANK
EXPLANATION
A loss of vacuum will cause a reduction in condensate depression, and therefore the condensate temperature will increase. This will also effect the SJAEs. The DOA talks about as condensate temperature rises and is verified to be 139°F, that consideration must be given for a manual scram. The feedwater distractors are wrong because FW heating will not be worsened by a rising condensate temperature.

QUESTION# 033
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 400000 2.1.32
QUESTION
Unit 2 was operating at near rated power, when the following set of conditions occurred:

- A Scram occurs on high DW pressure.
- Loss of off-site power (LOOP) occurs.
- The 2/3 cribhouse inlet temperature is 93°F and steady.

Given the above conditions, a maximum of ___(1)___ CCSW pumps may be run concurrently, to prevent ___(2)___ .

a. (1) 2; (2) overloading the 2/3 EDG
b. (1) 3; (2) overloading the 2/3 EDG
c. (1) 2; (2) choking the DGCWP flow to the 2/3 EDG
d. (1) 3; (2) choking the DGCWP flow to the 2/3 EDG

ANSWER
c.
REFERENCE
DOP 1500-02
DOP 6600-05
UFSAR 6.3
DGA 12
HIGHER
NEW
EXPLANATION
With the given cribhouse inlet temperature a max of 2 CCSW pumps may be run with the 2/3 EDG supplying Bus 23-1. This will prevent choking the DGCWP from the 2/3 EDG. This is an industry event at Dresden. The distractor for 3 CCSW pumps is wrong unless temp is between 83°F and 90°F. The distractors for overloading the 2/3 EDG is wrong because the actions of DGA 12 ensure power is distributed so that the CCSW pumps can run without overloading the EDGs. Given that there is a LOOP and Scram, actions of DGA 12 will be in progress.

QUESTION# 034
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295003K3.04
QUESTION
Unit 2 was operating at near rated conditions, when the following occurred:

- Unit 2 experienced a Loss of Off-Site Power (LOOP).
- Annunciator 902-8 E-4 2/3 DG OVERLOAD alarmed.
- Annunciator 902-8 D-4 2/3 DG GROUND FAULT alarmed.
- 2/3 DIESEL GENERATOR KILOWATT meter reads 2800 Kilowatts.

What action(s) is/are the NSO required to take?

a. Dispatch an NLO to depress the EMERGENCY STOP pushbutton on the 2/3 DG.

b. Trip ALL loads connected to 2/3 DG, then close breakers one at a time to locate ground fault to prevent damage to the Generator.

c. Trip ALL loads connected to 2/3 DG, then close breakers one at a time to locate ground fault to prevent damage to the load when Off-Site power restored.

d. Trip all UNNECESSARY loads connected to 2/3 DG, then close breakers one at a time to locate ground fault to prevent damage to the load when Off-Site power restored.

ANSWER
d.
REFERENCE
DAN 902-8 D-4
DAN 902-8 E-4
MEMORY
BANK
EXPLANATION
With the 2/3 EDG running via an AUTO start signal (LOOP), the actions required are to trip ALL unnecessary loads connected, then close breakers one at a time to locate ground fault to prevent damage to the load when Off-Site power restored.

QUESTION# 035
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295038K1.02
QUESTION
Unit 3 was operating at near rated conditions, when the following occurred:

- A leaking valve has caused water to be sprayed on 'A' SBGT Charcoal Bed.
- A fuel handling accident occurred, causing radiation levels at the site boundary to increase.
- An NSO isolated Reactor Building ventilation and started the 'A' SBGT train.

The release rates at the site boundary will be higher than anticipated for which of the following?

a. Iodine

b. Particulates

c. Transuranics

d. Noble Gases

ANSWER
a.
REFERENCE
ILTS027
UFSAR
HIGHER
BANK
EXPLANATION
The charcoal bed normally removes the Iodine, but due to being wet the efficiency of removal goes down. Transuranics are released with fuel failure but do not go airborne. Particulates are removed by the HEPA filters. Noble Gases have little hold up and would not be significantly changed.

QUESTION# 036
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 261000K6.04
QUESTION
Unit 2 was operating at near rated power, with the 'B' Reactor Building Ventilation Radiation Monitor removed from service, when Bus 29 tripped on overcurrent.

This will cause . . . . .

a. the SBGT system to auto start.

b. the 2A RPS MG Set to lose power.

c. the ESS Bus ABT to swap to MCC 28-2.

d. the Reactor building crane to be "locked" in its current position.

ANSWER
a.
REFERENCE
DOA 0500-5
DOP 0500-03
DAN 903-3 G-14
HIGHER
BANK
EXPLANATION
A loss of power to Bus 29 de-energizes MCC 29-2, which is the power supply to 2B RPS MG Set, which feeds the 2A RPS Bus, which is the power supply to the 'A' Reactor Building Vent Monitor. SBGT logic is one Rx Bldg Rad monitor upscale OR both Rx Bldg Vent monitors downscale.

QUESTION# 037
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 600000K3.04
QUESTION
A Chemistry Technician called the Control Room and reported a fire in the Unit 3 trackway.

Which of the following is an IMMEDIATE action to take per DOA 0010-10, FIRE/EXPLOSION, and why?

a. Direct Chemistry to evacuate the Chemistry lab.

b. Notify Coal City Fire Protection District to extinguish the fire.

c. Notify Security to respond to the scene to provide support as required.

d. Start the standby Service Water Pump to raise the fire header pressure.

ANSWER
c.
REFERENCE
DOA 0010-10
MEMORY
NEW
EXPLANATION
Security is notified to provide support (crowd control, etc.) per the Immediate Actions of the DOA. The Coal City Fire Dept is not notified unless the fire is OUTSIDE the protected area (trackway is inside). There is NO procedural direction for starting the standby Service Water Pump under the conditions stated. While the fire is near the Chemistry lab, there are no indications that evacuation is needed.

QUESTION# 038
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 205000A1.03
QUESTION
Unit 2 is shutdown with the following set of conditions:

- RPV water temperature is 322°F.
- BOTH Recirc Pumps are operating at 30%.
- 'A' and 'B' SDC pumps are in operation for core cooling.
- The NSO is throttling Shutdown Cooling MOs 2-1001-4A and 4B PP DISCH VLVs to control the cooldown rate.
- The NSO notices that the 2B Recirc Loop temperature indicates upscale on the Recirc Loop Temperature recorder.
- The 2B RECIRC LOOP WATER TEMPERATURE HI annunciator alarms.

With these current conditions, _____.

a. 2A and 2B SDC pumps will remain running

b. ALL SDC system MO valves are interlocked closed

c. ALL Recirc system MO valves are interlocked open

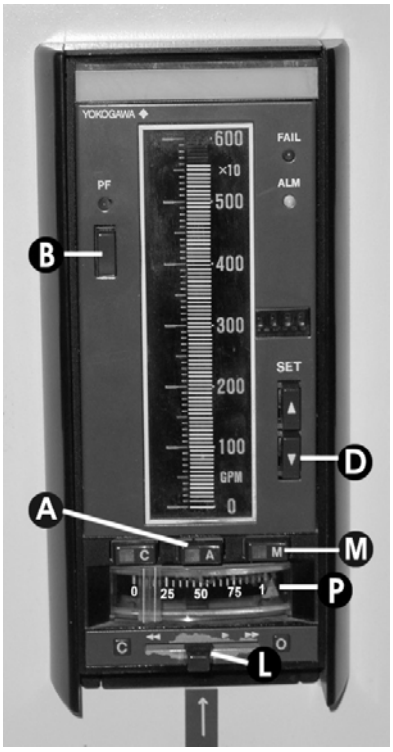
d. 2A and 2B SDC pumps will inject into the 2A Recirc loop ONLY

ANSWER
b.
REFERENCE
DAN 902-4 H-8
HIGHER
BANK
EXPLANATION
When any ONE of the 4 temperature elements reaches the high temperature setpoint (>346°F), then ALL SDC MO valves are interlocked closed (SDC system isolation). SDC pump high temp setpoint (>339°F) is sensed between the pump and pump suction valve, NOT the Recirc loop temp. No recirc system isolation occurs on HI RECIRC LOOP temp. With all SDC system valves isolating, SDC cannot inject into either Recirc loop.

QUESTION# 039
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 206000A4.02
QUESTION
Unit 3 has just scrammed, with the following conditions:

- Drywell pressure is 2.8 psig and steady.
- The 903-5 panel NSO reports that HPCI is NOT needed for RPV level control, but MAY be needed at a later time.

Per DOP 2300-04 hardcard attachment 1A, HPCI CONTROL/SHUTDOWN WITH INJECTION SIGNAL PRESENT, what are the proper actions to take on the HPCI flow controller to place HPCI in the configuration specified?



a. Depress the "M" pushbutton. Press and hold button "D" until the LED bar is at "0" gpm.

b. Ensure the "A" pushbutton is depressed. Press and hold button "D" until the LED bar is at "0" gpm.

c. Depress the "M" pushbutton. Move and hold lever "L" in the "C" direction until pointer "P" is at position "0".

d. Depress button "B" and ensure light "PF" is lit. Move and hold level "L" in the "C" direction until pointer "P" is at position "0".

ANSWER
c.
REFERENCE
DOP 2300-04
MEMORY
BANK
EXPLANATION
According to DOP 2300-04, Attachment 1, IF HPCI may be needed for injecting at a later time, THEN place the HPCI flow controller in MANUAL and reduce output to ZERO.

QUESTION# 040
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 263000K3.02
QUESTION
Both units were operating at near rated power, when the following occurred:

- 125 VDC POWER FAILURE annunciators alarm on both the 902-8 and 903-8 panels.
- NSOs diagnosed a complete loss of the Unit 2 125 Vdc system.
- An NLO, in the field, reports a GREEN light above GENERATOR 3 AUX 86B TRIP UNIT 3 control switch is illuminated.

What effect, if any, does this condition have on the Unit 3 Main Generator's protection?

a. No effect.

b. Generator trips as a result of this loss.

c. Half the protection is lost (generator has trip capability).

d. All of the protection is lost (generator does NOT have trip capability).

ANSWER
c.
REFERENCE
DOA 6900-T1
HIGHER
NEW
EXPLANATION
The protection circuitry is broken into two schemes, each with its own power supply (3A-2 and 3B-2). Although the schemes do not have redundant trips, they do provide protection for the generator independently. 3B-2 is supplied from U-2 125VDC system. Since the green light above the GENERATOR 3 AUX 86B TRIP UNIT 3 control switch is lit, power must be available from 3A-2 for the backup generator protective relays. ‘A’ is not correct because this does have an effect since half the trips have been lost. ‘B’ is not correct because this circuitry is energized to trip and requires 125 Vdc for that trip. ‘D’ is not true since you still have half of your protection left.

QUESTION# 041
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 215003A3.01
QUESTION
Unit 2 is in a startup with power ascension in progress with IRMs indicating 50 on range 4.

Positioning IRM CH 11 RANGE SWITCH from range 4 to 5 will automatically change the scale on IRM-APRM recorder, RR 2-750-10A to ___(1)___ and ___(2)___ will be displayed on the recorder chart trace.

a. (1) 0 - 40 (2) 5.0

b. (1) 0 - 40 (2) 50

c. (1) 0 - 125 (2) 5.0

d. (1) 0 - 125 (2) 50

ANSWER
a.
REFERENCE
LP DRE215LN003
HIGHER
BANK
EXPLANATION
Odd number ranges have a scale of 0-40, even ranges have a scale of 0 -125. Ranges 4 and 5 vary by a factor of 10, so ranging the IRM up would change the indication on the recorder top 5.0.

QUESTION# 042
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 2.1.17
QUESTION
Unit 2 was operating at near rated power, when a SCRAM occurred. The following parameters are observed:

- APRMs are 10%.
- RPV pressure is 920 psig.
- RPV water level is +5 inches.
- Drywell pressure is 1.2 psig.
- All RPS Channel 'A' and 'B' lights are extinguished.

Which of the statements below demonstrates a proper verbal report from the Unit NSO to the Unit Supervisor per DGP 2-3, REACTOR SCRAM?

a. "Attention for an update, All rods in, Reactor level and pressure and Drywell pressure are trending as expected, End of Update."

b. "Attention for an update, Rods did not go in, ARI actuated, it is a hydraulic ATWS, Reactor power is approximately 10%, End of Update."

c. "Attention for an update, Rods did not go in, ARI actuated, it is a hydraulic ATWS, Reactor level and pressure and Drywell pressure are trending as expected, Reactor power is approximately 10%, End of Update."

d. "Attention for an update, Rods did not go in, ARI actuated, it is an electrical ATWS, Reactor level and pressure and Drywell pressure are trending as expected, Reactor power is approximately 10%, End of Update."

ANSWER
c.
REFERENCE
DGP 2-3
HIGHER
NEW
EXPLANATION
The candidate must be able to determine that an ATWS exists (ARPMs reading 10%), and that it is a hydraulic ATWS, since the RPS lights are extinguished. Per the procedure, the candidate must also report the trend of Drywell and RPV parameters.

QUESTION# 043
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 400000A2.02
QUESTION
Unit 2 was operating at near rated power, when the following occurred:

- The Reactor scrammed on high Drywell pressure.
- Drywell pressure is 7.3 psig and climbing at a rate of 1.0 psig/minute.
- Annunciator 923-1 F-1, U2 RBCCW HEAD TANK LVL HI/LO was received.

What are the possible consequences of this situation AND what action(s) are required?

a. A potential for the Unit 2 RBCCW pumps to trip exists; isolate RBCCW to the Drywell per DOA 3700-01, LOSS OF THE RBCCW SYSTEM.

b. A potential for the Unit 2 RBCCW pumps to trip exists; open the RBCCW head tank level control bypass valve per DAN 923-1 F-1 U2 RBCCW HEAD TANK LVL HI/LO.

c. A potential of a leakage path from the Primary containment to the Reactor Building via the RBCCW head tank vent exists; isolate RBCCW to the Drywell per DOA 3700-01, LOSS OF THE RBCCW SYSTEM.

d. A potential of a leakage path from the Primary containment to the Reactor Building via the RBCCW head tank vent exists; open the RBCCW head tank level control bypass valve per DAN 923-1 F-1 U2 RBCCW HEAD TANK LVL HI/LO.

ANSWER
c.
REFERENCE
DAN 923-1 F-1
DOA 3700-01
HIGHER
NEW
EXPLANATION
With the Head Tank Level Hi/Lo AND a subsequent rise in Drywell pressure it is an indication that there is LOCA that may have ruptured an RBCCW line inside the Drywell. This leaves a vent path for the Drywell atmosphere to escape into the Reactor Building, via the RBCCW Head Tank vent. The correct actions, with these conditions is to isolate RBCCW to the Drywell.

QUESTION# 044
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295019K2.03
QUESTION
Unit 2 was operating at ~38% of rated power, with Bus 25 O.O.S., when the following occurred:

- Bus 24 experienced an overcurrent condition.
- The Instrument Air header pressure is 80 psig and dropping at a rate of 2 psig/minute.

What action(s) are the NSO required to take FIRST . . . . .

a. Verify the 2/3 EDG has auto started.

b. MANUALLY close the Bus 20 to Bus 27 crosstie breaker.

c. Verify the FRVs have transferred to the back-up nitrogen supply.

d. Depress the manual scram pushbuttons and place the MODE switch in shutdown.

ANSWER
c.
REFERENCE
DAN 902-6 H-10
DOA 4700-01
HIGHER
NEW
EXPLANATION
With a loss of Bus 24, power will be lost to Bus 26 and Bus 27 (since no cross-tie available with Bus 25 O.O.S.), which are the power supplies for all Unit 2 IACs. With a loss of all IACs, and header pressure dropping, per the DAN verify the FRVs are being supplied by the nitrogen backup (at 82 psig) so they will operate in setpoint setdown during a scram. Scramming the reactor is not required until Inst Air pressure drops to 55 psig. Verifying the 2/3 EDG auto started would not be correct, since Bus 24 supplies power to Bus 24-1 (not Bus 23-1) thus the U2 EDG would need to be verified as auto started. To crosstie Bus 20 to Bus 27 MANUALLY would not be correct, since Bus 20 would have already been de-energized when Bus 24 experienced the overcurrent.

QUESTION# 045
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 2.4.15
QUESTION
A transient occurred, which caused the Unit Supervisor to enter several DEOP procedures.

Per OP-DR-103-102-1002, STRATEGIES FOR SUCCESSFUL TRANSIENT MITIGATION, which choice below is an all inclusive list required to be aware of and reported?

When Drywell pressure approaches or reaches _____ psig, the NSO shall be aware of AND report the parameter.

a. 2.0 and 9.0 ONLY

b. 1.5 and 2.0 ONLY

c. 1.5, 2.0, and 9.0 ONLY

d. 1.5, 2.0, 9.0, and 12.0

ANSWER
c.
REFERENCE
OP-DR-103-102-1002
MEMORY
NEW
EXPLANATION
The above procedure, which replaced OPs policy 62, requires the Operators to be aware of and report Drywell pressure as it approaches or reaches 1.5, 2.0, AND 9.0 psig (not 12.0).

QUESTION# 046
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 286000K1.09
QUESTION
Fire protection for the Unit 3 Emergency Diesel Generator (EDG) room is provided by which of the following system(s)?

a. Halon ONLY.

b. Water ONLY.

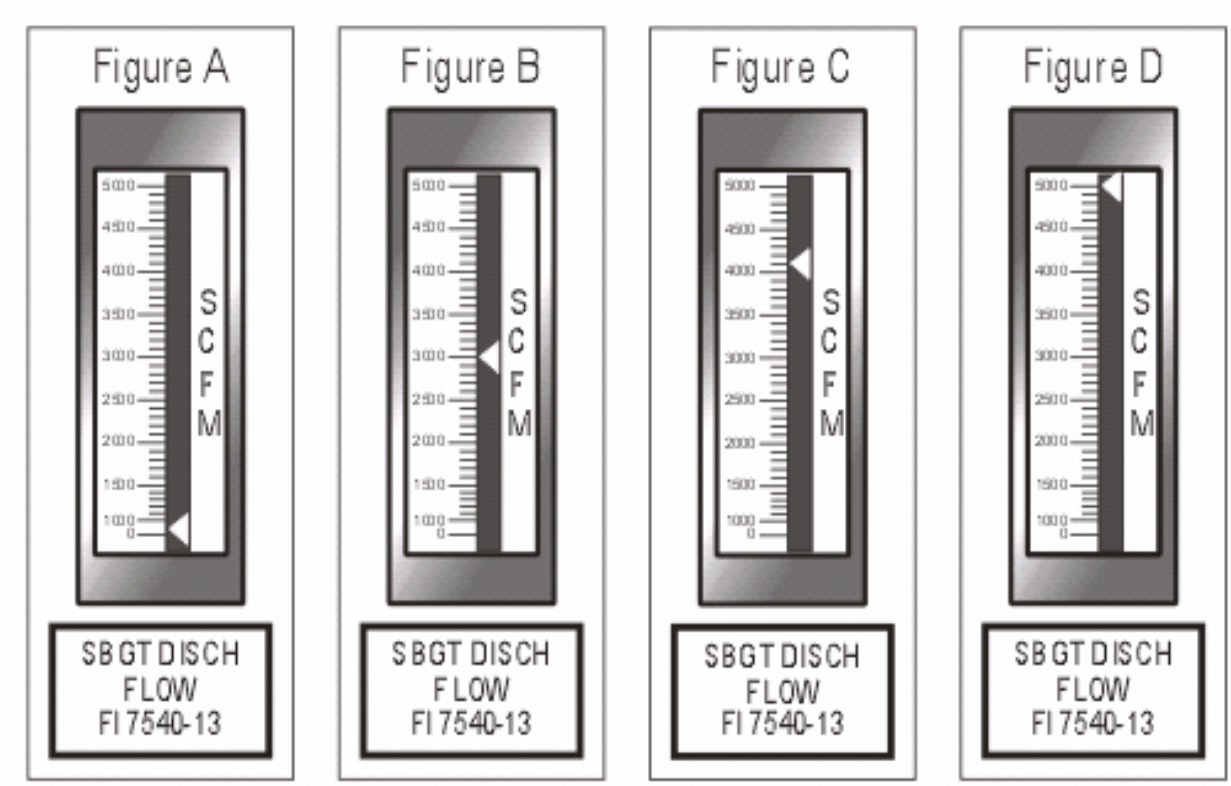
c. Cardox ONLY.

d. Cardox AND Halon.

ANSWER
c.
REFERENCE
DFPS 4183-03
MEMORY
NEW
EXPLANATION
The cardox system is a TRM (3.7.k.1) related system providing fire suppression to the U-2, U-3 & U-2/3 Diesel Generator Rooms.

QUESTION# 047
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295034A1.02
QUESTION
Secondary Containment Ventilation Radiation levels are rising as indicated by readings on the Fuel Pool Channel Radiation Monitors.

If these radiation monitors continue to rise to their MAXIMUM level, what SBGT system indication would the NSO expect to observe?



a. Figure A

b. Figure B

c. Figure C

d. Figure D

ANSWER
c.
REFERENCE
DAN 902-3 C-16
DOP 7500-01
MEMORY
BANK

EXPLANATION

Automatic action per DAN 902-3 C-16 is that SBGT will auto start. The student then needs to know that the normal flow required by Tech Specs is 4000 scfm plus or minus 10 percent. With 300 scfm ambient air passing through the standby unit, the required range is 3900 to 4700 scfm indicated on SBGT DISCH FLOW, FI 7540-13 for SBGT System to be considered operable.

QUESTION# 048
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 2.2.26
QUESTION
Per DFP 0800-01, MASTER REFUELING PROCEDURE, which of the following is required to verify the Shutdown Margin is adequate prior to start of fuel moves?

a. Shift Manager.

b. A Nuclear Station Operator (NSO).

c. A Qualified Nuclear Engineer (QNE).

d. The Control Room Nuclear Observer.

ANSWER
c.
REFERENCE
DFP 0800-01
MEMORY
NEW
EXPLANATION
The DFP requires that EITHER a Reactor Engineer OR Qualified Nuclear Engineer perform the Shutdown Margin calculation is adequate for fuel moves.

QUESTION# 049
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 206000K6.02
QUESTION
Both units were operating at near rated power, when the following occurred:

- A fire has de-energized Unit 3 DC Turbine Building MCC 3.

What is the impact (if any) on the Unit 2 HPCI system?

a. HPCI would operate upon an auto start signal, because MO 2-2301-3 TURB STM SUPPLY is unaffected.

b. HPCI would NOT operate upon an auto start signal, because the Aux Oil Pump would be de-energized.

c. HPCI would NOT operate upon an auto start signal, because the Motor Speed Changer would be de-energized.

d. HPCI would NOT operate upon an auto start signal, but could be started by depressing the HPCI AUTO INITIATE pushbutton.

ANSWER
b
REFERENCE
DOP 6900-01
DOA 6900-04
HIGHER
BANK
EXPLANATION
Unit 2 HPCI receives its 250VDC power from Unit 2 Reactor Building Bus, which is powered from Unit 3 250VDC. The Aux Oil Pump is lost upon a failure of the 250 VDC system and thus HPCI cannot start, either auto or manually. The 2301-3 valve is powered from 250VDC, would lose power and could not open.

QUESTION# 050
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295031A2.03
QUESTION
Unit 2 was operating at near rated power, when a Reactor Scram occurred. The following indications exist:

- RPV pressure is 555 psig and steady.
- RPV water level is -83 inches and steady.

What level correlates to Top of Active Fuel (TAF) on the 902-3 panel Fuel Zone indicators?

a. -143 inches

b. -170 inches

c. -187 inches

d. -191 inches

ANSWER
b.
REFERENCE
TSG, attachment L hardcard
MEMORY
BANK
EXPLANATION
-170 inches is TAF with RPV pressure > 500 psig.
-143 inches would be TAF if < 500 psig RPV pressure.
-187 psig is steam cooling w/injection with RPV pressure > 500 psig.
-191 inches is 2/3 core height with RPV pressure < 500 psig.

QUESTION# 051
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295004K2.03
QUESTION
Unit 2 was operating at near rated power, when U2 125 VDC TURB BLDG MAIN BUS 2A-1 DIST PANEL de-energized.

Which of the following load(s) will have lost Control Power indication in the Control Room?

a. U2 'B' RBCCW Pump.

b. U2 'B' Control Rod Drive Pump.

c. U2 'A' Circulating Water Pump; U2 'B' Circulating Water Pump.

d. U2 'A' Circulating Water Pump; U2 'C' Circulating Water Pump.

ANSWER
c.
REFERENCE
DAN 902-8 F-1
DOP 6900-06
DOA 6900-T1
MEMORY
NEW
EXPLANATION
With 2A-1 Dist Panel becoming de-energized, Bus 23 loses its main source of control power (control power indications). 'A' and 'B' Circ Water pumps are powered from Bus 23 and would have lost indications. 'B' RBCCW pump is powered from Bus 24-1 not Bus 23. 'B' CRD pump is powered from Bus 24. 'C' Circ Water pump is powered from Bus 24.

QUESTION# 052
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295016A1.04
QUESTION
DSSP 0100-CR "CONTROL ROOM EVACUATION" is in progress.

How is the Bus 39-38 Tie breaker closed, locally?

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

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

c. Utilize the 'Escution Tool' and place the two hooks of the operating handle in the lower portion of the cubicle and push down on the tool.

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

ANSWER
d.
REFERENCE
DSSP-0100-CR
DSSP 0100-A2B2
DOS 0010-14
DSSP 0100-F
MEMORY
BANK
EXPLANATION
AK-2A-50/75 480V Bus-Tie breakers that do NOT have local operating handles (normally electrically operated) are only capable of being closed locally by attaching a ratchet device and "ratcheting" until the breaker closes. There are no pushbuttons on the front of these breakers. A LPCS device are only used on 4KV breakers. Escution Tools are used on load breakers, NOT Bus-Tie breakers.

QUESTION# 053
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295019 2.1.2
QUESTION
Unit 3 was operating at near rated power when the following occurred:

- An Instrument Air pipe ruptured in the Unit 3 Turbine Building.
- An NSO reports that the 923-1 Panel IA HDR PRESS gauge is reading 80 psig and dropping at a rate of 5 psig/minute.

What action(s) are the Operating Team required to take next per DOA 4700-01, INSTRUMENT AIR SYSTEM FAILURE?

a. Immediately close 3-4701-501, U3 SERV AIR TO INST AIR X-TIE MANUAL ISOL VLV to prevent back flow to the Service Air system.

b. When IA HDR PRESS decrease to 65 psig, manually Scram the Unit 3 Reactor AND close the out-board (OTBD) MSIVs.

c. When IA HDR PRESS decrease to 55 psig, manually Scram the Unit 3 Reactor AND close the out-board (OTBD) MSIVs.

d. When IA HDR PRESS decrease to 55 psig, manually Scram the Unit 3 Reactor AND close the in-board (INBD) MSIVs.

ANSWER
c.
REFERENCE
DOA 4700-01
MEMORY
NEW
EXPLANATION
Per the DOA, when IA pressure reaches 55 psig (not 65), scram the reactor and close the OUTBOARD (not inboard) MSIVs. Closing the Service Air to Instrument Air cross-tie valve is ONLY performed upon a loss of Inst Air AND loss of off-site power.

QUESTION# 054
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295023K3.02
QUESTION
Per the UFSAR, during Reactor shutdown and with fuel loaded in the core all control rods are normally inserted. Interlocks are provided which prevent the inadvertent withdrawal of more than ___(1)___ control rod(s) with the mode switch in the ___(2)___ position.

a. (1) one; (2) refuel

b. (1) one; (2) startup

c. (1) two; (2) refuel

d. (1) two; (2) startup

ANSWER
a.
REFERENCE
UFSAR.4.6.3.4.1
MEMORY
NEW
EXPLANATION
Per the UFSAR, during Reactor shutdown and with fuel loaded in the core all control rods are normally inserted. Interlocks are provided which prevent the inadvertent withdrawal of more than ONE control rod with the mode switch in the REFUEL position.

QUESTION# 055
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 211000A1.04
QUESTION
Unit 2 was operating at near rated power, when a transient occurred. The Unit Supervisor directed the NSO to inject Standby Liquid Control for level control.

How can the NSO verify that the Standby Liquid Control system, 2-1101-1 SBLC DISCH HDR INBD DW SV, is open?

a. This manually operated valve has remote position indication in the control room.

b. This air operated valve fails open, with the air supply removed from the valve during normal operation.

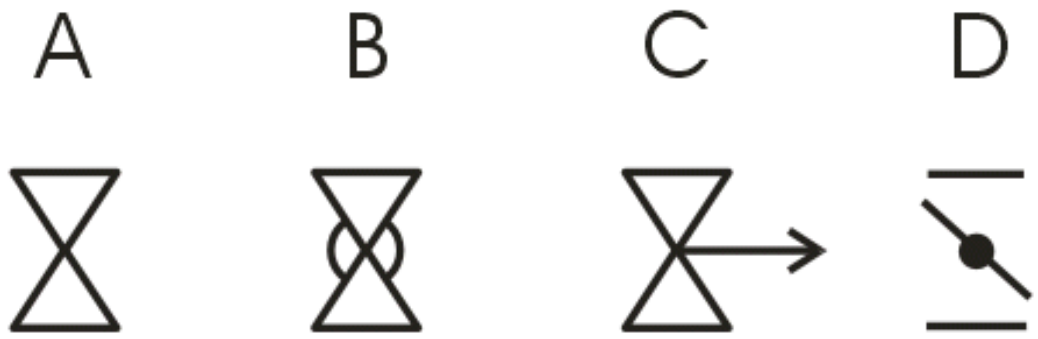
c. No Control Room indication is provided, however the valve is verified locked open during Drywell closeout.

d. This motor operated valve is verified open prior to drywell closeout and then has its power supply racked out to ensure administratively it is open.

ANSWER
a.
REFERENCE
Mechanical Print M-33
MEMORY
BANK
EXPLANATION
Because this is an important manual valve (located in the drywell), Control Room position indication is provided.

QUESTION# 056
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 2.1.24
QUESTION

Which of the following symbols is a drawing of a Globe Valve?



a. Figure A

b. Figure B

c. Figure C

d. Figure D

ANSWER
b.
REFERENCE
Mechanical Drawing M-11 sht 2
MEMORY
NEW
EXPLANATION
'B' is a Globe Valve. 'A' is a Gate Valve. 'C' is a Needle Valve. 'D' is a Butterfly Valve.

QUESTION# 057
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295010 2.4.4
QUESTION
Unit 2 was operating at near rated power, when a transient occurred. At time 05:25, the following indications are observed:

- All control rods are inserted EXCEPT rod F-7, which is at position 48.
- Drywell temperature is 150°F and trending up at a rate of 1.0°F/minute.
- Drywell pressure is 1.2 psig and trending up at a rate of 0.1 psig/minute.
- RPV water level is 20 inches and trending down at a rate of 1 inch/minute.

At time 05:34, which of the following DEOPs are required to be entered, based on which parameters?

a. DEOP 100 RPV CONTROL, on Drywell Pressure; DEOP 200-1 PRIMARY CONTAINMENT CONTROL on Drywell pressure

b. DEOP 100 RPV CONTROL, on RPV water level; DEOP 200-1 PRIMARY CONTAINMENT CONTROL on Drywell pressure

c. DEOP 100 RPV CONTROL, on Drywell Pressure; DEOP 200-1 PRIMARY CONTAINMENT CONTROL on Drywell temperature

d. DEOP 100 RPV CONTROL, on Drywell Pressure; DEOP 200-1 PRIMARY CONTAINMENT CONTROL, on Drywell pressure; DEOP 400-5 FAILURE TO SCRAM, Rod F-7 is not fully inserted.

ANSWER
a.
REFERENCE
DEOP 100
DEOP 200-1
HIGHER
NEW
EXPLANATION
At time 05:34 (9 minutes from start of event at 05:25), the following parameters will exist:
DW press: 2.1 psig.
DW Temp: 159°F.
RPV water level: 11 inches.
A Drywell pressure of 2.0 psig is an entry condition for DEOPs 100 and 200-1.
RPV water level entry condition would not be reached until 12 minutes.
Drywell Temperature entry condition would not be reached until 10 minutes.
DEOP 400-5 is not entered since the reactor can be assumed shutdown with only one rod out.

QUESTION# 058
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295015A1.05
QUESTION
Unit 2 was operating at near rated power when a scram signal was received. An ATWS occurred, with half the rods NOT fully inserting.

For the Control Rods at position 00, what color will they be displayed in on the Rod Worth Minimizer?

a. Cyan

b. Green

c. Yellow

d. Magenta

ANSWER
b.
REFERENCE
DOP 0400-02
MEMORY
MODIFIED
EXPLANATION
Control Rods at position 00 will be displayed in GREEN. Rods that are OOS are displayed in cyan. Any rod in an unknown position will be displayed in yellow (question marks). Any rod that deviates from the loaded sequence and has caused a rod block, will displayed in magenta.

QUESTION# 059
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295033A2.02
QUESTION
The Max Safe values for radiation, temperature, and water level in the Reactor Building per DEOP 300-1, SECONDARY CONTAINMENT CONTROL, are based on the maximum value(s) . . . . .

a. at which no equipment will fail.

b. expected to be seen during an accident.

c. expected to be seen during normal operations.

d. at which equipment needed for safe shutdown of the plant will not fail.

ANSWER
d.
REFERENCE
EPG B-8
MEMORY
BANK
EXPLANATION
Per the Bases, when the radiation, temperature, or water levels reach max safe levels: adequate core cooling, containment integrity, safety of personnel or continued operability of equipment needed to perform EPG actions can no longer be assured.

QUESTION# 060
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 203000K1.08
QUESTION
Which one of the following choices completes the statement below regarding the conditions required to generate annunciator 902-3 F-8, LPCI SYS B TIMERS NOT HOME?

A LPCI initiation signal is present and . . . . .

a. 125 VDC power available to Div 2 initiation logic ONLY.

b. Loop select logic complete AND 4KV power available to Bus 23-1.

c. 125 VDC power available to Div 1 initiation logic AND 4KV power available to Bus 23-1.

d. 125 VDC power available to Div 2 initiation logic AND 4KV power available to Bus 24-1.

ANSWER
d.
REFERENCE
DAN 903-3 E-8
DAN 903-3 H-15
MEMORY
NEW
EXPLANATION
As described in the DAN, the expected alarm for ECCS initiation; Monitors the sequence timer. Also need 125 VDC for sensing relay in logic circuit.

QUESTION# 061
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 209001K5.01
QUESTION
Unit 2 was operating at near rated power, when a LOCA occurred. The following conditions exist:

- Torus temperature is 109°F and steady.
- DW pressure is 10 psig and lowering slowly.
- Off site power is available and grid voltage is stable.
- Core Spray flow is fluctuating between 2000 gpm to 4000 gpm.
- Core Spray discharge pressure is fluctuating between 150 psig and 325 psig.

What is the cause of the Core Spray indications?

a. ECCS suction strainers are plugging.

b. A loss of NPSH caused by Torus temperature.

c. Voltage fluctuations from the Emergency Diesel Generators.

d. Leak in the piping downstream of the PP DISCH VLV MO 2-1402-25A.

ANSWER
a.
REFERENCE
NRC Bulletin 93-02
HIGHER
BANK
EXPLANATION
With the fluctuations in pump flow and discharge pressure, it is an indication that the suction strainers are the failure mode.
Distractor 'B' - Torus temperature is well within the band of ECCS operating curves at this Drywell pressure.
Distractor 'C' - without a LOOP, the EDGs would be running, but NOT powering the ECCS buses, and the stem states the grid is stable.
Distractor 'D' - a leak downstream of the disch valve would cause an increase in flow and amps without fluctuations.

QUESTION# 062
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 212000K4.01
QUESTION
Unit 2 was operating at near rated power when the following occurred:

- A fire at Bus 29 causes it to trip on overcurrent.

The ___(1)___ will become de-energized and may manually be re-energized from ___(2)___ .

a. (1) ESS Bus; (2) MCC 28-2

b. (1) 'A' RPS Bus; (2) MCC 25-2

c. (1) 'B' RPS Bus; (2) MCC 25-2

d. (1) Instrument Bus (2) MCC 25-2

ANSWER
b.
REFERENCE
DOP 0500-03
HIGHER
NEW
EXPLANATION
RPS Bus 'A' is powered from the 'B' RPS MG set, which is powered from MCC 29-2 via Bus 29. With a loss of Bus 29, The 'B' RPS MG set coasts down, de-energizing the 'A' RPS Bus. A mechanical interlock exists allowing either (not both) RPS Bus 'A' or 'B' to be re-energized manually.
Distractor A - Bus 29 is a power source for the ESS Bus, but the ESS Bus does not lose power, because of the associated UPS.
Distractor C - 'B' RPS Bus is powered from Bus 28 via MCC 28-2, not MCC 29 via MCC 28-2 (common misconception).
Distractor D - Can be re-energized from MCC 25-2, but is powered from Bus 28 via MCC 28-2, NOT Bus 29 via MCC 29-2.

QUESTION# 063
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 218000 2.1.23
QUESTION
Unit 3 was operating at near rated power when the following occurred:

- Annunciator 903-4 H-17, VALVE LEAK DET SYS TEMP HI is received.
- Annunciator 903-4 H-19, ACOUSTIC MONITOR ACTUATED is received.
- Drywell pressure is 1.20 psig and steady.

What is/are the FIRST action(s) the NSO is/are required to take?

a. Initiate Torus cooling.

b. Scram the reactor per DGP 2-3.

c. Place the appropriate relief valve control switch to the OFF position.

d. Cycle the appropriate relief valve control switch between OFF then back to AUTO.

ANSWER
c.
REFERENCE
DOA 0250-01
DAN 902-4 H-19
DAN 902-4 H-19
HIGHER
BANK
EXPLANATION
With these annunciators alarming, the Operator must diagnose a stuck open relief valve. The immediate operator action, of the above DOA, is to take the switch to OFF. If it does not close, then scram the reactor.

QUESTION# 064
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 300000K4.02
QUESTION
Unit 2 was operating at near rated power when a transient occurred. At time 04:44 an NSO reports that Instrument Air Header pressure is 91 psig and dropping at a rate of 1 psig/minute.

At time 04:59, what automatic action(s) will have occurred?

a. IA dryers 2A, and 2B bypasses opened.

b. IA dryers 2A, and 2B bypasses opened then AUTOMATICALLY re-closed when header pressure was restored.

c. AO 2-4701-500, U2 SERV AIR TO INST AIR AUTO X-TIE VLV, opened.

d. AO 2-4701-500, U2 SERV AIR TO INST AIR AUTO X-TIE VLV, opened then AUTOMATICALLY re-closed when header pressure was restored.

ANSWER
c.
REFERENCE
DOA 4700-01
HIGHER
NEW
EXPLANATION
At 04:59 (15 minutes from transient) the header pressure will be 76 psig. The AO backup from the Unit 2 Service Air System opens at 85 psig and dropping and will remain open until MANUALLY (not automatic) reset. The dryer bypasses will not open until header pressure reaches 60 psig.

QUESTION# 065
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 202002K5.01
QUESTION
Regarding the Recirc MG Sets, with the Scoop Tube fully ___(1)___ , ___(2)___ oil is present in the fluid coupler, resulting in ___(3)___ Recirc pump speed.

a. (1) in; (2) less; (3) increasing

b. (1) in; (2) more; (3) increasing

c. (1) out; (2) less; (3) decreasing

d. (1) out; (2) more; (3) increasing

ANSWER
d.
REFERENCE
LP DRE 202LN001
HIGHER
NEW
EXPLANATION
The farther OUT (opposite of the acronym "in for min") the scoop tube is will increase the amount of oil in the fluid coupler. With more oil in the coupler, there is maximum oil coupling. With max oil coupling, more energy is transferred to the Generator side of the MG, which increases Recirc pump speed.

QUESTION# 066
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 268000 2.1.28
QUESTION
The Maximum Recycle Concentrator Vaporheads purify water by ___(1)___ and send that PURIFIED effluent to the ___(2)___ .

a. (1) distillation and/or an evaporation process; (2) Waste Transfer Tanks

b. (1) distillation and/or an evaporation process; (2) Concentrator Condensers

c. (1) filtration and/or a reverse osmosis process; (2) Waste Transfer Tanks

d. (1) filtration and/or a reverse osmosis process; (2) Concentrator Condensers

ANSWER
b.
REFERENCE
LP DRE269LN001
MEMORY
NEW
EXPLANATION
The Concentrator Boils water to remove impurities through evaporation.

QUESTION# 067
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295025 2.1.33
QUESTION
With the unit operating at near rated power, which of the following is a Technical Specification ENTRY CONDITION?

a. Torus water level of 14 ft 8.5 inches.

b. Drywell average air temperature of 145°F.

c. Reactor Steam Dome pressure of 1010 psig.

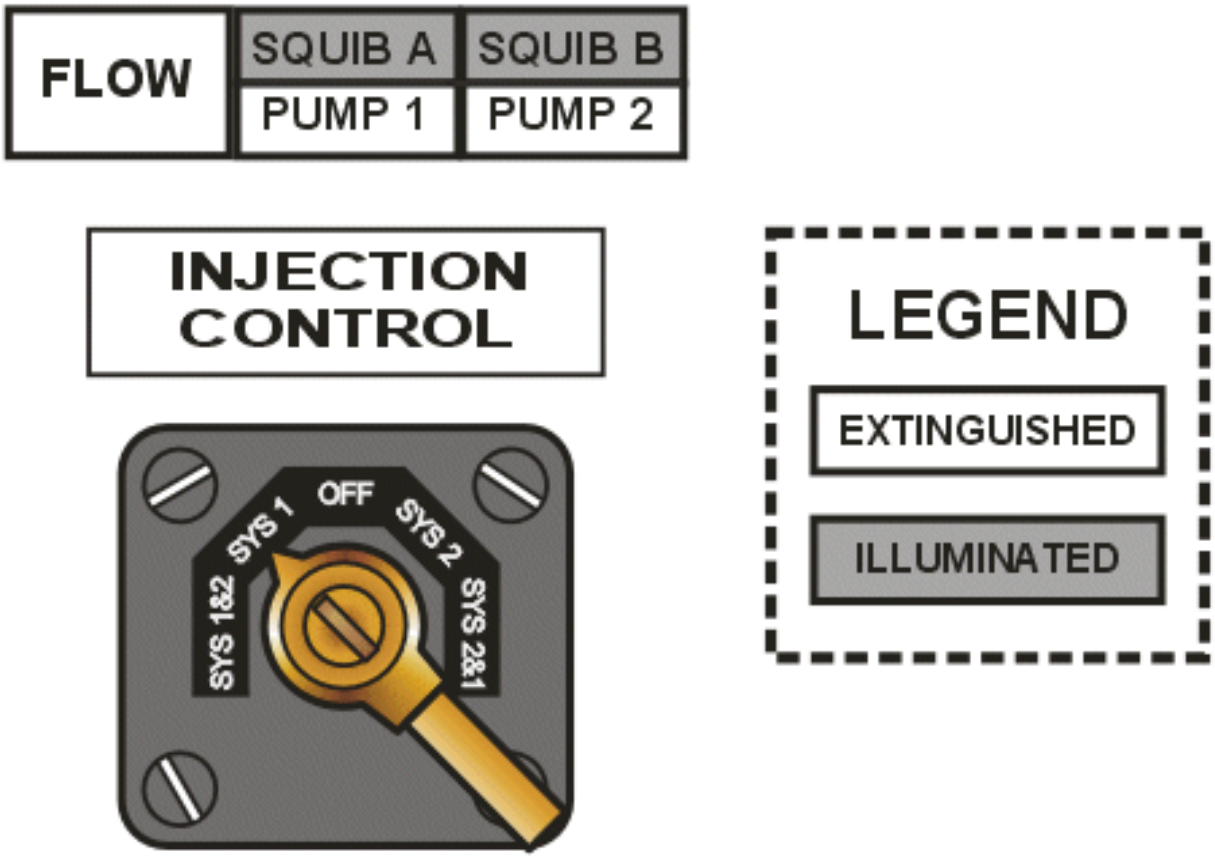
d. Reactor Coolant System unidentified leakage of 4 gpm.

ANSWER
c.
REFERENCE
Tech Spec 3.4.10
MEMORY
NEW
EXPLANATION
A Reactor Steam Dome pressure of > 1005 psig is an entry condition for T.S. 3.4.10. Torus water level must be between 14 ft 6.5 inches and 14 ft 10.5 inches. Drywell average air temp must be $\leq$150°F. RCS leakage must be $\leq$ 5gpm.

QUESTION# 068
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295037A1.04
QUESTION
Unit 2 was operating at near rated power when the following occurred:

- An unsuccessful Reactor scram was initiated.
- While executing the DEOPs, the Unit Supervisor directs injection of SBLC for an ATWS condition.

Given the drawing below, what action (if any) is the NSO required to take, to ensure injection of SBLC with an ATWS condition present?



a. None, the SBLC system is injecting.

b. Reposition the SBLC INJECTION CONTROL keyswitch to the SYS 2 position.

c. Reposition the SBLC INJECTION CONTROL keyswitch to the SYS 1 & 2 position.

d. Reposition the SBLC INJECTION CONTROL keyswitch to the SYS 2 & 1

position.

ANSWER
b.
REFERENCE
DOP 1100-02
HIGHER
NEW
EXPLANATION
With an ATWS condition present the c/s may be placed in either SYS 1 or SYS 2. With the indications provided (pump 1 light extinguished and Squib 1 light illuminated), the SYS 1 is not operating, thus the Operator would be required to place the c/s in the SYS 2 position. Using the c/s positions either SYS 1 & 2 or SYS 2 & 1 are only utilized for level control.

QUESTION# 069
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 295017K1.02
QUESTION
What is the bases for operating Turbine Building Ventilation when an Off-Site release rate is above the ALERT level of GSEP?

a. To maintain building temperature less than 95°F.

b. To discharge radioactivity through an elevated, release point.

c. To maintain building pressure greater than environmental pressure.

d. To prevent a Reactor scram due to high temperatures in the X-area.

ANSWER
b.
REFERENCE
DEOP bases section 9-4
MEMORY
BANK
EXPLANATION
Per the bases, Turb Bldg ventilation is operated when off-site release rate are above an alert level to discharge radioactivity through an elevated, release point.

QUESTION# 070
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 215005K2.02
QUESTION
Unit 2 was operating at near rated power when Bus 28 experienced an overcurrent condition.

Which of the following will be de-energized?

a. APRM channels 1, 2, and 3

b. APRM channels 4, 5, and 6

c. IRM channels 11, 12, 13, 14

d. IRM channels 15, 16, 17, 18

ANSWER
b.
REFERENCE
DOP 0500-03
HIGH
NEW
EXPLANATION
An overcurrent on Bus 28 causes MCC 28-2 to de-energize, which is the power supply to RPS Bus 'B', which is the power supply to APRM channels 4, 5, and 6. APRM channels 1, 2, and 3 are powered from RPS Bus 'A' (powered from MCC 29-2, by Bus 29). The 24/48 volt battery chargers are powered by the Instrument bus, which would lose its primary power, from Bus 28 (via MCC 28-2) but it remains energized from MCC 25-2 via its own ABT device. The IRMs are powered from the 24/48 Vdc batteries, not the RPS bus (common misconception).

QUESTION# 071
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 2.3.10
QUESTION
A Unit 2 Drywell entry is required to be made.

Which of the following statements are correct, with regards to dose concerns, for the personnel making the Drywell entry?

a. Ensure Reactor power is 34% OR lower.

b. Reactor MODE switch MUST be in MODE 2.

c. If in operation, the HPCI system MUST be secured.

d. If in operation, the RWCU system MUST be secured.

ANSWER
a.
REFERENCE
DOP 1600-22
MEMORY
NEW
EXPLANATION
Reactor power must be 34.2% or less for entry (not MODE 2). The RWCU and HPCI systems should NOT be secured if running, since this would change conditions.

QUESTION# 072
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 262001K5.02
QUESTION
Unit 2 was operating at near rated power, with the 2B CRD pump is O.O.S., when the following occurred:

- The 2A CRD pump tripped.
- A transient occurred, which caused the ANNUN DC PWR FAILURE alarm windows to be the only annunciators illuminated on the 902-3 through 902-8 panels.

To restore remote starting capability of the 2A CRD Pump, an NLO should be directed to transfer ___(1)___ control power from ___(2)___ to ___(3)___ .

a. (1) Bus 23; (2) 2A-1 Dist Panel; (3) 2B-1 Dist Panel

b. (1) Bus 23; (2) 2B-1 Dist Panel; (3) 2A-1 Dist Panel

c. (1) Bus 23-1; (2) 2A-1 Dist Panel; (3) U2 Rx Bldg Dist Panel

d. (1) Bus 23-1; (2) U2 Rx Bldg Dist Panel; (3) 2A-1 Dist Panel

ANSWER
a.
REFERENCE
DOA 6900-02
DOP 0300-E1
DOP 6900-06
DOP 6900-07
HIGHER
BANK
EXPLANATION
The 2A CRD pump is powered from Bus 23. Bus 23 control power is normal: 2A-1 & reserve: 2B-1.

QUESTION# 073
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 259002A2.01
QUESTION
With Unit 3 operating at rated conditions, which of the following signals will cause the Unit 3 FWLC system to transfer from 3-Element to 1-Element control, AND what action should the operator take?

a. 3A Feed Flow instrument fails “Bad Quality”; manually control the FRVs.

b. 3A Steam Flow instrument fails “Bad Quality”; depress the “1-ELEM” pushbutton.

c. "A" NR level instrument fails to “Bad Quality”; depress the “1-ELEM” pushbutton.

d. "A" NR level instrument fails to “Bad Quality”; manually control the FRVs.

ANSWER
b.
REFERENCE
DOP 0600-06
DAN 902-5 G-8
HIGHER
BANK
EXPLANATION
The loss of the 3A Steam flow instrument will cause the system to switch to "1-ELEM". The operator needs to depress the “1-ELEM” push button to have indication match actual conditions. A loss of the " A" NR instrument will cause the system to switch to another level input device. Taking manual control of the FRV actually would complicate the situation.

QUESTION# 074
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 223002K1.20
QUESTION
Unit 2 was operating at near rated power, when the feed breaker to Bus 29 de-energized on overcurrent.

Which PCIS alarm(s) would occur due to this condition?

a. GROUP 3 ONLY

b. GROUP 1 AND GROUP 2 ONLY

c. GROUP 2 AND GROUP 3 ONLY

d. GROUP 1, GROUP 2 AND GROUP 3

ANSWER
d.
REFERENCE
DAN 902-4 H-20
DAN 902-5 B-13
DAN 902-5 B-15
DRE223LN005
HIGHER
NEW
EXPLANATION
A loss of Bus 29 will cause MCC 29-1 to de-energize. When MCC 29-1 de-energizes, this will cause a loss of power to ATS panel 2202-73B. A loss of power to the ATS panel will cause a loss of RPV water level instruments, which will cause a half isolation and drive up annunciators for the Group 1, 2, and 3 PCIS isolations.

QUESTION# 075
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL RO
K/A 202001K2.02
QUESTION
Unit 2 was operating at near rated power when the following occurred:

- TR-86 Sudden Pressure Relay activated.
- A reactor Scram occurred.

Which statement below is a consequence, 30 seconds after the above transients occurred?

a. 2A Recirc MG Set will be de-energized.

b. 2A RBCCW pump will be de-energized.

c. 2B RBCCW pump will be de-energized.

d. The ESS Bus ABT will transfer to MCC 28-2.

ANSWER
a.
REFERENCE
DOP 0201-E1, AC Dist Drawing
HIGHER
NEW
EXPLANATION
With a loss of TR-86 and scram, Bus 21 will become de-energized, which is the power supply to the 2A Recirc MG Set. 2A RBCCW Pump is powered from Bus 23-1, which will have been re-energized 13 seconds after the transient by the 2/3 EDG. The 2B RBCCW Pump is powered from Bus 24-1 which is will have been re-energized 13 seconds after the transient by the U2 EDG. The ESS Bus ABT will not have transferred, since the 250 VDC batteries will take over once Bus 29 became de-energized (in the first 13 seconds before the EDG re-energized Bus 29 via Bus 24-1).

QUESTION# 076
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 206000A2.15
QUESTION
Unit 2 was operating at near rated power when the following occurred:

- Feedwater was isolated due to a leak.
- RPV water level is -40 inches and dropping at a rate of 1 inch/minute.
- RPV pressure is 880 psig and steady.
- HPCI injection is ordered for RPV water level control.
- An NSO reported that the HPCI Auxiliary Oil pump will NOT start.

As the Unit Supervisor, which one of the following describes the NEXT appropriate action(s) to mitigate the RPV water level condition?

a. Direct initiation of the SBLC system.

b. Anticipate RPV blowdown and direct opening ALL bypass valves.

c. Wait until level reaches -164 inches and then blowdown the RPV.

d. Immediately direct manual startup of the HPCI emergency oil pump (EOP).

ANSWER
a.
REFERENCE
DEOP 100
HIGH
BANK
REQUIRED REFERENCES
DEOP charts, with the entry conditions blanked out.
EXPLANATION
The AOP must be running before HPCI will start. Without this component, there will NOT be any control oil pressure to open HPCI turbine stop valve. The EOP supplies the lube oil header only and thus would be no help in order to get HPCI started. DEOP 100 directs the use of alternate injection systems when you cannot restore level above 8 inches and hold it there (level control override). So this action is appropriate. Waiting until -164 inches is NOT correct. DEOP 100 actually requires blowdown BEFORE -164 inches. The wait step is at TAF (-143 inches). Anticipate RPV blowdown is not the next required direction.

QUESTION# 077
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 209001A2.06
QUESTION
Unit 2 is operating at near rated power, with 'A' LPCI pump O.O.S., with the following conditions:

- 'A' Core Spray pump is running per DOS 1400-05, CORE SPRAY SYSTEM PUMP OPERABILITY AND QUARTERLY IST TEST WITH TORUS AVAILABLE.
- System Discharge pressure is 235 psig.
- System flow is 4400 gpm with MO 2-1402-4A, FLOW TEST VLV full open.

What is the impact to the Core Spray system and what actions are required?

a. 'A' Core Spray subsystem is INOP; 7 day LCO to restore Core Spray subsystem to operability.

b. 'A' Core Spray subsystem is INOP; immediately enter LCO 3.0.3 for shutdown.

c. 'A' Core Spray subsystem is OPERABLE; 7 day LCO to restore LPCI subsystem to operability.

d. 'A' Core Spray subsystem is OPERABLE; 30 day LCO to restore 'A' LPCI pump to operability.

ANSWER
b.
REFERENCE
T.S. 3.5.1
DOS 1400-05
HIGHER
BANK
REQUIRED REFERENCES
Tech Spec 3.5.1 pages 1 thru 3 with less than one hour times blanked out.
EXPLANATION
Per DOS 1400-5 the Core Spray pump must achieve a flowrate of 4600 gpm at greater than 235 psig. Since the flowrate is not sufficient the A Core Spray pump is INOP and puts you in a 7 day clock. The 'A' LPCI pump INOP means that you have 2 low pressure subsystem INOP driving to an immediate shutdown per T.S. 3.0.3.

QUESTION# 078
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 2.1.33
QUESTION
Unit 2 is in Refuel and spent fuel movements within the Reactor Pressure Vessel are in progress.

Which of the following describes the MINIMUM RPV water level that would meet the requirements to perform this evolution, per Tech Specs, AND the bases for this?

a. 19 feet above top of irradiated fuel assemblies; to limit iodine release during a fuel handling accident.

b. 19 feet above top of irradiated fuel assemblies; to limit iodine release during a loss of fuel pool cooling accident.

c. 23 feet above top of RPV flange; to limit iodine release during a fuel handling accident.

d. 23 feet above top of RPV flange; to limit iodine release during a loss of fuel pool cooling accident.

ANSWER
c.
REFERENCE
T.S. and Bases 3.9.6
MEMORY
BANK
EXPLANATION
Per the ITS and Bases

QUESTION# 079
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 223001A2.07
QUESTION
Unit 2 was in startup at ~10% power, when the following occurred:

- A transient has occurred inside the Drywell.
- Drywell pressure is 2.5 psig and rising at rate of 1 psig/minute.
- Due to a transient, ALL LPCI pumps are unavailable for seven (7) minutes.

After the seven (7) minute period, the Unit 2 Drywell Coolers are ___(1)___ AND the SRO will be procedurally required to direct the crew to initiate ___(2)___ sprays FIRST.

a. (1) tripped (2) Torus

b. (1) tripped (2) Drywell

c. (1) NOT tripped (2) Torus

d. (1) NOT tripped (2) Drywell

ANSWER
a.
REFERENCE
DAN 923-5 E-1
DEOP 200-01
HIGH
BANK
EXPLANATION
When Drywell pressure reaches >2 psig, per the DAN, the Unit 2 Drywell Coolers will trip. DEOP 200-1 will be entered based on Drywell pressure. The Drywell pressure will hit 9.5 psig after the 7 minute period. Even with the 9 psig limit exceeded, the strategy is still to initiate Torus sprays FIRST before Drywell sprays.

QUESTION# 080
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 2.4.6
QUESTION
Unit 3 was operating at near rated power when a scram occurred. The following conditions exist:

- Drywell pressure is 2.3 psig.
- RPV pressure is 500 psig.
- RPV water level is -173 inches.
- ALL injection source become unavailable and are not expected to be restored for 15 minutes.

What action(s) is/are the SRO required to take?

- DEOP 100, RPV CONTROL
- DEOP 400-2, EMERGENCY DEPRESSURIZATION
- DEOP 400-3, STEAM COOLING
- DEOP 500-3, ALTERNATE WATER INJECTION SYSTEMS

a. Enter DEOP 400-2.

b. Exit ALL DEOPs and enter the SAMGs.

c. Exit DEOP 100 AND enter DEOP 400-3.

d. Exit DEOP 100 AND DEOP 500-3 then enter DEOP 400-3

ANSWER
c.
REFERENCE
DEOP 100
HIGHER
BANK
REQUIRED REFERENCES
DEOP Charts, with the entry conditions blanked out.
EXPLANATION
Given the set of conditions, without any injection source, the DEOPs direct the SRO to exit DEOP 100 and enter DEOP 400-3, steam cooling. Emergency Depressurization is not performed unless there is an injection source, SAMGs are not entered unless there is an injection source and a blowdown has been performed AND level cannot still be restored.

QUESTION# 081
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 295001 2.4.49
QUESTION
Unit 3 was operating at near rated power when the following indications are observed:

- Indicated core flow increased.
- Core thermal power decreased.
- Main Generator power decreased.
- Core plate differential pressure decreased.

What has occurred and what action is the Unit Supervisor required to direct?

a. jet pump failure; lockup scoop tube.

b. jet pump failure; secure affected recirc pump.

c. recirc pump trip; lockup scoop tube.

d. recirc pump trip; secure affected recirc pump.

ANSWER
b.
REFERENCE
DOA 0201-01
HIGHER
BANK
EXPLANATION
The indications indicate a failed jet pump. If a recirc pump tripped the core flow would go down. The immediate action for a sudden failure of a jet pump is to secure the affected recirc pump per DOA 021-01.

QUESTION# 082
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 2.2.11
QUESTION
Which one of the following would qualify as a "Temporary Configuration Change" to be controlled by CC-AA-112, "Temporary Configuration Changes?"

a. A plug installed in a floor drain.

b. A portable air monitor permanently installed in the RWCU Demin room.

c. An electrical lead is lifted in accordance with a surveillance procedure.

d. A Service Air hose is being used for maintenance on a Condensate pump.

ANSWER
a.
REFERENCE
CC-AA-112
MEMORY
NEW
EXPLANATION
Floor drains installed with a plug are not excluded from the above procedure and are required to be controlled as a temp change.

QUESTION# 083
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 295002A2.04
QUESTION
Unit 2 was operating at near rated power, when the NSO reported the following:

- 2A off gas system flow on the 902-7 panel has risen from 135 to 170 cfm and remains steady.

A short time later the following alarms were received:

- 902-54 C-7, OFF GAS FLOW HI/LO.
- 902-7 D-13, OFF GAS FILTER DP HI.

Then the Aux NSO reported the following:

- Offgas system flow on the 902-54 panel has risen from 20 to 55 cfm and is now steady.
- Recombiner temperature remains relatively unchanged.

There has been an ___(1)___ AND the Unit Supervisor is required to direct entering ___(2)___.

a. (1) Off Gas explosion in the holdup volume
(2) DOA 0010-10 FIRE/EXPLOSION

b. (1) increase in condenser air in-leakage
(2) DOA 3300-02 LOSS OF CONDENSER VACUUM

c. (1) Off Gas system fire in the 2A air ejector after condenser
(2) DOP 5400-14 EXTINGUISHING AN OFF GAS FIRE

d. (1) increase in Hydrogen Addition system oxygen injection flow
(2) DOP 3390-01 HYDROGEN ADDITION SYSTEM OPERATION

ANSWER
b.
REFERENCE
DOA 3300-02
DAN 902-7 D-13
DAN 902-54 C-7
HIGHER
BANK
EXPLANATION
Condenser in-leakage would be sensed by both the 902-7 and 902-54 off-gas flow indications and would have little affect on recombiner temperature. An off-gas explosion in the holdup volume would have generated noticeable spikes in other off-gas indications and additional annunciators. An off-gas fire in the after condenser would have caused 902-7 flow to decrease and recombiner temperature to decrease. 902-54 flow would have remained unchanged.

Hydrogen addition system oxygen is injected downstream of the 902-7 flow element and would not have caused the observed indication change.

QUESTION# 084
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 215004 2.1.12
QUESTION
Unit 2 is in STARTUP, with IRMs on range 1, with control rods being withdrawn. SRM 22 failed upscale and SRM 24 failed downscale.

Which of the following describes the required action?

a. Restore SRM Channel 22 OR 24 to operable status within 4 hrs.

b. Restore inoperable channel(s) to OPERABLE status within 7 days.

c. Suspend control rod withdrawals until SRM 22 OR 24 has been restored to operable status.

d. Restore the Upscale Rod Block function of SRM Channel 22 OR 24 to operable status within 12 hours.

ANSWER
a.
REFERENCE
ITS 3.3.1.2
HIGHER
BANK
REQUIRED REFERENCES
I.T.S. 3.3.1.2 with less than one hour times blanked out.
EXPLANATION
With two of the SRMs inoperable, the minimum of 3 required by the Tech Spec is not met for MODE 2. The applicable action is 3.3.1.2 A, since there is one less operable channel than required. The rod block setpoints for SRMs 22 and 24 are incorrectly set non-conservative. The SCRAM setpoints on SRM 22 and 24 are set conservative and non-consequential per Tech Specs and TRM 3.3.a.

QUESTION# 085
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 295013A2.01
QUESTION
Unit 2 was operating at near rated conditions with the 902-36 back-panel recorder TIRS 2-1640-200A, TORUS TEMP MON DIV I Out Of Service (O.O.S.) due to a failed power supply. The following conditions exist:

- RPV pressure is 1000 psig.
- HPCI testing per DOS 2300-03 "HIGH PRESSURE COOLANT INJECTION SYSTEM OPERABILITY AND QUARTERLY IST VERIFICATION TEST" is in progress.

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

- Point 1 165°F
- Point 2 90°F
- Point 3 110°F
- Point 4 150°F
- Point 5 140°F
- Point 6 160°F
- Point 7 125°F
- Point 8 130°F

What action(s) is/are required based on the current readings?

a. Secure HPCI testing ONLY.

b. Secure HPCI testing and start all available Torus cooling ONLY.

c. Secure HPCI testing, start all available Torus cooling, and scram ONLY.

d. Secure HPCI testing, start all available Torus cooling, scram, and lower RPV pressure to stay below the Heat Capacity Limit.

ANSWER
c.
REFERENCE
DEOP 200-1
HIGHER
BANK
REQUIRED REFERENCES
DEOP charts, with the entry conditions blanked out.
EXPLANATION
The <u>average</u> torus temperature is 133.5°F. Per DEOP 200-1 the actions that need to be taken are all up to lowering pressure, since Fig M is not being violated.

QUESTION# 086
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 2.1.22
QUESTION
Given the following set of conditions on Unit 2:

- Primary containment is open.
- RPV Water level is 90 inches.
- RPV Water temperature is 190°F.
- The MODE switch is in SHUTDOWN.
- Reactor Vessel head bolts are tensioned.

An event occurred that caused RPV Water temperature to rise to and stabilize at 220°F.

Which of the following describes the current plant MODE and which procedure is required to be entered?

a. Mode 3, enter DEOP 300-1, Secondary Containment Control

b. Mode 4, enter DEOP 300-1, Secondary Containment Control

c. Mode 3, enter DOA 1000-01, Residual Heat Removal Alternatives

d. Mode 4, enter DOA 1000-01, Residual Heat Removal Alternatives

ANSWER
c.
REFERENCE
DOA 1000-01
Tech Spec Bases 1.1
HIGHER
BANK
EXPLANATION
When temp exceeds 212°F, the Rx will go from Mode 4 to Mode 3. Due to the Group 2 and temperature rise, DOA 1000-01, Residual Heat Removal Alternatives must be entered. There was not a Loss of Containment.

QUESTION# 087
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 295021A2.02
QUESTION
Unit 2 is in SHUTDOWN with the following conditions:

- 2A and 2B Recirc Pumps are in operation at minimum speed.
- 2A and 2B Shutdown Cooling (SDC) loops are controlling cool down rate.
- RPV water temperature is currently 305°F.

Then annunciator 902-4 H-8, 2B RECIRC LOOP WATER TEMP HI is received.

The NSO reports that the 2B Recirc Loop temperature indicates full upscale on the Recirc Loop Temperature recorder.

SDC flow will ___(1)___ and the Unit Supervisor is required to direct ___(2)___ .

a. (1) be lost ; (2) securing Both recirc pumps

b. (1) be lost; (2) increasing RWCU flow to maximize heat removal rate

c. (1) still be established; (2) securing Both recirc pumps

d. (1) still be established; (2) increasing RWCU flow to maximize heat removal rate

ANSWER
b.
REFERENCE
DAN 902-4 H-8
DOA 1000-01
HIGHER
NEW
EXPLANATION
When any ONE of the 4 Recirc loop temperature elements reach the high temperature setpoint of 345°F, THEN the ALL SDC System MO valves are interlocked closed and the SDC System Isolates (all flow lost). With the loss of SDC, to continue cooldown (per the DOA), RWCU flow is required to be maximized. The Recirc pumps are required to continue running to ensure proper core flow, so as to prevent thermal stratification.

QUESTION# 088
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 295026A2.03
QUESTION
Given the following set of conditions:

- Torus water level is 16.5 feet and steady.
- Torus water temperature is 180°F and steady.

What is the MAXIMUM allowable RPV pressure?

a. 225 psig

b. 325 psig

c. 425 psig

d. 525 psig

ANSWER
b.
REFERENCE
DEOP 200-1 curve M
HIGHER
NEW
REQUIRED REFERENCES
DEOP charts, with the entry conditions blanked out.
EXPLANATION
Per DEOP 200-1 curve M (heat capacity), with a Torus temperature of 180°F, the MAXIMUM allowable RPV pressure is 325 psig.

QUESTION# 089
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 295030 2.2.25
QUESTION
Which of the following is the bases for the Technical Specifications, Minimum Suppression Pool Water Level in Modes 1, 2, and 3?

Ensures a sufficient amount of water . . . . .

a. with the Minimum CST Volume, Long-Term Cooling is available for the Design Basis Accident.

b. would be available to adequately condense the steam from the relief valve quenchers ONLY.

c. with the Minimum CST Volume, in the event of a LOCA to permit recirculation cooling flow to the core.

d. would be available to adequately condense the steam from the relief valve quenchers, downcomer lines, OR HPCI turbine exhaust line.

ANSWER
d.
REFERENCE
Bases 3.6.2.2
MEMORY
BANK
EXPLANATION
ANSWER is per the above bases. CST is not part of bases. HPCI and downcomer lines are included in the bases.

QUESTION# 090
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 211000 2.2.12
QUESTION
While performing DOS 1100-04 STANDBY LIQUID CONTROL SYSTEM QUARTERLY/COMPREHENSIVE PUMP TEST, the acceptance criteria (AC) is that each SBLC Pump must deliver ___(1)___ gpm to the Standby Liquid Test Tank.

This flowrate ensures the rate of negative reactivity insertion from the SBLC System will adequately compensate for the positive reactivity effects encountered during power reduction, ___(2)___ of the moderator, and xenon decay.

a. (1) 36; (2) heatup

b. (1) 36; (2) cooldown

c. (1) 40; (2) heatup

d. (1) 40; (2) cooldown

ANSWER
d.
REFERENCE
DOS 1100-04
Tech Spec Bases 3.1.7
MEMORY
NEW
EXERCISE
Per the DOS, the flowrate required is 40 gpm acceptance criteria. This flowrate ensures the rate of negative reactivity insertion from the SBLC System will adequately compensate for the positive reactivity effects encountered during power reduction, COOLDOWN of the moderator, and xenon decay. The 36 gpm distractor is a common mistaken number, which comes from reading the flowrater inaccurately (figure 2 of the DOS).

QUESTION# 091
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 295031 2.4.4
QUESTION
DEOP 100 RPV CONTROL, is entered when RPV water level decreases to ___(1)___ . Per the Tech Spec Bases, this value is selected to protect available Recirc pump NPSH from significant ___(2)___ .

a. (1) +8 inches; (2) carryover

b. (1) +8 inches; (2) carryunder

c. (1) -59 inches; (2) carryover

d. (1) -59 inches; (2) carryunder

ANSWER
b.
REFERENCE
DEOP 100 and Tech Spec Bases 3.3.1.1
MEMORY
NEW
EXPLANATION
The Tech Spec Bases states that a low RPV water level of 8 inches ensures that during normal operation the separator skirts are not uncovered (this protects available recirculation pump net positive suction head (NPSH) from significant carryunder.

QUESTION# 092
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 295004A2.04
QUESTION
Unit 2 was operating at near rated power, with the following conditions:

- The Unit 2A 125 Vdc Battery Charger is supplying the Unit 2 125 Vdc system.
- The Unit 2/3 250 Vdc Battery Charger is supplying the Unit 2 250 Vdc system.

Then a fire caused Bus 28 to de-energize.

What effect will this have AND what actions can be taken to mitigate the transient?

a. The Unit 2 125 Vdc batteries ONLY will begin to discharge; place the Unit 2 125 Vdc Battery Charger in service.

b. The Unit 2 250 Vdc batteries ONLY will begin to discharge; place the Unit 2 250 Vdc Battery Charger in service.

c. The Unit 2 125 AND 250 Vdc batteries will begin to discharge; place the Unit 2 125 AND Unit 2 250 Vdc Battery Chargers in service.

d. The Unit 2 125 AND 250 Vdc batteries will begin to discharge; place the Unit 2 125 Alternate Battery AND Unit 2 250 Vdc Battery Charger in service.

ANSWER
a.
REFERENCE
DOA 6900-04
DOA 6900-T1
HIGHER
NEW
EXPLANATION
With the 2A charger (MCC 28-2) supplying the 125 Vdc system and the 2/3 charger (MCC 29-2 or 39-2) supplying the 250 Vdc system, a loss of Bus 28 will cause ONLY the 125 Vdc 2A charger to lose power, which will cause the 125 batteries to begin to discharge. Transferring the 125 Vdc system to the Unit 2 125 Vdc charger is the correct action.

QUESTION# 093
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 600000 2.4.25
QUESTION
Both units were operating at near rated power, when the following occurred:

- A fire started in the 2/3 Cribhouse.
- No Visible Damage to structures or Safety System equipment is reported.
- The Fire Brigade has been fighting the fire for 16 minutes.

Which of the following is correct with regards to the above conditions?

a. Declare an Unusual Event for a plant fire; make a fire location announcement over the plant PA system

b. Declare an Unusual Event for a plant fire; make a site assembly announcement over the site PA system

c. Declare an Site Alert for a plant fire; make a fire location announcement over the plant PA system

d. Declare an Site Alert for a plant fire; make a site assembly announcement over the site PA system

ANSWER
a.
REFERENCE
EP-AA-1004
DOA 0010-10
NEW
MEMORY
REQUIRED REFERENCES
EP charts.
EXPLANATION
With a fire in the Protected area that is not extinguished with 15 minutes an unusual event must be declared. Per the DOA, announcing the fire location is required. A site assembly is not required.

QUESTION# 094
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 2.2.23
QUESTION
Both units are operating at near rated power with the following conditions:

- Fuel handlers are inspecting new fuel on Refuel Floor.
- The 2/3A SBGT train is in day 2 of a seven day OOS for planned maintenance.
- The 2/3B SBGT train is in PRI position.

What required action is initiated IF the planned maintenance on the 2/3A SBGT train lasted past the planned 7 day duration?

a. Place the 2/3B SBGT train in operation.

b. Restore the 2/3A SBGT train to OPERABLE status.
c. Immediately suspend movement of fuel assemblies.

d. Place both units in MODE 3 within 12 hours and be in MODE 4 within 36 hours.

ANSWER
d.
REFERENCE
Tech Spec Section 3.6.4.3
HIGHER
BANK
REQUIRED REFERENCES
TS 3.6.4.3 pages 1, 2, & 3, with less than 1 hour times removed.
EXPLANATION
This knowledge can be gained from the Tech Specifications section 3.6.4.3 action B.1.
Action B.1 states be in MODE 3 in 12 hours and then be in MODE 4 in 36 hours for correct ANSWER to the question.
Fuel handlers are moving new fuel which is NOT irradiated fuel as the applicability statement states, so no need to stop fuel inspections nor place the OPERABLE SBGT subsystem in operation. Already have one OPERABLE (2/3B) SBGT subsystem so no need for restoration.

QUESTION# 095
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 264000A2.09
QUESTION
Unit 2 was operating at near rated power with DOS 6600-01, DIESEL GENERATOR SURVEILLANCE TEST in progress on the Unit 2 EDG, when MCC 29-2 experiences an overcurrent condition.

What is a consequence of the overcurrent on MCC 29-2, AND what actions are required to be directed?

a. The U2 EDG Cooling Water pump will be de-energized; reduce load on the EDG

b. The U2 EDG Cooling Water pump will be de-energized; secure the EDG

c. The EDG Air Start Compressor 'A' will be de-energized; verify pressure in Air Receiver 'A' is $\geq$ 120 psig

d. The EDG Air Start Compressor 'B' will be de-energized; verify pressure in Air Receiver 'B' is $\geq$ 120 psig

ANSWER
b.
REFERENCE
DAN 902-7 G-8
DOA 6600-01
HIGHER
NEW
EXPLANATION
With a loss of MCC 29-2, the U2 EDG cooling water pump will lose power. The correct action for this is to stop the EDG, before damage occurs. The 'B' starting air compressor also loses power, but the pressure to verify is $\geq$ 220 psig. The 'A' starting air compressor does not lose power.

QUESTION# 096
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 2.3.11
QUESTION
Unit 2 was operating at near rated power, when the Chemistry department provided the following Drywell air sample results:

- Iodine 131 is 3.0 X 10^{-8} µCI/CC.
- Current Beta/Gamma (total particulate) is 5.5 X 10^{-7} µCI/CC.

Which of the following describes the allowable vent path if the Radiation Protection department is unavailable to perform an off-site dose calculation?

a. Torus purge

b. Drywell purge

c. Standby Gas Treatment

d. Reactor Building ventilation

ANSWER
c.
REFERENCE
DOP 1600-05
HIGHER
NEW
EXPLANATION
DOP 1600-05 states that if radiation level is within the mentioned band the SBGT train will be used.

QUESTION# 097
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 2.4.49
QUESTION
Unit 2 was operating at near rated conditions when the annunciator 902-7 B-15, SCREEN WASH CONTROL PANEL TROUBLE was received. An NLO reported 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 occurred:

- An NSO reported Main Condenser vacuum trending down at a rate of 0.5 inches Hg per minute.
- An NLO reported the level difference is getting worse as more fish are accumulating on the traveling screens.

Which of the following action(s) is/are required to be performed, AND what is the bases for these action(s)?

a. Depress the manual scram pushbuttons; Maintain Condenser vacuum and maintain Service Water system available

b. Depress the manual scram pushbuttons; Protect the Condenser from over pressure and maintain heat sink available

c. Insert Cram rods, dial down the master Recirc flow controller and leave only one Circulating Water pump running; Maintain Condenser vacuum and maintain Service Water system available

d. Insert Cram rods, 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

ANSWER
b.
REFERENCE
DOA 4400-06
TS Bases 3.3.1.1
HIGHER
BANK
EXPLANATION
The DOA has under immediate actions that if a loss of condenser vacuum is IMMINENT and bar rack level difference does not improve scram the reactor. The Tech Spec Bases states that the reason for a low vacuum scram is to protect the main condenser from over pressure and maintain the heat sink available

QUESTION# 098
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 202001 2.2.22
QUESTION
Given the following Unit 2 parameters:

- Steam Dome Pressure is 750 psig.
- Core flow is 8% with only ONE Recirc pump operating.

The Reactor Core Safety Limit is ___(1)___ which ___(2)___ .

a. (1) MCPR $\geq$ 1.12; (2) ensures that fuel cladding integrity is maintained

b. (1) MCPR $\geq$ 1.12; (2) protects the Reactor Coolant System against overpressurization

c. (1) Thermal Power $\leq$ 25%; (2) ensures that fuel cladding integrity is maintained

d. (1) Thermal Power $\leq$ 25%; (2) protects the Reactor Coolant System against overpressurization

ANSWER
c.
REFERENCE
I.T.S. Safety Limits 2.0 and bases
MEMORY
NEW
EXPLANATION
With the reactor steam dome pressure $\leq$ 785 psig or core flow $\leq$ 10% rated core flow, the reactor core safety limit is < 25 RTP, based on maintaining fuel cladding integrity. The MCPR limit would only apply if reactor steam dome pressure was $\geq$ 785 psig and core flow $\geq$ 10% rated core flow. Protecting the Reactor Coolant System against overpressurization is based on the steam dome pressure Safety Limit.

QUESTION# 099
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 295033 2.3.10
QUESTION
Unit 3 was operating at near rated power, when a HPCI steam line ruptured. Attempts to isolate the leak have been unsuccessful.

The following parameters are reported:

- Clean Up Pump & Ht X Area is 175°F.
- HPCI pump room temperature is 200°F.
- Clean Up Demin Room temperature is 187°F.
- HPCI Cubicle radiation level is 2750 mr/hr.
- West LPCI Pump radiation level is 2600 mr/hr.
- West CRD module radiation level is 1750 mr/hr.

Which of the following choices lists ALL the procedures that the Unit Supervisor is currently required to enter?

- DEOP 100, RPV CONTROL
- DEOP 200-1, PRIMARY CONTAINMENT CONTROL
- DEOP 300-1, SECONDARY CONTAINMENT CONTROL
- DEOP 400-2, EMERGENCY DEPRESSURIZATION

a. DEOP 300-1 ONLY

b. DEOP 100 AND DEOP 300-1

c. DEOP 100, DEOP 300-1, AND DEOP 400-2

d. DEOP 100, DEOP 200-1, DEOP 300-1, AND DEOP 400-2

ANSWER
c.
REFERENCE
DEOP 300-1
HIGHER
NEW
EXPLANATION
The SRO is required to enter DEOP 300-1 for any temp and rad level being above max NORMAL. To reduce the radiation levels, when a primary system is discharging into the reactor building and cannot be isolated, then DEOP 100 is required to be entered before any temp or rad level is above max SAFE. DEOP 400-2 is required to be entered when any 2 temp or rad levels are above max SAFE.

QUESTION# 100
EXAM DATE 20080303
FACILITY Dresden Station
EXAM LEVEL SRO
K/A 241000 2.1.7
QUESTION
Unit 3 was operating at near rated power, with the “B” EHC pressure regulator out of service, when the “A” EHC pressure regulator setpoint failed high.

The following parameters are reported:

- IRMs are reading 50 on range 6 and decreasing.
- RPV pressure is 1065 psig and trending up at 1 psig/minute.
- RPV water level dropped to -12 inches and trending up at 1 inch/minute.

The Unit Supervisor is required to enter ___(1)___ and direct ___(2)___ .

a. (1) DEOP 100 on RPV pressure ONLY; (2) controlling RPV pressure between 800 to 1060 psig.

b. (1) DEOP 100 on RPV pressure AND water level; (2) controlling RPV pressure between 800 to 1060 psig and RPV water level between 8 and 48 inches.

c. (1) DEOP 100 on RPV pressure AND DEOP 400-5 for failure to scram; (2) controlling RPV pressure between 800 to 1060 psig and RPV water level between -164 and 48 inches.

d. (1) DEOP 400-5 for failure to scram ONLY; (2) controlling RPV pressure between 800 to 1060 psig and RPV water level between -164 and 48 inches.

ANSWER
b.
REFERENCE
DEOP 100
HIGHER
NEW
EXPLANATION
The entry conditions for DEOP 100 is RPV pressure and water level. RPV pressure and level will be required to be controlled. DEOP 400-5 does not have an entry since IRMs are below range 7.