U. S. NUCLEAR REGULATORY COMMISSION

REGION III

REPORTS NO. 50-237/OL-96-01; 50-249/OL-96-01

FACILITY
Dresden Nuclear Power Station, Units 2 and 3

License Nos. DPR-19; DPR-25

LICENSEE
Dresden Station
6500 North Dresden Road
Morris, IL 60450

DATES
Week of March 11, 1996

CHIEF EXAMINER
E. Plettner, NRC Region III

APPROVED BY

T. M. Burdick, Chief
Operator Licensing Branch

3/13/96
Date

Examination Summary

Examinations were administered during the week of March 11, 1996 (Reports No. 50-237/OL-96-01; 50-249/OL-96-01): Retake written examinations were given to two individuals. One individual was applying for a Reactor Operator (RO) license and one individual was applying for a Senior Reactor Operator (SRO) license exam.
Initial Licensed Operator Examination Results:
All individuals taking the written examination (RO and SRO) passed. The RO and the SRO were issued a license on March 12, 1996.

There were no strengths or weakness identified after the review of the written exams.

REPORT DETAILS

1. Examiners

E. Plettner, Examiner, NRC, Region III

2. Persons Contacted

Facility

D. Gronic, Operations Training Supervisor
J. Hech, Operations Training Instructor

The exit meeting was conducted on March 11, 1996.

3. Training Program Observations

The training staff appeared to be knowledgeable throughout the examination process.

The following information is provided for evaluation by the licensee via their SAT based training program. No response is required.

Written Examination

The initial RO and SRO retake license examination given was a standard 100 question examination as prescribed by NUREG 1021, Revision 7. The facility had no post examination comments on either exam. The NRC staff did not identify any strengths or weakness.

4. Exit Meeting

An exit meeting with the Dresden Nuclear Station management was conducted to discuss the results of the exam on March 11, 1996. Those attending the meetings are listed in Section 2 of this report.

Enclosure 2

FACILITY COMMENTS AND RESOLUTION OF FACILITY COMMENTS

NO comments were submitted by the facility.

U. S. NUCLEAR REGULATORY COMMISSION
SITE SPECIFIC EXAMINATION
REACTOR OPERATOR LICENSE
REGION 3

CANDIDATE'S NAME: _____

FACILITY: Dresden 2 & 3

REACTOR TYPE: BWR-GE3

DATE ADMINISTERED: 96/03/11

INSTRUCTIONS TO CANDIDATE:

Use the answer sheets provided to document your answers. Staple this cover sheet on top of the answer sheets. Points for each question are indicated in parentheses after the question. The passing grade requires a final grade of at least 80%. Examination papers will be picked up four (4) hours after the examination starts.

TEST VALUE	CANDIDATE'S SCORE	%	
100.00	_____	___ %	TOTALS
	FINAL GRADE		

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

_____
Candidate's Signature

A N S W E R S H E E T

Multiple Choice (Circle or X your choice)

If you change your answer, write your selection in the blank.

MULTIPLE CHOICE

001	a	b	c	d	___	023	a	b	c	d	___
002	a	b	c	d	___	024	a	b	c	d	___
003	a	b	c	d	___	025	a	b	c	d	___
004	a	b	c	d	___	026	a	b	c	d	___
005	a	b	c	d	___	027	a	b	c	d	___
006	a	b	c	d	___	028	a	b	c	d	___
007	a	b	c	d	___	029	a	b	c	d	___
008	a	b	c	d	___	030	a	b	c	d	___
009	a	b	c	d	___	031	a	b	c	d	___
010	a	b	c	d	___	032	a	b	c	d	___
011	a	b	c	d	___	033	a	b	c	d	___
012	a	b	c	d	___	034	a	b	c	d	___
013	a	b	c	d	___	035	a	b	c	d	___
014	a	b	c	d	___	036	a	b	c	d	___
015	a	b	c	d	___	037	a	b	c	d	___
016	a	b	c	d	___	038	a	b	c	d	___
017	a	b	c	d	___	039	a	b	c	d	___
018	a	b	c	d	___	040	a	b	c	d	___
019	a	b	c	d	___	041	a	b	c	d	___
020	a	b	c	d	___	042	a	b	c	d	___
021	a	b	c	d	___	043	a	b	c	d	___
022	a	b	c	d	___	044	a	b	c	d	___
						045	a	b	c	d	___

A N S W E R S H E E T

Multiple Choice (Circle or X your choice)

If you change your answer, write your selection in the blank.

046	a	b	c	d	___	069	a	b	c	d	___
047	a	b	c	d	___	070	a	b	c	d	___
048	a	b	c	d	___	071	a	b	c	d	___
049	a	b	c	d	___	072	a	b	c	d	___
050	a	b	c	d	___	073	a	b	c	d	___
051	a	b	c	d	___	074	a	b	c	d	___
052	a	b	c	d	___	075	a	b	c	d	___
053	a	b	c	d	___	076	a	b	c	d	___
054	a	b	c	d	___	077	a	b	c	d	___
055	a	b	c	d	___	078	a	b	c	d	___
056	a	b	c	d	___	079	a	b	c	d	___
057	a	b	c	d	___	080	a	b	c	d	___
058	a	b	c	d	___	081	a	b	c	d	___
059	a	b	c	d	___	082	a	b	c	d	___
060	a	b	c	d	___	083	a	b	c	d	___
061	a	b	c	d	___	084	a	b	c	d	___
062	a	b	c	d	___	085	a	b	c	d	___
3	a	b	c	d	___	086	a	b	c	d	___
064	a	b	c	d	___	087	a	b	c	d	___
065	a	b	c	d	___	088	a	b	c	d	___
066	a	b	c	d	___	089	a	b	c	d	___
067	a	b	c	d	___	090	a	b	c	d	___
068	a	b	c	d	___	091	a	b	c	d	___

A N S W E R S H E E T

Multiple Choice (Circle or X your choice)

If you change your answer, write your selection in the blank.

092	a	b	c	d	___
093	a	b	c	d	___
094	a	b	c	d	___
095	a	b	c	d	___
096	a	b	c	d	___
097	a	b	c	d	___
098	a	b	c	d	___
099	a	b	c	d	___
100	a	b	c	d	___

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

NRC RULES AND GUIDELINES FOR LICENSE EXAMINATIONS

During the administration of this examination the following rules apply:

1. Cheating on the examination means an automatic denial of your application and could result in more severe penalties.

2. After the examination has been completed, you must sign the statement on the cover sheet indicating that the work is your own and you have not received or given assistance in completing the examination. This must be done after you complete the examination.

3. Restroom trips are to be limited and only one applicant at a time may leave. You must avoid all contacts with anyone outside the examination room to avoid even the appearance or possibility of cheating.

4. Use black ink or dark pencil ONLY to facilitate legible reproductions.

5. Print your name in the blank provided in the upper right-hand corner of the examination cover sheet and each answer sheet.

6. Mark your answers on the answer sheet provided. USE ONLY THE PAPER PROVIDED AND DO NOT WRITE ON THE BACK SIDE OF THE PAGE.

7. Before you turn in your examination, consecutively number each answer sheet, including any additional pages inserted when writing your answers on the examination question page.

8. Use abbreviations only if they are commonly used in facility literature. Avoid using symbols such as _ or ¢ signs to avoid a simple transposition error resulting in an incorrect answer. Write it out.

9. The point value for each question is indicated in parentheses after the question.

10. Show all calculations, methods, or assumptions used to obtain an answer to any short answer questions.

11. Partial credit may be given except on multiple choice questions. Therefore, ANSWER ALL PARTS OF THE QUESTION AND DO NOT LEAVE ANY ANSWER BLANK.

12. Proportional grading will be applied. Any additional wrong information that is provided may count against you. For example, if a question is worth one point and asks for four responses, each of which is worth 0.25 points, and you give five responses, each of your responses will be worth 0.20 points. If one of your five responses is incorrect, 0.20 will be deducted and your total credit for that question will be 0.80 instead of 1.00 even though you got the four correct answers.

13. If the intent of a question is unclear, ask questions of the examiner only.

14. When turning in your examination, assemble the completed examination with examination questions, examination aids and answer sheets. In addition, turn in all scrap paper.

15. Ensure all information you wish to have evaluated as part of your answer is on your answer sheet. Scrap paper will be disposed of immediately following the examination.

16. To pass the examination, you must achieve a grade of 80% or greater.

17. There is a time limit of four (4) hours for completion of the examination.

18. When you are done and have turned in your examination, leave the examination area (EXAMINER WILL DEFINE THE AREA). If you are found in this area while the examination is still in progress, your license may be denied or revoked.

QUESTION: 001 (1.00)

Deviation from Technical Specifications is allowed under certain circumstances. Assuming that he/she is available, permission for such deviations must be obtained from the:

a. Shift Manager

b. Station Manager

c. Operation Manager

d. Field Supervisor

QUESTION: 002 (1.00)

In which area is transmitting with a portable radio prohibited?

a. Cable Tunnel

b. HPCI Pump Room

c. Security Gate House

d. Diesel Generator Room

QUESTION: 003 (1.00)

Whose authorization is required to be obtained immediately prior to the installation of a Temporary Alteration?

a. Unit Supervisor

b. Licensed System Engineer

c. Shift Manager

d. Operations Manager

QUESTION: 004 (1.00)

You are going to use part of an approved procedure to accomplish a test. The procedure does NOT specify the use of "NA". Which of the following describes the proper action if you want to "NA" some of the steps?

a. Initial and date next to the "NA", a comment is NOT required.

b. You are NOT allowed to do this. You must write a new procedure.

c. Mark the steps as "NA" AND Initial and Dating is NOT required.

d. Initial and date next to the "NA", then provide a comment describing why the step was "NA".

QUESTION: 005 (1.00)

Core flow is 60% of rated, core thermal power is 80%. Power has:

a. NOT exceeded any limits.

b. exceeded the Rod Block setpoint.

c. exceeded the flow bias scram setpoint.

d. exceeded the Safety Limit for this flow.

QUESTION: 006 (1.00)

The Unit 2 reactor is operating at nominal 100% power. You have just lieved the shift, when an APRM DOWNSCALE alarm occurs. Where is it ESSARY to log this condition, if any?

a. NO log entry necessary

b. Unit 2 Log

c. Control Room Operator's Log

d. Limiting Condition for Operation Log

QUESTION: 007 (1.00)

Who initially functions as the Station Director according to the Generating Station Emergency Plan (GSEP) at the onset of any Emergency Classification?

a. Field Supervisor

b. Shift Manager

c. Operations Manager

d. Unit Supervisor

QUESTION: 008 (1.00)

The _____ is responsible for having an item surveyed for unconditional release prior to removing it from the radiologically controlled area.

a. Field Supervisor

b. Individual Worker

c. Radiation Protection Supervisor

d. Radiation Protection Technician

QUESTION: 009 (1.00)

You have been designated as the spokes person for the up coming local High School tour. You will have the prime escort duties. How many can you escort into the plant?

a. 5 in the Vital Areas, and up to 10 in the Protected Areas.

b. No more than 5 in any area.

c. No more than 10 at any one time.

d. 10 in the Vital Areas, and NO more than 15 in the Protected Areas.

QUESTION: 010 (1.00)

Which of the following is the MINIMUM amount of time that an operator must abstain from consuming alcohol prior to reporting for a scheduled work shift?

a. 3 hrs

b. 5 hrs

c. 8 hrs

d. 12 hrs

QUESTION: 011 (1.00)

During a normal Unit shutdown the Main Steam Line Hydrogen Addition Setpoint Change Select Switch shall be:

a. off, prior to reducing power below 20%.

b. on, prior to reducing power below 20%.

c. off, after power has been reduced to below 20%.

d. on, after power has been reduced to below 20%.

QUESTION: 012 (1.00)

You are in the Unit 2 emergency diesel generator room when the plant's siren is initiated. You hear an alternating tone. What does this alarm mean?

a. Fire Alarm.

b. GSEP Alarm.

c. Cardox Alarm.

d. Radiation Alarm.

QUESTION: 013 (1.00)

A motor operated valve has been operated (cycled) 5 times in the last minute. What is the minimum cooling off time required prior to operating that valve again?

a. 15 minutes

b. 20 minutes

c. 25 minutes

d. 30 minutes

QUESTION: 014 (1.00)

Checking the control room panels following a reactor scram, the NSOs report the following conditions:

- Reactor Mode Switch is in Shutdown.
- ALL Control Rods at 00.
- The scram initiating condition has cleared.
- ALL eight white scram indicating lights are out.
- Reactor water level is being maintained at 30".
- SDV vents and drains valves indicate both open and close position.
- Placing all SDV vents and drains valves control switches to the close position has had NO effect on the double indication.
- The 902-3 panel has a RX BLDG RAD HI alarm up from the East CRD Module Area ARM reading 37 mr/hr.

Based on these conditions, you would...

a. Inhibit ADS.

b. Place Core Spray in PTL.

c. Reset the Reactor scram.

d. Insert a Manual Scram signal.

QUESTION: 015 (1.00)

Given the following conditions:

- The TURB BLDG RAD HI annunciator has alarmed and has been acknowledge by the NSO at the 902-3 panel.
- The ARM in alarm is still above its alarm setpoint.

The annunciator will be able to be reset...

a. ONLY when that ARM's RESET button is depressed on the 902-11 panel.

b. after the ARM BYPASS SWITCH for the ARM in alarm is placed in bypass.

c. ONLY when that ARM's SILENCE button is pressed locally at radiation detector.

d. after acknowledging the annunciator and then depressing the reset push button.

QUESTION: 016 (1.00)

HPCI is being run in the full-flow test mode from CST to CST. If the system is left running in this configuration and NO operator action is taken, what automatic actions will EVENTUALLY occur?

a. The HPCI turbine will trip due to high torus level.

b. HPCI will isolate on high HPCI-area temperature.

c. HPCI Supply valves will swap to take suction from the torus due to high suppression chamber level.

d. NO automatic actions will occur due to the HPCI SYSTEM IN TEST (902-3 H-12) logic being satisfied.

QUESTION: 017 (1.00)

Which of the following describes the operation of the Core Spray Injection Valves (1402-24 and 1402-25)?

a. Neither valve can be opened if reactor pressure is greater than 350 psig.

b. ONLY the 1402-24 valve can be opened when reactor pressure is greater than 350 psig.

c. Below 350 psig, both valves can be opened ONLY if valve 1402-25 is opened first.

d. Above 350 psig, either valve can be opened, but NOT at the same time.

QUESTION: 018 (1.00)

Given the following conditions:

- A Unit 2 shutdown is in progress.
- Due to an obstruction, one RVWLIS backfill line has been OOS for 10 days.

During a normal plant depressurization, you would most likely observe "notching" on the level recorder between RPV pressures of psig and psig.

a. 900, 751

b. 750, 601

c. 600, 451

d. 450, 0

QUESTION: 019 (1.00)

During normal plant operation, an operator called the control room and stated that some vapor is showing from the isolation condenser (IC) vent in the reactor building. An investigation reveals that the shell side water temperature is increasing, but the level is NOT changing. Which of the following could be happening in the isolation condenser system?

a. The isolation condenser has developed a tube leak.

b. The condensate return valve to the reactor is leaking.

c. The steam line vent to the "A" main steam line has failed closed.

d. The makeup valve to the shell side of the heat exchanger is leaking.

QUESTION: 020 (1.00)

If the control rod drive (CRD) flow control valve (FCV) failed open, what would happen immediately, and how should you immediately respond?

a. The rods would be driven in; you must scram the reactor.

b. The rods would remain in position, you must throttle the Drive Water Pressure control valve or the CRD pump will trip.

c. The rods would remain in position, you must manually open the backup flow control valve then manually close the original FCV.

d. The rods would remain in position, you must trip the CRD pump then swap to the back up flow control valve, then restore the CRD system on the backup flow control valve.

QUESTION: 021 (1.00)

Given the following conditions:
- The plant is operating at 50% power.
- Recirculation pump speeds are both at 40%.
- Loop A Recirculation MG Set speed is slowly increased to 50%.

Which of the following is the expected response by the Reactor Recirculation Flow Control system?

a. The Recirc interlock will trip the 'A' scoop tube brake and trip pump 'A' due to greater than 10% speed mismatch.

b. The speed mismatch will be limited to 10%, it will trip the low speed pump, pump 'B', after a time delay of 20 seconds.

c. The Recirc interlock will trip and lockup both the 'A' and 'B' scoop tubes, preventing any pump speed changes.

d. The speed mismatch will be limited to 10%, both recirc pumps 'A' and 'B' will remain at their present speeds.

QUESTION: 022 (1.00)

Operators have been attempting to reseat the Unit 3 Isolation Condenser Reactor INLET ISOLATION valve, 3-1301-3. The following conditions still exist:

- HPCI system is OOS
- Isolation Condenser shell side temp is rapidly increasing
- Isolation Condenser tube inlet temp is 180 degrees F and rapidly increasing
- Isolation Condenser shell side level is rapidly approaching 12 feet

The operators must:

a. immediately scram the reactor and isolate the Isolation Condenser.

b. isolate the Isolation Condenser and return the HPCI system to operable status within 7 days.

c. isolate the Isolation Condenser and continue plant operations indefinitely as long as ADS remains operable.

d. isolate the Isolation Condenser and reduce reactor pressure to less than or equal to 150 psig within 24 hours.

QUESTION: 023 (1.00)

The MINIMUM Boron concentration that will bring the reactor from full power to a 3% delta K or more subcritical condition with all rods withdrawn is _____ ppm in less than 100 minutes.

a. 700

b. 650

c. 600

d. 550

QUESTION: 024 (1.00)

When the Standby Liquid Control (SBLC) system initiation keylock switch 1130-301 on panel 903-5 is placed in the System 2 & 1 position the ...

a. Squib valve B fires, B SBLC pump receives a start signal, and the RWCU inboard (MO-1 and 1A) and outboard (MO-2 and 3) isolation valves closes.

b. Squib valve A fires, A and B SBLC pumps receive a start signal, and RWCU inboard (MO-1 and 1A) isolation valves closes.

c. Squib valves A and B fires, B SBLC pump receive a start signal, and RWCU inboard (MO-1, 1A and 7) and outboard (MO-2 and 3) isolation valves closes.

d. Squib valves A and B fires, A and B SBLC pumps receive a start signal, and RWCU inboard (MO-1, 1A and 7) and outboard (MO-2 and 3) isolation valves closes.

QUESTION: 025 (1.00)

A Unit 2 shutdown is in progress and the following conditions exist:

- Reactor power — 13% and decreasing
- Reactor water level — 30 inches
- Reactor pressure — 1020 psig
- Mode switch — in RUN
- APRMs/IRMs bypassed — None

Both divisions of the 48/24 VDC power system become deenergized. Which of the following states the effect on Unit 2?

a. The mode switch must be placed in STARTUP to prevent a scram.

b. A reactor scram occurs if the mode switch is moved to STARTUP.

c. Reactor power decrease must be stopped prior to reaching the SRMs range.

d. After the mode switch is in STARTUP, a reactor scram will occur when APRM power decreases below 3%.

QUESTION: 026 (1.00)

Unit 2 is operating at 30% rated power with the 'A' EHC pressure regulator in service. Which of the following describes the expected plant response if the 'A' pressure regulator pressure SETPOINT should fail to zero?

a. The plant would scram due to a turbine trip.

b. The reactor would scram due to MSIV closure.

c. The turbine would trip but the reactor would remain on line.

d. The backup pressure regulator would take control and maintain reactor pressure at a slightly higher value.

QUESTION: 027 (1.00)

Which of the following OPERATOR ACTIONS will ALWAYS terminate an Auto-Initiation of the ADS system and keep the valves closed once the 8.5 minute timer times out and the blowdown has started?

a. Take the ADS INHIBIT switch to INHIBIT.

b. Place all the LPCI pumps to Pull-to-Lock.

c. Press and release the Timer Reset Pushbutton.

d. Turn the Drywell Pressure Reset Switch to RESET.

QUESTION: 028 (1.00)

Given the following conditions:

- Both Units are operating at rated power.
- A fire in the AEER has forced the operators to evacuate the control room.
- ADS is placed to INHIBIT.
- Relief Valve control switches are placed to OFF.

Based on these conditions, what (if anything) will open the ADSV(s)?

a. All valves will remain closed.

b. Removing power to the ADS circuitry.

c. The target rock will operate in safety mode.

d. The target rock will operate in BOTH relief and safety modes.

QUESTION: 029 (1.00)

Which of the following states the normal operational control method for maintaining Drywell and Torus pressures so that in the event of a loss of coolant accident (LOCA) their integrity will NOT be lost? The nitrogen pressure control valve maintains the ...

a. Torus pressure at 1.1 psig and the pumpback system maintains a 0.5 psi differential pressure between the Torus and Drywell.

b. Drywell pressure at 1.1 psig and the pumpback system maintains a 1.0 psi differential pressure between the Drywell and the Torus.

c. Torus pressure at 1.0 psig and the Torus to Drywell vacuum breakers maintain a 0.5 psi differential pressure between the Torus and the Drywell.

d. Drywell pressure at 1.0 psig and the Torus to Reactor Building vacuum breakers maintain a 0.5 psi differential pressure between the Torus and the Reactor Building.

QUESTION: 030 (1.00)

While operating at 100% power a valid high steam line flow was sensed in the "A" main steam line. Which of the following is the expected MSIV response?

a. All MSIVs will close.

b. Only the MSIVs in main steam line 'A' will close.

c. Only the inboard MSIV in main steam line 'A' will close.

d. Only the inboard MSIVs in all four main steam lines will close.

QUESTION: 031 (1.00)

How are the relief valves connected to the suppression pool?

a. The discharge piping is connected to the bottom of the torus so it sprays up.

b. The discharge piping is connected to the top of the torus so it sprays down.

c. The discharge piping enters the torus through the downcomer and is run below the minimum torus water level.

d. The relief valves discharge directly to the drywell; the safety valves discharge piping is sprayed from the top of the torus

QUESTION: 032 (1.00)

You reduce reactor power from 100% to 95% by decreasing recirculation flow. What signals, if any, did the Electro Hydraulic Control use to move the turbine control valve?

a. Reactor Pressure, Pressure Setpoint.

b. Reactor Pressure, Max Combined Load Limit.

c. None; the turbine control valve did NOT move.

d. Turbine Throttle Pressure, Pressure Setpoint.

QUESTION: 033 (1.00)

Given the following conditions:

- Unit 2 was operating at 60% power.
- One of the running reactor feedwater pumps (RFPs) tripped.
- The standby RFP did NOT automatically start.

Which of the following conditions could have prevented the RFP from starting?

a. RFP suction pressure is 175 psig.

b. RFP lube oil pressure is 18 psig.

c. The associated RFP discharge valve was NOT full OPEN.

d. The associated RFP discharge valve was NOT full CLOSED.

QUESTION: 034 (1.00)

Which of the following will automatically reset a Unit 3 Reactor Feedwater Pump (RFP) Runout Flow Control condition?

a. The bypass valve around the FWRV is closed.

b. Feedwater flow drops below the runout setpoint.

c. Reactor water level increases above zero inches.

d. Reactor water level decreases to less than +48 inches.

QUESTION: 035 (1.00)

Given the following conditions:

- The reactor is operating at 100% power.
- Feedwater regulating valve (FWRV) 2A is in service.
- The air line supplying FWRV 2A dual port solenoid ruptures.
- Air is rapidly lost to the operator.
- FWRV nitrogen backup is out of service.

Which of the statements below identifies the response of the FWRV?

a. The valve fails full open immediately since it uses air to close, and spring pressure to open.

b. The valve fails full open, but the speed is limited by the hydraulic damper.

c. The valve would "lock up" in its present position, due to the actuation of the lock up device.

d. The valve fails full closed, but the speed is limited by the hydraulic damper.

QUESTION: 036 (1.00)

Given the following conditions:

- A valid initiation signal for Standby Gas Treatment is received.
- Train "A" is in PRIMARY.
- Train "B" is in STANDBY.

Under the existing circumstances, which of the following will initiate Train "B" of the Standby Gas Treatment System?

a. Refueling Floor radiation level of 100 mr/hr.

b. Reactor Building Ventilation radiation level of 4 mr/hr.

c. Low flow condition on Train "A" for ~~10~~ 20 seconds.

d. Drywell radiation level of 100 R/hr.

QUESTION: 037 (1.00)

Which of the following is NOT an input to the Standby Gas Treatment System?

a. Unit 2 and 3 Drywells

b. Atmosphere Containment Atmosphere Dilution System

c. Unit 2 and 3 Reactor Building HVAC

d. Turbine Building Ventilation System

QUESTION: 038 (1.00)

The following conditions exist:

A valid reactor low water level signal started the Standby Gas Treatment System.

SBGT Train "A" is in PRIMARY and SBGT Train "B" is in STANDBY.

Which of the following will initiate SBGT Train "B"?

a. Loss of power to Train A heater.

b. High radiation inside the drywell, 100 R/hr.

c. Refueling floor radiation level of 100 mr/hr.

d. Any subsequent initiation signal other than low water level.

QUESTION: 039 (1.00)

A startup is in progress. After the first three control rods were pulled, an electrical fault caused Primary Containment Pressure signals to spike to 3 psig for 2 seconds, then return to normal. How does SBGT respond under these conditions? SBGT will

a. start.

b. NOT start because the mode switch is NOT in run.

c. NOT start because NO Group II Isolation occurred.

d. NOT start because the signal was NOT present past the time delay.

QUESTION: 040 (1.00)

Given the following conditions:

- 0930 Loss of Offsite Power has initially occurred in Unit 2.
- 0931 Bus 23 and 24 are de-energized.
- 0932 Emergency Diesel Generators (DG) 2 and 2/3 automatically start.
- 0935 Unit 2 diesel generator TRIPS.
- 0937 Unit 3 suffers a loss of offsite power and Emergency Diesel Generator 3 starts.
- 0937 NO ECCS signal present on either unit.

Assuming all other systems operates as expected, which of the following pump configuration would be available during this event?

	UNIT 2	UNIT 3
a.	Core Spray Pump A LPCI Pumps A and B	Core Spray Pump B LPCI Pumps C and D
b.	Core Spray Pump B LPCI Pumps C and D	Core Spray Pump A and B LPCI Pumps A, B, C, and D
c.	Core Spray Pumps A and B LPCI Pumps A, B, C, and D	Core Spray Pump A LPCI Pumps C and D
d.	No Core Spray Pumps LPCI Pumps A and B	Core Spray Pumps A and B LPCI Pumps A, B, C, and D

QUESTION: 041 (1.00)

The Unit 3 Diesel Generator was running unloaded for testing when the following annunciator was received.

DIESEL ENGINE CRANKCASE PRESS HIGH

The operator tried to trip the Diesel Generator by placing its local control switch to "STOP" but the diesel failed to shut down. Which of the following is the PREFERRED method to shut down the diesel generator in this condition?

a. Pull on the fuel injector rack handle.

b. Close the emergency fuel shutoff valve.

c. Deenergize the diesel oil transfer pump.

d. Lower the speed droop governor setting to zero.

QUESTION: 042 (1.00)

Given the following conditions;

- The plant is operating at 82% power.
- The NSO has just pulled control rod D-12 from position 24 to position 32.
- A few seconds later a rod drift alarm occurs for control rod D-12.
- After driving the rod to position 00 using EMERG ROD IN, control rod D-12 again starts to drift in the OUT direction.

What could be the cause of this rod drift?

a. The scram outlet valve is leaking.

b. The RMCS timer may have failed.

c. The control rod drive mechanism collet fingers could be stuck.

d. The collet housing has fractured due to Intergranular Stress Corrosion Cracking.

QUESTION: 043 (1.00)

Which of the following controls the reactivity addition rate during a control rod drop accident, so it ensures fuel damage does NOT occur?

a. 121 Valve Disc

b. Velocity Limiter

c. Orificed Check Valve

d. Control Rod Stabilizing valves

QUESTION: 044 (1.00)

While making a tour of the control room back panels, you notice an alarm light on a RBM channel on top of panel 902-37. The light is labeled, "REF APRM DOWNSCALE". What RBM function is associated with this alarm?

a. Rod Block

b. Automatically bypasses RBM

c. Bypasses Rod Insert Blocks

d. Indication only for the reference APRM at 30% power

QUESTION: 045 (1.00)

If a ?? in red appears on the RWM screen while viewing the Primary Screen, what is this indicating to the operator about that control rod?

a. A substitute position has been entered for that rod.

b. An insert error is present for that rod.

c. A withdraw error is present for that rod.

d. An unknown position is present for that rod.

QUESTION: 046 (1.00)

Given the following conditions:

- Reactor startup was in progress on Unit 2.
- Operator was withdrawing control rods from 6 to 8.
- Control rod went to position 10.

Which of the following states how the Rod Worth Minimizer (RWM) will affect normal, in-sequence rod movements?

a. All control rods may only move in.

b. The mispositioned rod may move in or out, all other control rods may only move in.

c. The mispositioned rod may only be moved in, all other control rods are blocked from movement.

d. The mispositioned rod may move in or out, all other control rods are blocked from movement.

QUESTION: 047 (1.00)

Given the following conditions:

- Problems with the 2A Recirc Pumps M-G Set caused a trip of the 2A Recirc Pump.
- Unit 2 has been operating in single loop on the 2B Recirc pump for the past 30 minutes.
- The 2B Recirc Pump is operating at 32% speed.
- The 2A Recirc Pump Discharge Valve is open.

Based on these conditions, what are the hazards of continuing operation under the present circumstances?

a. Excessive bottom head cooldown.

b. The idle loop will begin to cool down.

c. This pump speed can lead to excessive jet pump riser vibrations.

d. The inactive jet pumps are undergoing reverse flow, causing water to bypass the core.

QUESTION: 048 (1.00)

The following parameters exist for the RWCU system:

- The 2A RWCU recirc pump is operating
- The FCV is adjusted to yield 600 gpm
- Regenerative Heat Exchanger inlet is 530 deg F
- Regenerative Heat Exchanger outlet is 210 deg F
- Non-Regen Heat Exchanger outlet is 160 deg F
- "B" Demineralizer outlet conductivity is .1 umho

Given the above conditions, what actions should the operator verify?

a. RWCU MO valves 2, 3 and 7 close.

b. RWCU MO valves 1, 2, 3 and 7 close.

c. RWCU MO valves 1, 1A, 2, and 3 close.

d. RWCU MO valves 1, 1A, 2, 3 and 7 close.

QUESTION: 049 (1.00)

The reactor is shut down with one loop of shutdown cooling in use and NO recirc pumps running. How would the Shutdown Cooling System respond if RPV level decreased from +50" to +4"?

a. Shutdown cooling continues unaffected.

b. The shutdown cooling inlet valves isolate, the pumps remain RUNNING.

c. The shutdown cooling inlet and outlet valves isolate, the pumps TRIP on low suction pressure.

d. All shutdown cooling system valves except for the min flow valve isolate, the pumps trip when inlet valves leave the full open position.

QUESTION: 050 (1.00)

Given the following Unit 2 conditions:

- Reactor scrammed, all control rods at 00.
- RPV pressure is 525 psig.
- RPV level is -210 inches.
- Drywell pressure is 14 psig.
- Drywell temperature is 230 deg F.
- LPCI loop select logic has selected the "B" Loop for injection.
- Two (2) minutes have passed since 2-1501-21A, INJ THROT VLV, closed.

Select the condition that must exist before the operator can open the 2-1501-21A valve.

a. RPV level is above -59 inches.

b. Five (5) minutes have passed since 2-1501-21A closed.

c. Keylock switch 2-316A, CNMT SP/TORUS CLG PERMISSIVE, in MANUAL.

d. Keylock switches 2-316A, CNMT SP/TORUS CLG PERMISSIVE, and 2-317A, 2/3 CORE COVERAGE OVERRIDE, in MANUAL.

QUESTION: 051 (1.00)

After LPCI System is aligned in the torus cooling mode, the CCSW System is adjusted to achieve a differential pressure of ...

a. 10 psid with CCSW system pressure greater than LPCI system pressure.

b. 10 psid with LPCI system pressure greater than CCSW system pressure.

c. 20 psid with CCSW system pressure greater than LPCI system pressure.

d. 20 psid with LPCI system pressure greater than CCSW system pressure.

QUESTION: 052 (1.00)

Given the following conditions:

- RPV pressure is 275 psig.
- RPV level is -25 inches.
- Drywell pressure is 17 psig.
- Drywell temperature is 230 degrees.
- Drywell sprays have been initiated.

Which of the following describes the operator's actions required to prevent the drywell pressure from dropping below 0 psig?

a. The drywell spray valves should be manually closed when the drywell drops below 2 psig.

b. Verify the drywell spray valves close automatically when drywell pressure drops below 1 psig.

c. Verify the drywell spray valves close automatically when the drywell pressure reaches 2 psig.

d. The drywell spray valves should be manually closed when the drywell pressure drops below the 9 psig spray initiation limit.

QUESTION: 053 (1.00)

Given the following conditions:

- A LPCI initiation signal of -59".
- RPV pressure less than 350 psig.

What interlocks are required to be met to allow the Drywell and Torus spray valves to be opened?

a. 316 switch (CNMT SP/Torus Clg Permissive) in Manual.
drywell pressure greater than 1 psig.
RPV level greater than 2/3 core height.

b. 318 switch (CCSW Pps Start Permissive) in Manual Override
drywell pressure greater than 1 psig
RPV level greater than 2/3 core height.

c. 317 switch (2/3 Core Coverage Override) in Manual Override
318 switch (CCSW Pps Start Permissive) in Manual Override
Torus pressure greater than 1 psig.

d. 316 switch (CNMT SP/Torus Clg Permissive) in Manual
317 switch (2/3 Core Coverage Override) in Manual Override.

QUESTION: 054 (1.00)

Given the following conditions:

- Unit 3 is in cold shutdown.
- RPV water level below the main steam lines.
- The vessel head is removed.
- Operability check on the main steam relief valves is required.

Which of the following is the reason for NOT doing the operability check at this time?

a. Cycling the valves at atmospheric conditions will damage the valve seats, requiring extensive repair.

b. Cold cycling of the springs on the valves will result in fatigue on the springs, voiding the lifting pressure set points.

c. With the reactor head off, opening the relief valves would violate containment integrity, opening a line to the Suppression Pool.

d. The valves will NOT open, due to insufficient pressure under the valve disk to overcome the spring force on the valve.

QUESTION: 055 (1.00)

Given the following plant conditions:

- Reactor power is currently 25%.
- Unit 2 has commenced a shutdown for maintenance.
- Two (2) Condensate Demineralizers are in service.
- Condensate Demineralizer differential pressure is 18 psid.

Which action is required to restore Condensate Demineralizer differential pressure to its normal operating band?

a. Take a Condensate Demineralizer out of service.

b. Throttle Condensate Demineralizer bypass valves.

c. Place another Condensate Demineralizer in service.

d. Throttle open Condensate Booster pump minimum flow valve.

QUESTION: 056 (1.00)

Given the following conditions:

- Dresden 2 has just experienced a loss of offsite power.
- Drywell pressure is currently +2.5 psig.
- The diesels fast start.

Which of the following states the timed starting sequence for the emergency bus equipment?

a. When reactor pressure reaches 350 psig AND 8.5 minutes have elapsed from initiation, then the diesel generator breaker closes, then the first low pressure coolant injection (LPCI) pump starts followed by the core spray pump 5 seconds later followed by the second LPCI pump 5 seconds later.

b. When reactor pressure reaches 350 psig AND 8.5 minutes have elapsed from initiation, then the diesel generator breaker closes, then the first LPCI pump starts followed by the second LPCI pump 5 seconds later followed by the core spray pump 5 seconds later.

c. The diesel generator breaker closes within 10 seconds, then the first LPCI pump starts followed by the core spray pump 5 seconds later followed by the second LPCI pump 5 seconds later.

d. The diesel generator breaker closes within 10 seconds, then the first LPCI pump starts followed by the second LPCI pump 5 seconds later followed by the core spray pump 5 seconds later.

QUESTION: 057 (1.00)

Which of the following statements explains how the ESS Bus uninterruptable power supply system provides a continuous source of AC power?

a. Normal power is supplied by bus 25 with alternate power supplied by MCC 28-2 on loss of power to bus 25.

b. Normal power is supplied by bus 29 through a rectifier, and switches automatically to bus 25 on loss of power to bus 29.

c. Normal power is supplied by the Turbine Building 250 VDC with the alternate power supplied by bus 29 through a rectifier.

d. Normal power is supplied by bus 29, and the Turbine Building 250 VDC takes over automatically on loss of power to bus 29.

QUESTION: 058 (1.00)

The Off-Gas High Radiation alarm for Unit 2 has just annunciated. In addition to a fuel element failure, which of the following could cause the high offgas radiation condition?

a. Failure to achieve recombination in the recombiner.

b. Failure of the condensate demineralizer resulting in resin intrusion.

c. Trip of the operating Steam Jet Air Ejector.

d. Increased off gas dilution steam flow.

QUESTION: 059 (1.00)

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

a. A high reactor water level condition.

b. Upscale trips on both RBCCW process radiation monitors.

c. An upscale trip on one reactor building exhaust plenum monitor.

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

QUESTION: 060 (1.00)

Service Water Pump Trip, annunciator alarms on panel 923-1. Concurrently, a leak in the fire main header results in the water pressure steadily decreasing to 72 psig. What pump or pumps is(are) operating to maintain the fire main header pressure.

a. unit 1 screen wash pumps

b. unit 2/3 diesel fire pump

c. unit 1 and unit 2/3 diesel fire pumps

d. unit 1 diesel fire pump and unit 1 screen wash pumps

QUESTION: 061 (1.00)

CO2 tank discharge valves are_____to open while the selector valves to the diesel generator rooms are _____to open.

a. energize, energize

b. energize, de-energize

c. de-energize, energize

d. de-energize, de-energize

QUESTION: 062 (1.00)

Which of the following conditions will cause the fuel pool cooling pump 2A to trip?

a. Undervoltage on Bus 29.

b. Skimmer Surge tank at 19 inches.

c. Pump suction pressure at 4 psig.

d. Filter inlet pressure at 125 psig.

QUESTION: 063 (1.00)

The reactor is at 100% power when the following is observered:

- Recirc pump 'A' flow increased 3%
- Recirc pump speeds remained constant.
- Reactor power drops slightly.

You should:

a. Enter the DOA for Jet Pump Failure.

b. Immediately lock the Scoop Tube for A.

c. Immediately restore the flow to its initial value.

d. Enter the DGA for Reactor Core Instabilities.

QUESTION: 064 (1.00)

Which of the following describes core orifice location and the purpose of the core orifices? The core orifice is located in the:

a. lower tie plate; provide proper flow distribution throughout the core

b. fuel support pieces; provide proper flow distribution throughout the core

c. lower tie plate; provide maximum flow to fuel bundles in the central region

d. fuel support pieces; provide maximum flow to fuel bundles in the peripheral region

QUESTION: 065 (1.00)

Which of the following statements correctly describes the operation of the Output Circuit Breakers (OCBs)?

a. OCBs can be tripped from the 902-8 panel anytime.

b. There is NO time delay for the OCBs to open when operated from the 902-8 panel.

c. OCBs must be closed from the 923-2 panel if the Main Transformer disconnect is open.

d. OCBs can only be tripped from the 923-2 panel if a generator reverse power condition is present.

QUESTION: 066 (1.00)

The Unit Supervisor orders you to insert a manual scram because power is unexpectedly increasing. Which of the following responses indicates that the scram has successfully controlled reactivity under all conditions?

a. Reactor power dropping rapidly.

b. 6 rods indicate position 02, remaining rods indicate position 00.

c. 1 rod indicates 48, 1 rod at 10, remaining rods indicate position 00.

d. Panel 902-5 CHANNEL A RX SCRAM and CHANNEL B RX SCRAM alarms lit and Scram Solenoids Group indicating lights A1, A2, B1, and B2 all lit.

QUESTION: 067 (1.00)

The reactor has scrammed due to High Main Steam Line Flow and closure of all MSIVs. Reactor pressure control is vital. Which of the following is the PREFERRED method for controlling reactor pressure under these conditions as described in DOP 1300-03 "Manual Operation of the Isolation Condenser"?

a. Cycle ADSVs.

b. HPCI system in pressure control mode.

c. Max Recycle Reboiler.

d. Main Condenser, after re-opening the MSIVs.

QUESTION: 068 (1.00)

Given the following conditions:

- Unit 2 is at 100% power.
- 2A and 2B RFP's are running
- 2C RFP is OOS

Which of the following actions would be in accordance with DOA-600-01 (Transient Level Control) and effective in recovering level if the 2B RFP trips?

a. Initiate HPCI.

b. Open the Reactor Low Flow Feed Reg Valve.

c. Reduce reactor power with recirculation flow.

d. Shift Main Feed Reg Valves to Manual and raise feed flow.

QUESTION: 069 (1.00)

An unisolable reactor coolant leak on Unit 2 has resulted in a reactor scram and a rapid increase in drywell pressure.

- Reactor building vent radiation is at 3 mr/hr
- Reactor pressure is 775 psig
- Drywell temperature is 155 degrees F
- All rods are inserted
- Drywell pressure 3 psig increasing
- HPCI is maintaining reactor level at 10 inches

Which of the following DEOP(s) groups should be entered?

a. DEOP 0100 (Reactor Control) only

b. DEOP 0100 (Reactor Control) and DEOP 200-01 (Primary Containment Control)

c. DEOP 200-01 (Primary Containment Control) only

d. DEOP 200-01 (Primary Containment Control) and DEOP 300-01 (Secondary Containment Control)

QUESTION: 070 (1.00)

Which of the following conditions would REQUIRE an IMMEDIATE manual reactor SCRAM?

a. One Electromatic relief valve fails open.

b. One recirculation pump trips from 90% or greater power.

c. Six (6) LPRMs are alarming High and Low, with a period of 1.5 seconds.

d. Total core flow is less than 45% of rated and above 80% Flow Control Line (FCL).

QUESTION: 071 (1.00)

A caution in DEOP 0500-05 (Alternate Insertion of Control Rods) warns that a specific order must be adhered to when pulling or inserting the power supply fuses for the scram solenoids. Which of the following is the reason for this requirement?

a. The scram discharge volume may be overpressurized.

b. The scram discharge volume will NOT drain properly.

c. A vent path can be established from the reactor vessel to the reactor building.

d. A vent path can be established from the primary containment to the reactor building.

QUESTION: 072 (1.00)

Given the following conditions:

- Unit 3 has scrammed.
- DEOP 200 has been entered on Hi Drywell Pressure.
- Torus sprays have been initiated and are failing to control drywell pressure.
- Drywell temperature is 180 deg F and steady.

When drywell pressure reaches 9 psig the operator is to:

a. Stop torus sprays and initiate drywell sprays.

b. Increase torus sprays and trip drywell coolers.

c. Trip recirculation pumps and drywell coolers and initiate drywell sprays.

d. Emergency Depressurize the RPV.

QUESTION: 073 (1.00)

Which of the following Emergency Operating Procedures (EOPs) would be entered if the U2 East RBFD SUMP LVL HI-HI alarm sounded?

a. DEOP 200-1 (Primary Containment)

b. DEOP 200-2 (Primary Containment Hydrogen Control)

c. DEOP 300-1 (Secondary Containment Control)

d. DEOP 400-2 (Emergency Depressurization)

QUESTION: 074 (1.00)

While performing a HPCI operability test, a transient occurs resulting in drywell pressure exceeding 2.0 psig. If LPCI was in the torus cooling mode prior to the transient, which of the following describes the affect this will have on the LPCI system?

a. There will be NO affect on the LPCI system until RPV pressure drops below 350 psig.

b. There will be NO effect on LPCI system operation until RPV pressure drops below 900 psig.

c. All 4 LPCI pumps are running providing maximum torus cooling through the 'B' LPCI test valves.

d. Torus cooling valves close, LPCI heat exchanger bypass valve opens, and LPCI is running through the minimum flow valves.

QUESTION: 075 (1.00)

The reactor is operating at full power, when all "Main Steam Line High-High Radiation" alarms annunciate. Highest reactor pressure noted is 1100 psig. Which of the following sets of automatic actions are expected to occur under this condition?

a. The MSIVs shut on high pressure, the reactor scrams on MSIV closure.

b. No automatic actions occur. The operator must respond manually to the annunciator.

c. The MSIVs shut on high pressure, the reactor scrams on steam line High-High radiation.

d. The MSIVs shut on High-High radiation, the reactor scrams on steam line High-High radiation.

QUESTION: 076 (1.00)

Given the following conditions:

- A LOCA and a simultaneous loss of Transformer 22.
- The 2/3 Diesel Generator (D/G) is out-of-service (OOS).
- Unit 2 D/G fails to start.
- HPCI operated for 10 minutes, but is now INOPERABLE due to an oil leak.
- The Isolation Condenser had to be secured due to high radiation readings in the exhaust duct radiation monitor.
- Reactor water level is -148".

From the above information, you should...

a. Place/verify ADSV control switches in AUTO.

b. Initiate Emergency Depressurization.

c. Open one (1) ADSV in MANUAL.

d. Utilize SBLC to inject from the test tank.

QUESTION: 077 (1.00)

Which of the following systems is used to inject Alternate Standby Liquid Control (SLC) boron into the reactor?

a. RWCU system

b. Head Spray line

c. Core Spray line

d. Feed and Condensate system

QUESTION: 078 (1.00)

During an Anticipated Transient Without a Scram on Unit 3, the operators were required to execute level/power control and lowered level to -140 inches. Which of the following is true concerning the subsequent operator actions?

The operator must wait until the SBLC tank level decreases to a level of:

a. 8% before terminating boron injection.

b. 8% before cooling down the RPV per DGP 2-1, "Normal Unit Shutdown."

c. 27% before restoring and maintaining RPV water level between 8 and 48 inches.

d. 35% before restoring and maintaining RPV water level between 8 and 48 inches.

QUESTION: 079 (1.00)

There is a partial loss of AC power. Several of the indications include:

- scoop tube lockout on recirculation MG set
- rod block
- condenser offgas valves close
- RFP minimum flow valves fail open
- a portion of the recorders on panel 902-5 are NOT functioning

What is the cause of the problem?

a. Loss of RPS Bus

b. Loss of 4KV bus

c. Loss of Instrument Bus

d. Loss of Essential Service Bus

QUESTION: 080 (1.00)

Unit 3 is operating at 100% rated power. Which of the following systems would NOT function if unit 2 125 VDC battery power was lost? (Assume all ECCS systems are in normal standby and respond properly.)

a. HPCI

b. Diesel Generator 3

c. Core Spray System I

d. Diesel Generator 2/3

QUESTION: 081 (1.00)

The generator was just synched to the grid during a startup. In rapid succession the following occurred:

- Alarm 902-5 E-8, RPV LVL HI comes in.
- Reactor Feedwater Pumps trip.
- The main turbine trips, but RPV level continues to slowly increase.

How can you use the Reactor Water Cleanup (RWCU) to stop the reactor water level transient? Place RWCU in operation then ...

a. open the BLOWDN TO COND valve and slowly Open the DRN FLOW CONTLR.

b. bypass the high temp out of the NRHX isolation, open BLOWDN TO RW VLV and slowly raise demand on the DRN FLOW CONTLR.

c. verify RWCU system is NOT feeding by setting the DRN FLOW CONTLR demand to zero and open the BLOWDN TO RW VLV and the BLOWDN TO CONDR valves.

d. bypass the Group III Isolation caused by level-high transient, then open the BLOWDN TO COND valve and slowly raise demand on the DRN FLOW CONTLR.

QUESTION: 082 (1.00)

A malfunction of the Reactor Feedwater Level Controller has resulted in an INCREASING reactor water level on Unit 2. The Reactor Feedwater Pumps are automatically tripped on a high reactor water level signal to prevent:

a. feed pump damage due to increasing pump discharge flow rate and head.

b. HPCI and main turbine damage due to moisture carryover into the turbines.

c. main steam line piping and hanger damage due to filling the main steam lines.

d. reactor vessel damage due to completely filling and overpressurizing the vessel.

QUESTION: 083 (1.00)

The following conditions exist:

- The reactor is at full power.
- Testing is in progress which adds heat to the torus.
- The torus bulk temperature is increasing.

The required action is to stop testing before exceeding_____ deg F, enter DEOP 200-1 at _____ deg F, and scram a _____ deg F.

a. 95, 95, 105

b. 95, 105, 110

c. 105, 95, 110

d. 105, 105, 110

QUESTION: 084 (1.00)

A relief valve is stuck open and is slowly raising the temperature of the torus. If reactor pressure is 400 psig and torus level is 15 feet, what is the maximum torus temperature allowed before the reactor pressure must be lowered?

a. 175 deg F.

b. 185 deg F.

c. 200 deg F.

d. 210 deg F.

QUESTION: 085 (1.00)

A severe fire has forced evacuation of the main control room. Which of the following describe the actions taken concerning RPS?

a. The mode switch is placed in S/D.

b. The SDV/SIV valves are manually CLOSED.

c. The manual scram pushbuttons are depressed.

d. The SDV Hi Level Bypass switch is placed in BYPASS.

QUESTION: 086 (1.00)

Which of the following explains why DEOP 300-2, Radioactive Release Control, directs the operator to restart the Turbine Building Ventilation, if it is shutdown?

a. to maintain a positive pressure inside the turbine building.

b. to reduce the turbine building area and equipment temperatures.

c. to prevent an unmonitored ground level release of radioactivity.

d. to filter the air in the turbine building before release to the environment.

QUESTION: 087 (1.00)

Given the following conditions:

- An obstruction in the normal cooling water supply line to the ECCS Room Coolers (HPCI and Corner Rooms) has caused the rooms to reach abnormally high temperatures.

Which of the following systems can supply a BACK-UP source of cooling water to these room coolers?

a. Service Water

b. Diesel Generator Cooling Water

c. Containment Cooling Service Water (CCSW)

d. Reactor Building Closed Cooling Water (RBCCW)

QUESTION: 088 (1.00)

A loss of instrument air to which of the following will NEVER cause an automatic protective system scram on Unit 2?

a. CRD flow control valves.

b. Feedwater regulating valves.

c. Main Steam Isolation Valves.

d. Steam Jet Air Ejectors suction valves.

QUESTION: 089 (1.00)

Given the following plant conditions:

- Small Break LOCA and ATWS
- Reactor power 25% and oscillating
- Reactor Pressure 900 psig increasing slowly
- Reactor Water Level -60 inches
- Torus Water Temperature 195 deg F increasing
- One LPCI pump in Torus Cooling mode
- All Safety Relief Valves Closed
- Torus water level is 14.5 feet

Which of the following states the required actions?

a. Shift the LPCI pump from Torus Cooling to inject into the core and maintain reactor water level above TAF.

b. Line up to drain the Torus, increase Torus Cooling Water flow, and when water level reaches TAF enter DEOP 400-3, "Steam Cooling".

c. Initiate Emergency Depressurization using all five (5) ADS valves irrespective of loss of reactor water level and adequate core cooling.

d. Manually control reactor pressure at 900 psig by opening one (1) relief valve as necessary and maintain reactor water level above top of active fuel.

QUESTION: 090 (1.00)

Given the following conditions:

- Unit 2 at 100% power
- Alarm 902-4, B-16, DRYWELL PNEU SPLY TROUBLE is received.
- DW SUPPLY VLV AO 2-4722 and AO 2-4723 are closed and will not open.

If one of these can NOT be opened, why will the reactor eventually scram?

a. The inboard MSIVs will close.

b. The drywell pressure will increase to the scram setpoint.

c. The feedwater reg valves will go closed and water level will drop to the scram setpoint.

d. The CRD flow control valves will close and the SCRAM inlet valves will OPEN under spring pressure.

QUESTION: 091 (1.00)

A transient has occurred resulting in an ATWS with a Group I isolation signal. The following conditions have resulted:

- 3 ADS valves were cycled to control pressure.
- SBLC is injecting to reduce power.
- Torus water level is 13 feet.
- RPV pressure is 1000 psig.
- Bulk torus temperature is 175 degrees.
- LPCI system is operating at maximum flow in the torus cooling mode.

Which of the following describes the actions required to control torus temperature?

a. Emergency depressurize the reactor pressure vessel.

b. Lower reactor pressure below the Heat Capacity Temperature Limit.

c. Lower torus temperature below the Heat Capacity Temperature Limit.

d. Operate all available torus cooling regardless of adequate core cooling.

QUESTION: 092 (1.00)

What is the basis of maintaining Reactor water greater than 48" when in Shutdown conditions and NO Recirc pumps are running.

a. Provides a natural circulation flowpath through the steam separators.

b. Provides adequate NPSH to recirc pumps when they are started.

c. Allows the Recirc loop temp recorders to be utilized to measure moderator temperature.

d. This level will NOT interfere with LPCI loop select logic when an initiation signal is received.

QUESTION: 093 (1.00)

Given the following conditions:

- A reactor startup was in progress with the mode switch in STARTUP.
- You had pulled two rods and were pulling the third rod when CRD pump A tripped.
- The accumulator trouble light for the rod you were pulling illuminated.
- You note CRD system pressure is decreasing.

You should cease rod movement and:

a. Immediately scram.

b. Dispatch operator to clear accumulator trouble.

c. Scram if you receive eight more accumulator trouble lights; do NOT start CRD pump B until the problem with first pump resolved.

d. Scram if you receive any two adjacent accumulator trouble alarm lights or if you receive more than eight in any give quadrant; do NOT start CRD pump B until problem with first pump resolved.

QUESTION: 094 (1.00)

Given the following conditions:

- Steam line rupture in the HPCI room with a failure of the Group IV Isolation.
- All personnel have been evacuated from the reactor building.
- HPCI pump room temperature is 215 deg F and radiation level is 125 mr/hr.

Which of the following actions should be taken to control this event?

a. Enter DEOP 300-1, scram the reactor, perform an emergency depressurization then enter DEOP 100.

b. Enter DEOP 300-1, scram the reactor then enter DEOP 100.

c. Enter DEOP 300-1, DEOP 300-2 and DEOP 100.

d. Enter DEOP 300-1, DEOP 300-2 and scram the reactor.

QUESTION: 095 (1.00)

Given the following conditions:

- A small-break LOCA occurred.
- Drywell pressure is 3.0 psig.
- RPS has successfully inserted a reactor scram.
- The Feedwater system is tripped.
- HPCI is maintaining RPV water level.
- Torus water level is 11.5 feet, wide range.

What must be done as a result?

a. HCPI suction must be manually swapped to the CST.

b. An immediate Emergency Depressurization is required.

c. HPCI must be immediately secured irrespective of core cooling.

d. HPCI must be immediately secured unless it is required for core cooling.

QUESTION: 096 (1.00)

Which of the following radiation signals will automatically start the SBGT system?

a. 1000 mr/hr Drywell High Radiation

b. 10 mr/hr Refueling Floor High Radiation

c. 6 mr/hr Off-Gas High High Radiation (post treatment)

d. 4 mr/hr Reactor Building Ventilation High High Radiation

QUESTION: 097 (1.00)

DEOP 300-1 RB/T directs isolation of all systems discharging into the area EXCEPT those needed for Reactor shutdown, Core cooling or fire suppression. Specifically what "systems" does the DEOP intend to isolate as "systems discharging into the area"?

a. ONLY systems that tie to the reactor.

b. All systems passing through the area which are pressurized.

c. Any system that could be the cause of the temperature excursion.

d. Any plant system which indicates, by system parameters or visually, discharging into the area.

QUESTION: 098 (1.00)

The plant was operating in a full power lineup at 95% rector power, when the following indications are received:

- RX BLDG VENT CH B RAD HI HI annunciates.
- SBGT actuates.
- RX BUILDING AREA RADIATION LEVELS.
  EAST CRD module 45 mr/hr
  Vessel Inst Rack 35 mr/hr
- RX BULDING AREA TEMPERATURE.
  Shutdown Cooling Pump Room Currently at 190 deg F
  Shutdown Cooling HT Exchanger Room at 185 deg F

What is the proper course of action.

a. Shutdown the reactor and enter DEOP-100.

b. Scram the Reactor and enter DEOP-100, "Reactor Control."

c. Scram the Reactor and initiate Emergency Depressurization, DEOP 400-2.

d. Shutdown the reactor and initiate Emergency Depressurization, DEOP 400-2.

QUESTION: 099 (1.00)

At 5:40 p.m. reactor vessel pressure was 950 psig and stable. Which of the following is correct if the current time is 5:55 p.m. and reactor pressure is 700 psig.

a. If the current trend continues, the Technical Specification cooldown rate limit will NOT be exceeded.

b. If the current trend continues, the Technical Specification cooldown rate limit will be exceeded at 6:10 p.m.

c. If reactor pressure stabilizes at 700 psig, the Technical Specification cooldown rate limit will be exceeded.

d. If reactor pressure stabilizes at 700 psig, the Technical Specification cooldown rate limit will NOT be exceeded.

QUESTION: 100 (1.00)

Which of the following sets of parameters is an indication of an offgas fire? Sudden _____ in Steam Jet Air Ejector flow and sudden _____ in recombiner temperature.

a. INCREASE, RISE

b. DECREASE, DROP

c. INCREASE, DROP

d. DECREASE, RISE

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

ANSWER: 001 (1.00)

a.

REFERENCE:

DAP 09-13, section F.4.b, page 8 of 12, 10 CFR 50.54(x)
294001A102 ..(KA's)

ANSWER: 002 (1.00)

a.

REFERENCE:

DAP 1-11, Rev. 02, page 2 of 9
294001A104 ..(KA's)

ANSWER: 003 (1.00)

a.

REFERENCE:

DAP 07-04, Rev 20, sec 2, 6
294001A103 ..(KA's)

ANSWER: 004 (1.00)

d.

REFERENCE:

DAP 9-13
294001A102 ..(KA's)

ANSWER: 005 (1.00)

a.

REFERENCE:

T.S. Figure 2.1-3, APRM FLOW BIAS SCRAM RELATIONSHIP TO NORMAL OPERATING CONDITIONS, Amend. 95.
NOTE: Above figure required to solve question.
294001A108 ..(KA's)

ANSWER: 006 (1.00)

b.

REFERENCE:

DAP 7-5, Operating Logs and Records. page 10
294001A106 ..(KA's)

ANSWER: 007 (1.00)

b.

REFERENCE:

DAP 7-1, rev 12, sec 4
294001A116 ..(KA's)

ANSWER: 008 (1.00)

b.

REFERENCE:

TH-HP-CH5-EKO-11, Rev. 0
294001K103 ..(KA's)

ANSWER: 009 (1.00)

b.

REFERENCE:

DAP 13-10, Escort Duties
294001K102 ..(KA's)

ANSWER: 010 (1.00)

b.

REFERENCE:

DAP 13-17, Supervisor's Fitness For Duty Responsibilities
10 CFR 26
294001K105 ..(KA's)

ANSWER: 011 (1.00)

a.

REFERENCE:

T.S. Table 3.2.1
294001K115 ..(KA's)

ANSWER: 012 (1.00)

a.

REFERENCE:

Dresden N-GET, p. 18.
DAP 3-1
294001K116 ..(KA's)

ANSWER: 013 (1.00)

d.

REFERENCE:

DOP 040-01.
294001K107 ..(KA's)

ANSWER: 014 (1.00)

c.

REFERENCE:

DEOP 0300-01
201001K202 ..(KA's)

ANSWER: 015 (1.00)

b.

REFERENCE:

272L-S1, Dresden Exam Bank
272000G008 ..(KA's)

ANSWER: 016 (1.00)

c.

REFERENCE:

206L-S1, High Pressure Coolant Injection, p. 45
206000A104 ..(KA's)

ANSWER: 017 (1.00)

d.

REFERENCE:

Dresden Lesson Plan 209L-S1, Section D.1 (page 12), Objective 8d.
DOP 1400-02, Rev. 7, Section H. (page 4 of 5).
209001A403 ..(KA's)

ANSWER: 018 (1.00)

d.

REFERENCE:

LP 216L-S1, Dresden exam bank
216000A211 ..(KA's)

ANSWER: 019 (1.00)

b.

REFERENCE:

Dresden Lesson Plan, Isolation Condenser 207L-S1 8-92, Pg. 19.
207000K109 ..(KA's)

ANSWER: 020 (1.00)

b.

REFERENCE:

DOA 0300-01, CONTROL ROD DRIVE SYSTEM FAILURE, Rev. 11.
201001A207 ..(KA's)

ANSWER: 021 (1.00)

d.

REFERENCE:

DSLP 12, Recirc Flow Control System
202002A204 ..(KA's)

ANSWER: 022 (1.00)

d.

REFERENCE:

T.S. 3.5.E.3
207000K607 ..(KA's)

ANSWER: 023 (1.00)

c.

REFERENCE:

Tech Specs Bases, B 3/4.4-6, Amendment No. 82
211000K503 ..(KA's)

ANSWER: 024 (1.00)

d.

REFERENCE:

DOP 1100-02, REV 7
211000K408 ..(KA's)

ANSWER: 025 (1.00)

b.

REFERENCE:

215L-S3, IRMs, pg 17 & 18, obj 5.b
DOA 6900
215003K402 ..(KA's)

ANSWER: 026 (1.00)

b.

REFERENCE:

DOA 5650-02, Rev. 3, Section B.3 (page 2 of 3).
241000A216 ..(KA's)

ANSWER: 027 (1.00)

a.

REFERENCE:

218L-S1, Automatic Depressurization System, Rev. 1, pp 13-14.
218000A206 ..(KA's)

ANSWER: 028 (1.00)

c.

REFERENCE:

LP 239L-S1
LP 218L-S1
218000K401 ..(KA's)

ANSWER: 029 (1.00)

b.

REFERENCE:

Dresden Lesson Plan, Primary Containment Systems 223L-S3 4-92, Pg. 4 & 5.
223001K406 ..(KA's)

ANSWER: 030 (1.00)

a.

REFERENCE:

Dresden Lesson Plan 223L-S2, Section II.4 (page 9A), Objective 2b.
DAN 902(3)-5 C-9, "CHANNEL A MN STM LINE FLOW HI"
223002K101 ..(KA's)

ANSWER: 031 (1.00)

c.

REFERENCE:

239L-S1, Main Steam System, Rev. 16, p. 9.
239002K107 ..(KA's)

ANSWER: 032 (1.00)

d.

REFERENCE:

241L-S1, EHC Pressure Control and Logic System, Rev. 01, p. 5.
241000A407 ..(KA's)

ANSWER: 033 (1.00)

b.

REFERENCE:

DOP 3200-02, Rev. 5, Section F.2 (page 5 of 14).
Dresden Lesson Plan 259L-S1, Section B.8.d.2 (page 15), Objective 8b.
259001K401 ..(KA's)

ANSWER: 034 (1.00)

c.

REFERENCE:

DOA 0600-01, Rev. 11, Section B.2.a (page 3 of 7).
Dresden Lesson Plan 259L-S2, Section III.A.6.b.4) (page 14A), Objective 8a.
259002A405 ..(KA's)

ANSWER: 035 (1.00)

c.

REFERENCE:

Dresden Lesson Plan, Feedwater Level Control System 259L-S2, Pg. 8.
259002K601 ..(KA's)

ANSWER: 036 (1.00)

c.

REFERENCE:

DSLP 40, Secondary Containment, page 13
261000A301 ..(KA's)

ANSWER: 037 (1.00)

d.

REFERENCE:

DSLP 40, Secondary Containment
261000K101 ..(KA's)

ANSWER: 038 (1.00)

a.

REFERENCE:

261L-S1, SBGT pg 8, obj 5.b
261000K401 ..(KA's)

ANSWER: 039 (1.00)

a.

REFERENCE:

261L-S1, Standby Gas Treatment, Rev. 3, p. 10.
261000K609 ..(KA's)

ANSWER: 040 (1.00)

a.

REFERENCE:

DSLP 2, rev 0, AC Distribution
DSLP 4, rev 0, Diesels
264000K303 ..(KA's)

ANSWER: 041 (1.00)

a.

REFERENCE:

DOP 6600-03, Rev. 11, Section F.2 (page 4 of 10).
Dresden Lesson Plan 264L-S1, Section D.6 (page 22), Objective 10b.
264000G010 ..(KA's)

ANSWER: 042 (1.00)

c.

REFERENCE:

DOA 0300-07
201003A203 ..(KA's)

ANSWER: 043 (1.00)

b.

REFERENCE:

Dresden Lesson Plan, CRD Blade and Mechanism 6-92, 201L-S3, C.4.c., Pg.9.
201003K401 ..(KA's)

ANSWER: 044 (1.00)

b.

REFERENCE:

Dresden lesson plan, RBM , sec B and C
215002A305 ..(KA's)

ANSWER: 045 (1.00)

d.

REFERENCE:

201L-S6
201006K102 ..(KA's)

ANSWER: 046 (1.00)

c.

REFERENCE:

Dresden Lesson Plan 201L-S6, Rod Worth Minimizer, Rev. 01, p. 8A.
201006K510 ..(KA's)

ANSWER: 047 (1.00)

b.

REFERENCE:

202L-S1
DGP 3-3.
202001A113 ..(KA's)

ANSWER: 048 (1.00)

c.

REFERENCE:

DAN 902(3)-4 E-12
204000K404 ..(KA's)

ANSWER: 049 (1.00)

c.

REFERENCE:

205L-S1, Shutdown Cooling (SDC), Rev. 2, p. 8.
205000A209 ..(KA's)

ANSWER: 050 (1.00)

d.

REFERENCE:

12E-2437 sh. 2, 12E-2437A, 12E-2438A,12E-2439, 12E-2441 sh. 3
DOP 1500-02
219000A214 ..(KA's)

ANSWER: 051 (1.00)

c.

REFERENCE:

DOP 1500-2, Rev 13, page 6
219000A405 ..(KA's)

ANSWER: 052 (1.00)

a.

REFERENCE:

DEOP 200
226001A403 ..(KA's)

ANSWER: 053 (1.00)

a.

REFERENCE:

LPCI System LP 203L-SI
230000A406 ..(KA's)

ANSWER: 054 (1.00)

d.

REFERENCE:

239L-S1
239001K125 ..(KA's)

ANSWER: 055 (1.00)

d.

REFERENCE:

DOP 3300-03
DGP 2-1
256000A405 ..(KA's)

ANSWER: 056 (1.00)

d.

REFERENCE:

Dresden Lesson Plan, Low Pressure Coolant Injection 203L-S1, Pg. 22.
262001K602 ..(KA's)

ANSWER: 057 (1.00)

d.

REFERENCE:

Dresden Lesson Plan, AC Electrical Distribution Section 3.C.3
262002K401 ..(KA's)

ANSWER: 058 (1.00)

b.

REFERENCE:

DGA-16, Section F, Rev 04, p. 5 of 6
271000A112 ..(KA's)

ANSWER: 059 (1.00)

c.

REFERENCE:

Containment Isolation lesson plan
288000K105 ..(KA's)

ANSWER: 060 (1.00)

c.

REFERENCE:

Lesson plan- Fire Protection System, rev 0, sec F.4.b
286000K403 ..(KA's)

ANSWER: 061 (1.00)

c.

REFERENCE:

286L-S1
286000K402 ..(KA's)

ANSWER: 062 (1.00)

c.

REFERENCE:

Fuel Pool Cooling and Cleanup 233L-S1 5-92, Pg. 12.
233000A302 ..(KA's)

ANSWER: 063 (1.00)

a.

REFERENCE:

DOA 0201-01, Jet Pump Failure, Rev. 05, p. 2.
DAP 07-01, Conduct of Operations, Rev. 15, step B.9.c.(4)
290002G015 ..(KA's)

ANSWER: 064 (1.00)

b.

REFERENCE:

Dresden Lesson Plan, Reactor Pressure Vessel and Internals 223L-S1, Pg. 20
290002K403 ..(KA's)

ANSWER: 065 (1.00)

c.

REFERENCE:

262L-S1
295005A107 ..(KA's)

ANSWER: 066 (1.00)

b.

REFERENCE:

DGP 02-03, Unit 2/3 Reactor Scram, Rev. 18, p. 4.
295006K103 ..(KA's)

ANSWER: 067 (1.00)

b.

REFERENCE:

DOP-1300-03
295007K302 ..(KA's)

ANSWER: 068 (1.00)

c.

REFERENCE:

DOA 600-01, Rev 09, B.1.a and C.1
295009G010 ..(KA's)

ANSWER: 069 (1.00)

b.

REFERENCE:

DEOP 1 and DEOP 2 entry conditions
295010G011 ..(KA's)

ANSWER: 070 (1.00)

c.

REFERENCE:

DGA-2, Rev 2, sec C
DOA 250-1, Rev 7, sec C
DOA 202-01, Rev 7, sec C
295014G010 ..(KA's)

ANSWER: 071 (1.00)

c.

REFERENCE:

DEOP 0500-05, Rev 03, p.4 and 5 of 8
295015K204 ..(KA's)

ANSWER: 072 (1.00)

c.

REFERENCE:

DEOP's Containment Control 200 Series lesson plan pg 21
295024A111 ..(KA's)

ANSWER: 073 (1.00)

c.

REFERENCE:

Dresden EOPs, DEOP 300-1 Secondary Containment Control.
295024G011 ..(KA's)

ANSWER: 074 (1.00)

d.

REFERENCE:

DOP 1500-02
295024K212 ..(KA's)

ANSWER: 075 (1.00)

d.

REFERENCE:

Tech Specs 1.1
295025K202 ..(KA's)

ANSWER: 076 (1.00)

a.

REFERENCE:

DEOP 100
DEOP 400-03
295031A204 ..(KA's)

ANSWER: 077 (1.00)

d.

REFERENCE:

DEOP 0500-01, Rev 0, sec I, p. 4 of 19
295037K213 ..(KA's)

ANSWER: 078 (1.00)

d.

REFERENCE:

Failure to Scram DEOP 400-5
295037K304 ..(KA's)

ANSWER: 079 (1.00)

d.

REFERENCE:

DAN 902(3)-8 B-08 and DOA 6800-01
295003A201 ..(KA's)

ANSWER: 080 (1.00)

b.

REFERENCE:

DOA 6900-3, Rev 02, p. 3, Item B.2.e
295004A202 ..(KA's)

ANSWER: 081 (1.00)

a.

REFERENCE:

DAN 902(3)-5 E-8, RPV LVL HI
DOA 0600-01, TRANSIENT LEVEL CONTROL, Rev. 09A, p. 3.
DOP 1200-02, RWCU SYSTEM BLOWDOWN, Rev. 03, pp. 2-5.
204L-S1, Reactor Water Cleanup (RWCU), Rev. 15, p. 22.
295008K209 ..(KA's)

ANSWER: 082 (1.00)

c.

REFERENCE:

Lesson Plan, Feedwater and Condensate, pp 34
295008K304 ..(KA's)

ANSWER: 083 (1.00)

c.

REFERENCE:

DEOP 200-1, and lp 200-1, obj 8
TS 3.7.A.c pg 3/4.7-2
295013A102 ..(KA's)

ANSWER: 084 (1.00)

c.

REFERENCE:

DEOP 200-01
295013G011 ..(KA's)

ANSWER: 085 (1.00)

c.

REFERENCE:

DSSP 0100-CR
295016A101 ..(KA's)

ANSWER: 086 (1.00)

c.

REFERENCE:

Lesson Plan, DEOP 300-2, Radioactive Release Control, Section III.C.2,
295017K302 ..(KA's)

ANSWER: 087 (1.00)

b.

REFERENCE:

276L-S1
295018A102 ..(KA's)

ANSWER: 088 (1.00)

a.

REFERENCE:

DOA 4700-01, pgs 9 and 10 sect 2.a,b.e.n
295019K201 ..(KA's)

ANSWER: 089 (1.00)

c.

REFERENCE:

DEOP 200-1, Rev. 02, LP 295L-S2, Sec. II B.6, Obj. 3b
295026K301 ..(KA's)

ANSWER: 090 (1.00)

a.

REFERENCE:

DAN 902(3)-4 B-16, DRYWELL PNEU SPLY TROUBLE, Rev. 02, pp. 1-2.
295020K301 ..(KA's)

ANSWER: 091 (1.00)

b.

REFERENCE:

DEOP 200-01
295026A203 ..(KA's)

ANSWER: 092 (1.00)

a.

REFERENCE:

205L-S1
295021A203 ..(KA's)

ANSWER: 093 (1.00)

a.

REFERENCE:

DOA 0300-01, Control Rod Drive System Failure, Rev. 09A, p. 2.
295022A102 ..(KA's)

ANSWER: 094 (1.00)

b.

REFERENCE:

Dresden EOPs, DEOP 300-1 Secondary Containment Control.
295032G012 ..(KA's)

ANSWER: 095 (1.00)

c.

REFERENCE:

DEOP 200-1, Primary Containment Control, Rev. 02.
DEOP's Containment Control 200 Series, Rev. 1, Objective 5.
295030K201 ..(KA's)

ANSWER: 096 (1.00)

d.

REFERENCE:

261L-S1, Rev 2. p. 10 of 17
295034K203 ..(KA's)

ANSWER: 097 (1.00)

c.

REFERENCE:

DEOP 300-1
295036A102 ..(KA's)

ANSWER: 098 (1.00)

c.

REFERENCE:

DEOP 300-1
295032G011 ..(KA's)

ANSWER: 099 (1.00)

d.

REFERENCE:

DSSP 100-T11
295016A108 ..(KA's)

ANSWER: 100 (1.00)

b.

REFERENCE:

Dresden Lesson Plan 271L-S1, Obj. 2d
DAN 902(3)-7,C13
DOP 5400-14.
295017A102 ..(KA's)

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

A N S W E R K E Y

MULTIPLE CHOICE

001	a
002	a
003	a
004	d
005	a
006	b
007	b
008	b
009	b
010	b
011	a
012	a
013	d
014	c
015	b
016	c
017	d
018	d
019	b
020	b
021	d
022	d
023	c
024	d
025	b
026	b
027	a
028	c
029	b
030	a
031	c
032	d
033	b
034	c
035	c
036	c
037	d
038	a
039	a
040	a
041	a
042	c
043	b
044	b
045	d

A N S W E R K E Y

046	c	069	b
047	b	070	c
048	c	071	c
049	c	072	c
050	d	073	c
051	c	074	d
052	a	075	d
053	a	076	a
054	d	077	d
055	d	078	d
056	d	079	d
057	d	080	b
058	b	081	a
059	c	082	c
060	c	083	c
061	c	084	c
062	c	085	c
063	a	086	c
064	b	087	b
065	c	088	a
066	b	089	c
067	b	090	a
068	c	091	b

A N S W E R K E Y

092 a

093 a

094 b

095 c

096 d

097 c

098 c

099 d

100 b

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

U. S. NUCLEAR REGULATORY COMMISSION
SITE SPECIFIC EXAMINATION
SENIOR OPERATOR LICENSE
REGION 3

CANDIDATE'S NAME: _____

FACILITY: Dresden 2 & 3

REACTOR TYPE: BWR-GE3

DATE ADMINISTERED: 96/03/11

INSTRUCTIONS TO CANDIDATE:

Use the answer sheets provided to document your answers. Staple this cover sheet on top of the answer sheets. Points for each question are indicated in parentheses after the question. The passing grade requires a final grade of at least 80%. Examination papers will be picked up four (4) hours after the examination starts.

TEST VALUE	CANDIDATE'S SCORE	%	
99.00 ~~100.00~~ Exp	_____	___ %	TOTALS
	FINAL GRADE		

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

_____
Candidate's Signature

MASTER COPY

A N S W E R S H E E T

Multiple Choice (Circle or X your choice)

If you change your answer, write your selection in the blank.

MULTIPLE CHOICE

001	a	b	c	d	___	023	a	b	c	d	___
002	a	b	c	d	___	024	a	b	c	d	___
003	a	b	c	d	___	025	a	b	c	d	___
004	a	b	c	d	___	026	a	b	c	d	___
005	a	b	c	d	___	027	a	b	c	d	___
006	a	b	c	d	___	028	a	b	c	d	___
007	a	b	c	d	___	029	a	b	c	d	___
008	a	b	c	d	___	030	a	b	c	d	___
009	a	b	c	d	___	031	a	b	c	d	___
010	a	b	c	d	___	032	a	b	c	d	___
011	a	b	c	d	___	033	a	b	c	d	___
012	a	b	c	d	___	034	a	b	c	d	___
013	a	b	c	d	___	035	a	b	c	d	___
014	a	b	c	d	___	036	a	b	c	d	___
015	a	b	c	d	___	037	a	b	c	d	___
016	a	b	c	d	___	038	a	b	c	d	___
017	a	b	c	d	___	039	a	b	c	d	___
018	a	b	c	d	___	040	a	b	c	d	___
019	a	b	c	d	___	041	a	b	c	d	___
020	a	b	c	d	___	042	a	b	c	d	___
021	a	b	c	d	___	043	a	b	c	d	___
022	a	b	c	d	___	044	a	b	c	d	___
						045	a	b	c	d	___

A N S W E R S H E E T

Multiple Choice (Circle or X your choice)

If you change your answer, write your selection in the blank.

046	a	b	c	d	___		069	a	b	c	d	___		
047	a	b	c	d	___		070	a	b	c	d	___		
048	a	b	c	d	___		071	a	b	c	d	___		
049	a	b	c	d	___		072	a	b	c	d	___		
050	a	b	c	d	___		073	a	b	c	d	___		
051	a	b	c	d	___		074	a	b	c	d	___		
052	a	b	c	d	___		075	a	b	c	d	___		
053	a	b	c	d	___		076	a	b	c	d	___		
054	a	b	c	d	___		077	a	b	c	d	___		
055	a	b	c	d	___		078	a	b	c	d	___		
056	a	b	c	d	___		079	a	b	c	d	___		
057	a	b	c	d	___		080	a	b	c	d	___		
058	a	b	c	d	___		081	a	b	c	d	___		
059	a	b	c	d	___		082	a	b	c	d	___		
060	a	b	c	d	___		083	a	b	c	d	___		
061	a	b	c	d	___		084	a	b	c	d	___		
062	a	b	c	d	___		085	a	b	c	d	___		
063	a	b	c	d	___		086	a	b	c	d	___		
064	a	b	c	d	___		087	a	b	c	d	___		
065	a	b	c	d	___		088	a	b	c	d	___		
066	a	b	c	d	___		089	a	b	c	d	___		
067	a	b	c	d	___		090	a	b	c	d	___		
068	a	b	c	d	___		091	a	b	c	d	___		

A N S W E R S H E E T

Multiple Choice (Circle or X your choice)

If you change your answer, write your selection in the blank.

092	a	b	c	d	___
093	a	b	c	d	___
094	a	b	c	d	___
095	a	b	c	d	___
096	a	b	c	d	___
097	a	b	c	d	___
098	a	b	c	d	___
099	a	b	c	d	___
100	a	b	c	d	___

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

NRC RULES AND GUIDELINES FOR LICENSE EXAMINATIONS

During the administration of this examination the following rules apply:

1. Cheating on the examination means an automatic denial of your application and could result in more severe penalties.

2. After the examination has been completed, you must sign the statement on the cover sheet indicating that the work is your own and you have not received or given assistance in completing the examination. This must be done after you complete the examination.

3. Restroom trips are to be limited and only one applicant at a time may leave. You must avoid all contacts with anyone outside the examination room to avoid even the appearance or possibility of cheating.

4. Use black ink or dark pencil ONLY to facilitate legible reproductions.

5. Print your name in the blank provided in the upper right-hand corner of the examination cover sheet and each answer sheet.

6. Mark your answers on the answer sheet provided. USE ONLY THE PAPER PROVIDED AND DO NOT WRITE ON THE BACK SIDE OF THE PAGE.

7. Before you turn in your examination, consecutively number each answer sheet, including any additional pages inserted when writing your answers on the examination question page.

8. Use abbreviations only if they are commonly used in facility literature. Avoid using symbols such as _ or ¢ signs to avoid a simple transposition error resulting in an incorrect answer. Write it out.

9. The point value for each question is indicated in parentheses after the question.

10. Show all calculations, methods, or assumptions used to obtain an answer to any short answer questions.

11. Partial credit may be given except on multiple choice questions. Therefore, ANSWER ALL PARTS OF THE QUESTION AND DO NOT LEAVE ANY ANSWER BLANK.

12. Proportional grading will be applied. Any additional wrong information that is provided may count against you. For example, if a question is worth one point and asks for four responses, each of which is worth 0.25 points, and you give five responses, each of your responses will be worth 0.20 points. If one of your five responses is incorrect, 0.20 will be deducted and your total credit for that question will be 0.80 instead of 1.00 even though you got the four correct answers.

13. If the intent of a question is unclear, ask questions of the examiner only.

14. When turning in your examination, assemble the completed examination with examination questions, examination aids and answer sheets. In addition, turn in all scrap paper.

15. Ensure all information you wish to have evaluated as part of your answer is on your answer sheet. Scrap paper will be disposed of immediately following the examination.

16. To pass the examination, you must achieve a grade of 80% or greater.

17. There is a time limit of four (4) hours for completion of the examination.

18. When you are done and have turned in your examination, leave the examination area (EXAMINER WILL DEFINE THE AREA). If you are found in this area while the examination is still in progress, your license may be denied or revoked.

QUESTION: 001 (1.00)

Deviation from Technical Specifications is allowed under certain circumstances. Assuming that he/she is available, permission for such deviations must be obtained from the:

a. Shift Manager

b. Station Manager

c. Operation Manager

d. Field Supervisor

QUESTION: 002 (1.00)

In which area is transmitting with a portable radio prohibited?

a. Cable Tunnel

b. HPCI Pump Room

c. Security Gate House

d. Diesel Generator Room

QUESTION: 003 (1.00)

Whose authorization is required to be obtained immediately prior to the installation of a Temporary Alteration?

a. Unit Supervisor

b. Licensed System Engineer

c. Shift Manager

d. Operations Manager

QUESTION: 004 (1.00)

You are going to use part of an approved procedure to accomplish a test. The procedure does NOT specify the use of "NA". Which of the following describes the proper action if you want to "NA" some of the steps?

a. Initial and date next to the "NA", a comment is NOT required.

b. You are NOT allowed to do this. You must write a new procedure.

c. Mark the steps as "NA" AND Initial and Dating is NOT required.

d. Initial and date next to the "NA", then provide a comment describing why the step was "NA".

QUESTION: 005 (1.00)

Core flow is 60% of rated, core thermal power is 80%. Power has:

a. NOT exceeded any limits.

b. exceeded the Rod Block setpoint.

c. exceeded the flow bias scram setpoint.

d. exceeded the Safety Limit for this flow.

QUESTION: 006 (1.00)

The Unit 2 reactor is operating at nominal 100% power. You have just relieved the shift, when an APRM DOWNSCALE alarm occurs. Where is it NECESSARY to log this condition, if any?

a. NO log entry necessary

b. Unit 2 Log

c. Control Room Operator's Log

d. Limiting Condition for Operation Log

QUESTION: 007 (1.00)

Who initially functions as the Station Director according to the Generating Station Emergency Plan (GSEP) at the onset of any Emergency Classification?

a. Field Supervisor

b. Shift Manager

c. Operations Manager

d. Unit Supervisor

QUESTION: 008 (1.00)

The _____ is responsible for having an item surveyed for unconditional release prior to removing it from the radiologically controlled area.

a. Field Supervisor

b. Individual Worker

c. Radiation Protection Supervisor

d. Radiation Protection Technician

QUESTION: 009 (1.00)

You have been designated as the spokes person for the up coming local High School tour. You will have the prime escort duties. How many can you escort into the plant?

a. 5 in the Vital Areas, and up to 10 in the Protected Areas.

b. No more than 5 in any area.

c. No more than 10 at any one time.

d. 10 in the Vital Areas, and NO more than 15 in the Protected Areas.

QUESTION: 010 (1.00)

Which of the following is the MINIMUM amount of time that an operator must abstain from consuming alcohol prior to reporting for a scheduled work shift?

a. 3 hrs

b. 5 hrs

c. 8 hrs

d. 12 hrs

QUESTION: 011 (1.00)

During a normal Unit shutdown the Main Steam Line Hydrogen Addition Setpoint Change Select Switch shall be:

a. off, prior to reducing power below 20%.

b. on, prior to reducing power below 20%.

c. off, after power has been reduced to below 20%.

d. on, after power has been reduced to below 20%.

QUESTION: 012 (1.00)

You are in the Unit 2 emergency diesel generator room when the plant's siren is initiated. You hear an alternating tone. What does this alarm mean?

a. Fire Alarm.

b. GSEP Alarm.

c. Cardox Alarm.

d. Radiation Alarm.

QUESTION: 013 (1.00)

A motor operated valve has been operated (cycled) 5 times in the last minute. What is the minimum cooling off time required prior to operating that valve again?

a. 15 minutes

b. 20 minutes

c. 25 minutes

d. 30 minutes

QUESTION: 014 (1.00)

Checking the control room panels following a reactor scram, the NSOs report the following conditions:

- Reactor Mode Switch is in Shutdown.
- ALL Control Rods at 00.
- The scram initiating condition has cleared.
- ALL eight white scram indicating lights are out.
- Reactor water level is being maintained at 30".
- SDV vents and drains valves indicate both open and close position.
- Placing all SDV vents and drains valves control switches to the close position has had NO effect on the double indication.
- The 902-3 panel has a RX BLDG RAD HI alarm up from the East CRD Module Area ARM reading 37 mr/hr.

Based on these conditions, you would...

a. Inhibit ADS.

b. Place Core Spray in PTL.

c. Reset the Reactor scram.

d. Insert a Manual Scram signal.

QUESTION: 015 (1.00)

Given the following conditions:

- The TURB BLDG RAD HI annunciator has alarmed and has been acknowledge by the NSO at the 902-3 panel.
- The ARM in alarm is still above its alarm setpoint.

The annunciator will be able to be reset...

a. ONLY when that ARM's RESET button is depressed on the 902-11 panel.

b. after the ARM BYPASS SWITCH for the ARM in alarm is placed in bypass.

c. ONLY when that ARM's SILENCE button is pressed locally at radiation detector.

d. after acknowledging the annunciator and then depressing the reset push button.

QUESTION: 016 (1.00)

HPCI is being run in the full-flow test mode from CST to CST. If the system is left running in this configuration and NO operator action is taken, what automatic actions will EVENTUALLY occur?

a. The HPCI turbine will trip due to high torus level.

b. HPCI will isolate on high HPCI-area temperature.

c. HPCI Supply valves will swap to take suction from the torus due to high suppression chamber level.

d. NO automatic actions will occur due to the HPCI SYSTEM IN TEST (902-3 H-12) logic being satisfied.

QUESTION: 017 (1.00)

Given the following conditions:

- A Unit 2 shutdown is in progress.
- Due to an obstruction, one RVWLIS backfill line has been OOS for 10 days.

During a normal plant depressurization, you would most likely observe "notching" on the level recorder between RPV pressures of _____ psig and _____psig.

a. 900, 751

b. 750, 601

c. 600, 451

d. 450, 0

QUESTION: 018 (1.00)

During normal plant operation, an operator called the control room and stated that some vapor is showing from the isolation condenser (IC) vent in the reactor building. An investigation reveals that the shell side water temperature is increasing, but the level is NOT changing. Which of the following could be happening in the isolation condenser system?

a. The isolation condenser has developed a tube leak.

b. The condensate return valve to the reactor is leaking.

c. The steam line vent to the "A" main steam line has failed closed.

d. The makeup valve to the shell side of the heat exchanger is leaking.

QUESTION: 019 (1.00)

The MINIMUM Boron concentration that will bring the reactor from full power to a 3% delta K or more subcritical condition with all rods withdrawn is _____ ppm in less than 100 minutes.

a. 700

b. 650

c. 600

d. 550

QUESTION: 020 (1.00)

Given the following conditions:

- Both Units are operating at rated power.
- A fire in the AEER has forced the operators to evacuate the control room.
- ADS is placed to INHIBIT.
- Relief Valve control switches are placed to OFF.

Based on these conditions, what (if anything) will open the ADSV(s)?

a. All valves will remain closed.

b. Removing power to the ADS circuitry.

c. The target rock will operate in safety mode.

d. The target rock will operate in BOTH relief and safety modes.

QUESTION: 021 (1.00)

While operating at 100% power a valid high steam line flow was sensed in the "A" main steam line. Which of the following is the expected MSIV response?

a. All MSIVs will close.

b. Only the MSIVs in main steam line 'A' will close.

c. Only the inboard MSIV in main steam line 'A' will close.

d. Only the inboard MSIVs in all four main steam lines will close.

QUESTION: 022 (1.00)

How are the relief valves connected to the suppression pool?

a. The discharge piping is connected to the bottom of the torus so it sprays up.

b. The discharge piping is connected to the top of the torus so it sprays down.

c. The discharge piping enters the torus through the downcomer and is run below the minimum torus water level.

d. The relief valves discharge directly to the drywell; the safety valves discharge piping is sprayed from the top of the torus

QUESTION: 023 (1.00)

You reduce reactor power from 100% to 95% by decreasing recirculation flow. What signals, if any, did the Electro Hydraulic Control use to move the turbine control valve?

a. Reactor Pressure, Pressure Setpoint.

b. Reactor Pressure, Max Combined Load Limit.

c. None; the turbine control valve did NOT move.

d. Turbine Throttle Pressure, Pressure Setpoint.

QUESTION: 024 (1.00)

Which of the following will automatically reset a Unit 3 Reactor Feedwater Pump (RFP) Runout Flow Control condition?

a. The bypass valve around the FWRV is closed.

b. Feedwater flow drops below the runout setpoint.

c. Reactor water level increases above zero inches.

d. Reactor water level decreases to less than +48 inches.

QUESTION: 025 (1.00)

Given the following conditions:

- A valid initiation signal for Standby Gas Treatment is received.
- Train "A" is in PRIMARY.
- Train "B" is in STANDBY.

Under the existing circumstances, which of the following will initiate Train "B" of the Standby Gas Treatment System?

a. Refueling Floor radiation level of 100 mr/hr.

b. Reactor Building Ventilation radiation level of 4 mr/hr.

c. Low flow condition on Train "A" for 10 seconds.

d. Drywell radiation level of 100 R/hr.

QUESTION: 026 (1.00)

Which of the following is NOT an input to the Standby Gas Treatment System?

a. Unit 2 and 3 Drywells

b. Atmosphere Containment Atmosphere Dilution System

c. Unit 2 and 3 Reactor Building HVAC

d. Turbine Building Ventilation System

QUESTION: 027 (1.00)

A startup is in progress. After the first three control rods were pulled, an electrical fault caused Primary Containment Pressure signals to spike to 3 psig for 2 seconds, then return to normal. How does SBGT respond under these conditions? SBGT will

a. start.

b. NOT start because the mode switch is NOT in run.

c. NOT start because NO Group II Isolation occurred.

d. NOT start because the signal was NOT present past the time delay.

QUESTION: 028 (1.00)

Given the following conditions:

- 0930 Loss of Offsite Power has initially occurred in Unit 2.
- 0931 Bus 23 and 24 are de-energized.
- 0932 Emergency Diesel Generators (DG) 2 and 2/3 automatically start.
- 0935 Unit 2 diesel generator TRIPS.
- 0937 Unit 3 suffers a loss of offsite power and Emergency Diesel Generator 3 starts.
- 0937 NO ECCS signal present on either unit.

Assuming all other systems operates as expected, which of the following pump configuration would be available during this event?

	UNIT 2	UNIT 3
a.	Core Spray Pump A LPCI Pumps A and B	Core Spray Pump B LPCI Pumps C and D
b.	Core Spray Pump B LPCI Pumps C and D	Core Spray Pump A and B LPCI Pumps A, B, C, and D
c.	Core Spray Pumps A and B LPCI Pumps A, B, C, and D	Core Spray Pump A LPCI Pumps C and D
d.	No Core Spray Pumps LPCI Pumps A and B	Core Spray Pumps A and B LPCI Pumps A, B, C, and D

QUESTION: 029 (1.00)

The Unit 3 Diesel Generator was running unloaded for testing when the following annunciator was received.

DIESEL ENGINE CRANKCASE PRESS HIGH

The operator tried to trip the Diesel Generator by placing its local control switch to "STOP" but the diesel failed to shut down. Which of the following is the PREFERRED method to shut down the diesel generator in this condition?

a. Pull on the fuel injector rack handle.

b. Close the emergency fuel shutoff valve.

c. Deenergize the diesel oil transfer pump.

d. Lower the speed droop governor setting to zero.

QUESTION: 030 (1.00)

Given the following conditions;

- The plant is operating at 82% power.
- The NSO has just pulled control rod D-12 from position 24 to position 32.
- A few seconds later a rod drift alarm occurs for control rod D-12.
- After driving the rod to position 00 using EMERG ROD IN, control rod D-12 again starts to drift in the OUT direction.

What could be the cause of this rod drift?

a. The scram outlet valve is leaking.

b. The RMCS timer may have failed.

c. The control rod drive mechanism collet fingers could be stuck.

d. The collet housing has fractured due to Intergranular Stress Corrosion Cracking.

QUESTION: 031 (1.00)

While making a tour of the control room back panels, you notice an alarm light on a RBM channel on top of panel 902-37. The light is labeled, "REF APRM DOWNSCALE". What RBM function is associated with this alarm?

a. Rod Block

b. Automatically bypasses RBM

c. Bypasses Rod Insert Blocks

d. Indication only for the reference APRM at 30% power

QUESTION: 032 (1.00)

Given the following conditions:

- Reactor startup was in progress on Unit 2.
- Operator was withdrawing control rods from 6 to 8.
- Control rod went to position 10.

Which of the following states how the Rod Worth Minimizer (RWM) will affect normal, in-sequence rod movements?

a. All control rods may only move in.

b. The mispositioned rod may move in or out, all other control rods may only move in.

c. The mispositioned rod may only be moved in, all other control rods are blocked from movement.

d. The mispositioned rod may move in or out, all other control rods are blocked from movement.

QUESTION: 033 (1.00)

Given the following conditions:

- Problems with the 2A Recirc Pumps M-G Set caused a trip of the 2A Recirc Pump.
- Unit 2 has been operating in single loop on the 2B Recirc pump for the past 30 minutes.
- The 2B Recirc Pump is operating at 32% speed.
- The 2A Recirc Pump Discharge Valve is open.

Based on these conditions, what are the hazards of continuing operation under the present circumstances?

a. Excessive bottom head cooldown.

b. The idle loop will begin to cool down.

c. This pump speed can lead to excessive jet pump riser vibrations.

d. The inactive jet pumps are undergoing reverse flow, causing water to bypass the core.

QUESTION: 034 (1.00)

The reactor is shut down with one loop of shutdown cooling in use and NO recirc pumps running. How would the Shutdown Cooling System respond if RPV level decreased from +50" to +4"?

a. Shutdown cooling continues unaffected.

b. The shutdown cooling inlet valves isolate, the pumps remain RUNNING.

c. The shutdown cooling inlet and outlet valves isolate, the pumps TRIP on low suction pressure.

d. All shutdown cooling system valves except for the min flow valve isolate, the pumps trip when inlet valves leave the full open position.

QUESTION: 035 (1.00)

Given the following Unit 2 conditions:

- Reactor scrammed, all control rods at 00.
- RPV pressure is 525 psig.
- RPV level is -210 inches.
- Drywell pressure is 14 psig.
- Drywell temperature is 230 deg F.
- LPCI loop select logic has selected the "B" Loop for injection.
- Two (2) minutes have passed since 2-1501-21A, INJ THROT VLV, closed.

Select the condition that must exist before the operator can open the 2-1501-21A valve.

a. RPV level is above -59 inches.

b. Five (5) minutes have passed since 2-1501-21A closed.

c. Keylock switch 2-316A, CNMT SP/TORUS CLG PERMISSIVE, in MANUAL.

d. Keylock switches 2-316A, CNMT SP/TORUS CLG PERMISSIVE, and 2-317A, 2/3 CORE COVERAGE OVERRIDE, in MANUAL.

QUESTION: 036 (1.00)

After LPCI System is aligned in the torus cooling mode, the CCSW System is adjusted to achieve a differential pressure of ...

a. 10 psid with CCSW system pressure greater than LPCI system pressure.

b. 10 psid with LPCI system pressure greater than CCSW system pressure.

c. 20 psid with CCSW system pressure greater than LPCI system pressure.

d. 20 psid with LPCI system pressure greater than CCSW system pressure.

QUESTION: 037 (1.00)

Given the following conditions:

- RPV pressure is 275 psig.
- RPV level is -25 inches.
- Drywell pressure is 17 psig.
- Drywell temperature is 230 degrees.
- Drywell sprays have been initiated.

Which of the following describes the operator's actions required to prevent the drywell pressure from dropping below 0 psig?

a. The drywell spray valves should be manually closed when the drywell drops below 2 psig.

b. Verify the drywell spray valves close automatically when drywell pressure drops below 1 psig.

c. Verify the drywell spray valves close automatically when the drywell pressure reaches 2 psig.

d. The drywell spray valves should be manually closed when the drywell pressure drops below the 9 psig spray initiation limit.

QUESTION: 038 (1.00)

Given the following conditions:

- A LPCI initiation signal of -59".
- RPV pressure less than 350 psig.

What interlocks are required to be met to allow the Drywell and Torus spray valves to be opened?

a. 316 switch (CNMT SP/Torus Clg Permissive) in Manual.
drywell pressure greater than 1 psig.
RPV level greater than 2/3 core height.

b. 318 switch (CCSW Pps Start Permissive) in Manual Override
drywell pressure greater than 1 psig
RPV level greater than 2/3 core height.

c. 317 switch (2/3 Core Coverage Override) in Manual Override
318 switch (CCSW Pps Start Permissive) in Manual Override
Torus pressure greater than 1 psig.

d. 316 switch (CNMT SP/Torus Clg Permissive) in Manual
317 switch (2/3 Core Coverage Override) in Manual Override.

QUESTION: 039 (1.00)

Given the following conditions:

- Unit 3 is in cold shutdown.
- RPV water level below the main steam lines.
- The vessel head is removed.
- Operability check on the main steam relief valves is required.

Which of the following is the reason for NOT doing the operability check at this time?

a. Cycling the valves at atmospheric conditions will damage the valve seats, requiring extensive repair.

b. Cold cycling of the springs on the valves will result in fatigue on the springs, voiding the lifting pressure set points.

c. With the reactor head off, opening the relief valves would violate containment integrity, opening a line to the Suppression Pool.

d. The valves will NOT open, due to insufficient pressure under the valve disk to overcome the spring force on the valve.

QUESTION: 040 (1.00)

Given the following conditions:

- Dresden 2 has just experienced a loss of offsite power.
- Drywell pressure is currently +2.5 psig.
- The diesels fast start.

Which of the following states the timed starting sequence for the emergency bus equipment?

a. When reactor pressure reaches 350 psig AND 8.5 minutes have elapsed from initiation, then the diesel generator breaker closes, then the first low pressure coolant injection (LPCI) pump starts followed by the core spray pump 5 seconds later followed by the second LPCI pump 5 seconds later.

b. When reactor pressure reaches 350 psig AND 8.5 minutes have elapsed from initiation, then the diesel generator breaker closes, then the first LPCI pump starts followed by the second LPCI pump 5 seconds later followed by the core spray pump 5 seconds later.

c. The diesel generator breaker closes within 10 seconds, then the first LPCI pump starts followed by the core spray pump 5 seconds later followed by the second LPCI pump 5 seconds later.

d. The diesel generator breaker closes within 10 seconds, then the first LPCI pump starts followed by the second LPCI pump 5 seconds later followed by the core spray pump 5 seconds later.

QUESTION: 041 (1.00)

Which of the following statements explains how the ESS Bus uninterruptable power supply system provides a continuous source of AC power?

a. Normal power is supplied by bus 25 with alternate power supplied by MCC 28-2 on loss of power to bus 25.

b. Normal power is supplied by bus 29 through a rectifier, and switches automatically to bus 25 on loss of power to bus 29.

c. Normal power is supplied by the Turbine Building 250 VDC with the alternate power supplied by bus 29 through a rectifier.

d. Normal power is supplied by bus 29, and the Turbine Building 250 VDC takes over automatically on loss of power to bus 29.

QUESTION: 042 (1.00)

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

a. A high reactor water level condition.

b. Upscale trips on both RBCCW process radiation monitors.

c. An upscale trip on one reactor building exhaust plenum monitor.

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

QUESTION: 043 (1.00)

The reactor is at 100% power when the following is observered:

- Recirc pump 'A' flow increased 3%
- Recirc pump speeds remained constant.
- Reactor power drops slightly.

You should:

a. Enter the DOA for Jet Pump Failure.

b. Immediately lock the Scoop Tube for A.

c. Immediately restore the flow to its initial value.

d. Enter the DGA for Reactor Core Instabilities.

QUESTION: 044 (1.00)

Which of the following statements correctly describes the operation of the Output Circuit Breakers (OCBs)?

a. OCBs can be tripped from the 902-8 panel anytime.

b. There is NO time delay for the OCBs to open when operated from the 902-8 panel.

c. OCBs must be closed from the 923-2 panel if the Main Transformer disconnect is open.

d. OCBs can only be tripped from the 923-2 panel if a generator reverse power condition is present.

QUESTION: 045 (1.00)

The Unit Supervisor orders you to insert a manual scram because power is unexpectedly increasing. Which of the following responses indicates that the scram has successfully controlled reactivity under all conditions?

a. Reactor power dropping rapidly.

b. 6 rods indicate position 02, remaining rods indicate position 00.

c. 1 rod indicates 48, 1 rod at 10, remaining rods indicate position 00.

d. Panel 902-5 CHANNEL A RX SCRAM and CHANNEL B RX SCRAM alarms lit and Scram Solenoids Group indicating lights A1, A2, B1, and B2 all lit.

QUESTION: 046 (1.00)

The reactor has scrammed due to High Main Steam Line Flow and closure of all MSIVs. Reactor pressure control is vital. Which of the following is the PREFERRED method for controlling reactor pressure under these conditions as described in DOP 1300-03 "Manual Operation of the Isolation Condenser"?

a. Cycle ADSVs.

b. HPCI system in pressure control mode.

c. Max Recycle Reboiler.

d. Main Condenser, after re-opening the MSIVs.

QUESTION: 047 (1.00)

Given the following conditions:

- Unit 2 is at 100% power.
- 2A and 2B RFP's are running
- 2C RFP is OOS

Which of the following actions would be in accordance with DOA-600-01 (Transient Level Control) and effective in recovering level if the 2B RFP trips?

a. Initiate HPCI.

b. Open the Reactor Low Flow Feed Reg Valve.

c. Reduce reactor power with recirculation flow.

d. Shift Main Feed Reg Valves to Manual and raise feed flow.

QUESTION: 048 (1.00)

An unisolable reactor coolant leak on Unit 2 has resulted in a reactor scram and a rapid increase in drywell pressure.

- Reactor building vent radiation is at 3 mr/hr
- Reactor pressure is 775 psig
- Drywell temperature is 155 degrees F
- All rods are inserted
- Drywell pressure 3 psig increasing
- HPCI is maintaining reactor level at 10 inches

Which of the following DEOP(s) groups should be entered?

a. DEOP 0100 (Reactor Control) only

b. DEOP 0100 (Reactor Control) and DEOP 200-01 (Primary Containment Control)

c. DEOP 200-01 (Primary Containment Control) only

d. DEOP 200-01 (Primary Containment Control) and DEOP 300-01 (Secondary Containment Control)

QUESTION: 049 (1.00)

Which of the following conditions would REQUIRE an IMMEDIATE manual reactor SCRAM?

a. One Electromatic relief valve fails open.

b. One recirculation pump trips from 90% or greater power.

c. Six (6) LPRMs are alarming High and Low, with a period of 1.5 seconds.

d. Total core flow is less than 45% of rated and above 80% Flow Control Line (FCL).

QUESTION: 050 (1.00)

Given the following conditions:

- Unit 3 has scrammed.
- DEOP 200 has been entered on Hi Drywell Pressure.
- Torus sprays have been initiated and are failing to control drywell pressure.
- Drywell temperature is 180 deg F and steady.

When drywell pressure reaches 9 psig the operator is to:

a. Stop torus sprays and initiate drywell sprays.

b. Increase torus sprays and trip drywell coolers.

c. Trip recirculation pumps and drywell coolers and initiate drywell sprays.

d. Emergency Depressurize the RPV.

QUESTION: 051 (1.00)

Which of the following Emergency Operating Procedures (EOPs) would be entered if the U2 East RBFD SUMP LVL HI-HI alarm sounded?

a. DEOP 200-1 (Primary Containment)

b. DEOP 200-2 (Primary Containment Hydrogen Control)

c. DEOP 300-1 (Secondary Containment Control)

d. DEOP 400-2 (Emergency Depressurization)

QUESTION: 052 (1.00)

While performing a HPCI operability test, a transient occurs resulting in drywell pressure exceeding 2.0 psig. If LPCI was in the torus cooling mode prior to the transient, which of the following describes the affect this will have on the LPCI system?

a. There will be NO affect on the LPCI system until RPV pressure drops below 350 psig.

b. There will be NO effect on LPCI system operation until RPV pressure drops below 900 psig.

c. All 4 LPCI pumps are running providing maximum torus cooling through the °B' LPCI test valves.

d. Torus cooling valves close, LPCI heat exchanger bypass valve opens, and LPCI is running through the minimum flow valves.

QUESTION: 053 (1.00)

The reactor is operating at full power, when all "Main Steam Line High-High Radiation" alarms annunciate. Highest reactor pressure noted is 1100 psig. Which of the following sets of automatic actions are expected to occur under this condition?

a. The MSIVs shut on high pressure, the reactor scrams on MSIV closure.

b. No automatic actions occur. The operator must respond manually to the annunciator.

c. The MSIVs shut on high pressure, the reactor scrams on steam line High-High radiation.

d. The MSIVs shut on High-High radiation, the reactor scrams on steam line High-High radiation.

QUESTION: 054 (1.00)

Which of the following systems is used to inject Alternate Standby Liquid Control (SLC) boron into the reactor?

a. RWCU system

b. Head Spray line

c. Core Spray line

d. Feed and Condensate system

QUESTION: 055 (1.00)

During an Anticipated Transient Without a Scram on Unit 3, the operators were required to execute level/power control and lowered level to -140 inches. Which of the following is true concerning the subsequent operator actions?

The operator must wait until the SBLC tank level decreases to a level of:

a. 8% before terminating boron injection.

b. 8% before cooling down the RPV per DGP 2-1, "Normal Unit Shutdown."

c. 27% before restoring and maintaining RPV water level between 8 and 48 inches.

d. 35% before restoring and maintaining RPV water level between 8 and 48 inches.

QUESTION: 056 (1.00)

There is a partial loss of AC power. Several of the indications include:

- scoop tube lockout on recirculation MG set
- rod block
- condenser offgas valves close
- RFP minimum flow valves fail open
- a portion of the recorders on panel 902-5 are NOT functioning

What is the cause of the problem?

a. Loss of RPS Bus

b. Loss of 4KV bus

c. Loss of Instrument Bus

d. Loss of Essential Service Bus

QUESTION: 057 (1.00)

Unit 3 is operating at 100% rated power. Which of the following systems would NOT function if unit 2 125 VDC battery power was lost? (Assume all ECCS systems are in normal standby and respond properly.)

a. HPCI

b. Diesel Generator 3

c. Core Spray System I

d. Diesel Generator 2/3

QUESTION: 058 (1.00)

The generator was just synched to the grid during a startup. In rapid succession the following occurred:

- Alarm 902-5 E-8, RPV LVL HI comes in.
- Reactor Feedwater Pumps trip.
- The main turbine trips, but RPV level continues to slowly increase.

How can you use the Reactor Water Cleanup (RWCU) to stop the reactor water level transient? Place RWCU in operation then ...

a. open the BLOWDN TO COND valve and slowly Open the DRN FLOW CONTLR.

b. bypass the high temp out of the NRHX isolation, open BLOWDN TO RW VLV and slowly raise demand on the DRN FLOW CONTLR.

c. verify RWCU system is NOT feeding by setting the DRN FLOW CONTLR demand to zero and open the BLOWDN TO RW VLV and the BLOWDN TO CONDR valves.

d. bypass the Group III Isolation caused by level-high transient, then open the BLOWDN TO COND valve and slowly raise demand on the DRN FLOW CONTLR.

QUESTION: 059 (1.00)

The following conditions exist:

- The reactor is at full power.
- Testing is in progress which adds heat to the torus.
- The torus bulk temperature is increasing.

The required action is to stop testing before exceeding_____ deg F, enter DEOP 200-1 at _____ deg F, and scram a _____ deg F.

a. 95, 95, 105

b. 95, 105, 110

c. 105, 95, 110

d. 105, 105, 110

QUESTION: 060 (1.00)

A relief valve is stuck open and is slowly raising the temperature of the torus. If reactor pressure is 400 psig and torus level is 15 feet, what is the maximum torus temperature allowed before the reactor pressure must be lowered?

a. 175 deg F.

b. 185 deg F.

c. 200 deg F.

d. 210 deg F.

QUESTION: 061 (1.00)

Given the following conditions:

- Unit 2 is operating at 80% power.
- Unit 3 is shutdown for a maintenance outage
- Smoke and noxious odor is coming from the back panels of Unit 2.
- Smoke and odor quickly engulf the control room.
- Shift Supervisor orders IMMEDIATE evacuation of the control room.

Which of the statements below describes the operator actions prior to leaving the control room?

a. Manually SCRAM the reactor using the pushbuttons, reset the scram, notify Security, and place the relief valve control switches to OFF.

b. SCRAM the reactor by placing the mode switch to SHUTDOWN, trip the turbine, trip both recirc pumps, and initiate the Isolation Condenser.

c. Manually SCRAM the reactor using the pushbuttons, place ADS to INHIBIT and the relief valve controls to OFF, initiate the Isolation Condenser, and close the MSIV's.

d. Manually SCRAM the reactor using the pushbuttons, place the mode switch to SHUTDOWN, reset the scram, place ADS to INHIBIT, close the MSIV's and initiate the Isolation Condenser.

QUESTION: 062 (1.00)

Which of the following explains why DEOP 300-2, Radioactive Release Control, directs the operator to restart the Turbine Building Ventilation, if it is shutdown?

a. to maintain a positive pressure inside the turbine building.

b. to reduce the turbine building area and equipment temperatures.

c. to prevent an unmonitored ground level release of radioactivity.

d. to filter the air in the turbine building before release to the environment.

QUESTION: 063 (1.00)

Given the following conditions:

- An obstruction in the normal cooling water supply line to the ECCS Room Coolers (HPCI and Corner Rooms) has caused the rooms to reach abnormally high temperatures.

Which of the following systems can supply a BACK-UP source of cooling water to these room coolers?

a. Service Water

b. Diesel Generator Cooling Water

c. Containment Cooling Service Water (CCSW)

d. Reactor Building Closed Cooling Water (RBCCW)

QUESTION: 064 (1.00)

A loss of instrument air to which of the following will NEVER cause an automatic protective system scram on Unit 2?

a. CRD flow control valves.

b. Feedwater regulating valves.

c. Main Steam Isolation Valves.

d. Steam Jet Air Ejectors suction valves.

QUESTION: 065 (1.00)

Given the following plant conditions:

- Small Break LOCA and ATWS
- Reactor power 25% and oscillating
- Reactor Pressure 900 psig increasing slowly
- Reactor Water Level -60 inches
- Torus Water Temperature 195 deg F increasing
- One LPCI pump in Torus Cooling mode
- All Safety Relief Valves Closed
- Torus water level is 14.5 feet

Which of the following states the required actions?

a. Shift the LPCI pump from Torus Cooling to inject into the core and maintain reactor water level above TAF.

b. Line up to drain the Torus, increase Torus Cooling Water flow, and when water level reaches TAF enter DEOP 400-3, "Steam Cooling".

c. Initiate Emergency Depressurization using all five (5) ADS valves irrespective of loss of reactor water level and adequate core cooling.

d. Manually control reactor pressure at 900 psig by opening one (1) relief valve as necessary and maintain reactor water level above top of active fuel.

QUESTION: 066 (1.00)

Given the following conditions:

- Unit 2 at 100% power
- Alarm 902-4, B-16, DRYWELL PNEU SPLY TROUBLE is received.
- DW SUPPLY VLV AO 2-4722 and AO 2-4723 are closed and will not open.

If one of these can NOT be opened, why will the reactor eventually scram?

a. The inboard MSIVs will close.

b. The drywell pressure will increase to the scram setpoint.

c. The feedwater reg valves will go closed and water level will drop to the scram setpoint.

d. The CRD flow control valves will close and the SCRAM inlet valves will OPEN under spring pressure.

QUESTION: 067 (1.00)

A transient has occurred resulting in an ATWS with a Group I isolation signal. The following conditions have resulted:

- 3 ADS valves were cycled to control pressure.
- SBLC is injecting to reduce power.
- Torus water level is 13 feet.
- RPV pressure is 1000 psig.
- Bulk torus temperature is 175 degrees.
- LPCI system is operating at maximum flow in the torus cooling mode.

Which of the following describes the actions required to control torus temperature?

a. Emergency depressurize the reactor pressure vessel.

b. Lower reactor pressure below the Heat Capacity Temperature Limit.

c. Lower torus temperature below the Heat Capacity Temperature Limit.

d. Operate all available torus cooling regardless of adequate core cooling.

QUESTION: 068 (1.00)

What is the basis of maintaining Reactor water greater than 48" when in Shutdown conditions and NO Recirc pumps are running.

a. Provides a natural circulation flowpath through the steam separators.

b. Provides adequate NPSH to recirc pumps when they are started.

c. Allows the Recirc loop temp recorders to be utilized to measure moderator temperature.

d. This level will NOT interfere with LPCI loop select logic when an initiation signal is received.

QUESTION: 069 (1.00)

Given the following conditions:

- A reactor startup was in progress with the mode switch in STARTUP.
- You had pulled two rods and were pulling the third rod when CRD pump A tripped.
- The accumulator trouble light for the rod you were pulling illuminated.
- You note CRD system pressure is decreasing.

You should cease rod movement and:

a. Immediately scram.

b. Dispatch operator to clear accumulator trouble.

c. Scram if you receive eight more accumulator trouble lights; do NOT start CRD pump B until the problem with first pump resolved.

d. Scram if you receive any two adjacent accumulator trouble alarm lights or if you receive more than eight in any give quadrant; do NOT start CRD pump B until problem with first pump resolved.

QUESTION: 070 (1.00)

Given the following conditions:

- Steam line rupture in the HPCI room with a failure of the Group IV Isolation.
- All personnel have been evacuated from the reactor building.
- HPCI pump room temperature is 215 deg F and radiation level is 125 mr/hr.

Which of the following actions should be taken to control this event?

a. Enter DEOP 300-1, scram the reactor, perform an emergency depressurization then enter DEOP 100.

b. Enter DEOP 300-1, scram the reactor then enter DEOP 100.

c. Enter DEOP 300-1, DEOP 300-2 and DEOP 100.

d. Enter DEOP 300-1, DEOP 300-2 and scram the reactor.

QUESTION: 071 (1.00)

Given the following conditions:

- A small-break LOCA occurred.
- Drywell pressure is 3.0 psig.
- RPS has successfully inserted a reactor scram.
- The Feedwater system is tripped.
- HPCI is maintaining RPV water level.
- Torus water level is 11.5 feet, wide range.

What must be done as a result?

a. HCPI suction must be manually swapped to the CST.

b. An immediate Emergency Depressurization is required.

c. HPCI must be immediately secured irrespective of core cooling.

d. HPCI must be immediately secured unless it is required for core cooling.

QUESTION: 072 (1.00)

Which of the following radiation signals will automatically start the SBGT system?

a. 1000 mr/hr Drywell High Radiation

b. 10 mr/hr Refueling Floor High Radiation

c. 6 mr/hr Off-Gas High High Radiation (post treatment)

d. 4 mr/hr Reactor Building Ventilation High High Radiation

QUESTION: 073 (1.00)

DEOP 300-1 RB/T directs isolation of all systems discharging into the area EXCEPT those needed for Reactor shutdown, Core cooling or fire suppression. Specifically what "systems" does the DEOP intend to isolate as "systems discharging into the area"?

a. ONLY systems that tie to the reactor.

b. All systems passing through the area which are pressurized.

c. Any system that could be the cause of the temperature excursion.

d. Any plant system which indicates, by system parameters or visually, discharging into the area.

QUESTION: 074 (1.00)

Which of the following methods/systems is normally used to refill the fuel storage pool?

a. Align Shutdown Cooling and refill via the spent fuel pool diffusers.

b. Start the second FPCC pump and refill via the spent fuel pool diffusers.

c. Cross connect with Unit 3 FPCC and refill via the spent fuel pool diffusers.

d. From the "A" CST via the condensate transfer pumps and refill through the skimmer surge tank(s).

QUESTION: 075 (1.00)

The plant was operating in a full power lineup at 95% rector power, when the following indications are received:

- RX BLDG VENT CH B RAD HI HI annunciates.
- SBGT actuates.
- RX BUILDING AREA RADIATION LEVELS.
  EAST CRD module 45 mr/hr
  Vessel Inst Rack 35 mr/hr
- RX BULDING AREA TEMPERATURE.
  Shutdown Cooling Pump Room Currently at 190 deg F
  Shutdown Cooling HT Exchanger Room at 185 deg F

What is the proper course of action.

a. Shutdown the reactor and enter DEOP-100.

b. Scram the Reactor and enter DEOP-100, "Reactor Control."

c. Scram the Reactor and initiate Emergency Depressurization, DEOP 400-2.

d. Shutdown the reactor and initiate Emergency Depressurization, DEOP 400-2.

QUESTION: 076 (1.00)

At 5:40 p.m. reactor vessel pressure was 950 psig and stable. Which of the following is correct if the current time is 5:55 p.m. and reactor pressure is 700 psig.

a. If the current trend continues, the Technical Specification cooldown rate limit will NOT be exceeded.

b. If the current trend continues, the Technical Specification cooldown rate limit will be exceeded at 6:10 p.m.

c. If reactor pressure stabilizes at 700 psig, the Technical Specification cooldown rate limit will be exceeded.

d. If reactor pressure stabilizes at 700 psig, the Technical Specification cooldown rate limit will NOT be exceeded.

QUESTION: 077 (1.00)

Given the following conditions:

- A steam line leak has occurred in the drywell.
- Drywell temperature is 289 degrees.
- Drywell temperature has been steadily increasing for 20 minutes at about 5 degrees/min; the trend is NOT reversing.

Which of the following describes the actions required to control containment temperature?

a. Emergency depressurize the RPV.

b. Run drywell coolers ONLY bypassing trips as necessary.

c. Spray the drywell regardless of adequate core cooling.

d. Spray the torus and drywell only if adequate core cooling can be assured.

QUESTION: 078 (1.00)

Regarding procedure adherence, how should you accomplish the Immediate Operator actions of a DOA?

Treat the immediate actions of the procedure as ...

a. Category I steps, which means you get the procedure out and follow them step by step.

b. Category II steps, which means you take the actions the Unit Supervisor will talk you through them.

c. Category II steps, which means you take the actions and MUST follow up with the procedure.

d. Category III steps, which means you take the actions and MAY follow up with the procedure.

QUESTION: 079 (1.00)

Two valve protection when taking equipment OOS is required when system pressure is greater than _____ psig or system temperature is greater than _____ degrees F.

a. 100, 100

b. 200, 150

c. 400, 150

d. 500, 200

QUESTION: 080 (1.00)

You are the SRO in charge of the refuel floor and the vessel head is removed. Which of the following statements is correct concerning the conduct of refueling operations?

a. During shutdown margin checks, personnel in the reactor building must be at least one floor below the level of the fuel loading platform.

b. During refuel interlock checks, personnel in the reactor building must be at least one floor below the level of the fuel loading platform.

c. During refueling operations any personnel may observe the refueling activities without the fuel handling supervisor's permission as long as the door to the refueling floor is NOT locked.

d. During any activity on the refueling floor the door to the refueling floor is locked, EXCEPT during the functional and shutdown margin checks

QUESTION: 081 (1.00)

Concerning the duties of Acting Station Director, which of the following CANNOT be delegated?

a. Notification of State.

b. Contacting Resident Inspector.

c. ENS Notification.

d. Determining PAR recommendations.

QUESTION: 082 (1.00)

During the performance of a reactor shutdown. The Turbine Stop Valve Closure scram will be AUTOMATICALLY bypassed when ...

a. reactor power reaches 30% as sensed by first stage pressure.

b. reactor power reaches 45% as sensed by first stage pressure.

c. reactor pressure reaches 600 psig.

d. reactor pressure reaches 800 psig.

QUESTION: 083 (1.00)

Unit 2 is operating at 100% rated power when a spurious scram on RPS Channel A occurs. The operator observes the following:

the indicating lights for scram solenoid groups A1, A2, and A3 are ILLUMINATED.

the indicating lights for scram solenoid group for A4 is EXTINGUISHED.

Which of the following states the percentage of control rods that will insert into the core, if the operator inadvertently depresses the RPS Channel B manual scram button while implementing DOA 0500-2, Partial 1/2 or Full Scram Actuation?

a. 100%

b. 75%

c. 50%

d. 25%

QUESTION: 084 (1.00)

Which of the following describes the process that is used in the charcoal beds to reduce the off-gas radioactive isotopes being released to the environment?

a. Hydrogen gas isotopes are removed using recombination with a catalyst and then condensation.

b. Radioactive particulates are removed using high efficiency filtration.

c. Nitrogen gas isotopes are removed using holdup and decay.

d. Noble gas isotopes are removed using adsorption and decay.

QUESTION: 085 (1.00)

Given the following plant conditions:

- Reactor level -130 inches and slowly increasing.
- Torus level 8 feet.
- ECCS systems initiated automatically and are operating as expected.
- HPCI isolated on low reactor pressure.
- LPCI injection flow 19500 gpm.
- A Core Spray injection flow 5000 gpm.
- B Core Spray injection flow 5000 gpm.
- NO operator action has been taken for ECCS systems.

The expected operator response is to:

a. maintain current injection flows.

b. bypass interlocks and restart HPCI.

c. open the LPCI heat exchanger bypasses.

d. reduce ECCS injection flow to below ECCS Vortex Limit.

QUESTION: 086 (1.00)

Which of the following is the Unit 2 plant response to a complete loss of instrument air pressure?

a. Level in the main condenser hotwell should remain the same because the MAKEUP valves are failing CLOSED and the REJECT valves are failing CLOSED.

b. SBGT system discharge flow rate would DECREASE since the SUCTION FLOW CONTROL VALVES will fail CLOSED.

c. The Reactor Recirculation Motor Generator oil coolers will overheat because the service water TEMPERATURE CONTROL VALVES to the oil coolers will fail CLOSED.

d. The reactor will scram on high reactor pressure or high reactor flux because all the INBOARD MSIVs will fail CLOSED.

QUESTION: 087 (1.00)

A transient is in progress on Unit 3 that is causing Torus Water level to INCREASE. The operating crew is executing DEOP 200-1, Primary Containment Control. Which of the following is the adverse condition that is prevented by maintaining Torus Water level below the SRV Tail Pipe Level Limit in accordance with DEOP 200-1?

a. Failure of the SRV tailpipes and quenchers due to rapid evacuation of water in the tail pipe during SRV operation.

b. Failure of primary containment due to rapid blowdown of water in the SRV tailpipe.

c. Damage to the lower region of the Torus due to exceeding the maximum allowed Torus Bottom Pressure Limit.

d. Overpressurization of the torus during rapid reactor depressurization.

QUESTION: 088 (1.00)

Which of the following is a correct response when all shutdown cooling pumps are lost?

a. Maximize reactor water cleanup flow.

b. Minimize reactor water cleanup flow.

c. Decrease the number of drywell coolers in operation.

d. Decrease reactor water cleanup blowdown flow from 100 to 0.

QUESTION: 089 (1.00)

Given the following plant conditions:

- An ATWS is in progress
- Reactor power has stabilized at a steady state value of 5.0% on the APRMs (5.0% = 140 MWth).
- All Electromatic Relief Valves are operable.

Determine how many Electromatic Relief Valves, if any, must be opened to maintain reactor pressure relatively constant.

a. 0

b. 1

c. 2

d. 3

QUESTION: 090 (1.00)

Unit 3 is experiencing a LOCA. The following condition exists:

- reactor shutdown
- drywell pressure 10 psig
- drywell temperature 350 deg F
- reactor pressure 75 psig
- reactor water level -70 inches
- reactor building temperature is 105 deg F

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

a. Drywell pressure is excessive.

b. Actual RPV level is below indicating levels.

c. Reactor Building temperature is excessive.

d. Drywell temperature is excessive.

QUESTION: 091 (1.00)

Unit 2 is operating at 100% power. During his afternoon rounds, the High Voltage Operator (HVO) reports that the Core Spray Line Break Detection dp is reading -4.7" H20. This reading indicates:

a. A possible line break between the vessel and the core shroud.

b. A possible line break between the vessel top plate and the core shroud.

c. The core spray line break detection is operating normally.

d. The core spray line break detection is reading higher because reactor power is above 80%.

QUESTION: 092 (1.00)

Given the following conditions...

- Unit 2 is operating at 100% power.
- All Status LEDs on the 902-5 FWLC Control Stations start to flash.

What caused the LEDs to respond in this manner?

a. Position to demand error greater than 10% for 15 seconds.

b. All RPV water level indications becoming bad quality.

c. Valve position feedback signal becoming bad quality.

d. Loss of communications between the Control Stations and the backpanel.

QUESTION: 093 (1.00)

Given the following:

- Unit 2 is at 75% power
- AT 0600 Control rod movements per QNE were completed
- Control rod J-08 in-sequence position is "36"
- At 0715 Control rod J-08 is discovered at position "30"

The operator should immediately:

a. withdraw the control rod to its in-sequence position and notify a QNE.

b. stop all control rod movements and recirc flow changes and contact the Unit Supervisor.

c. reduce recirc flow 50 MWe then contact a QNE.

d. insert the control rod to position "00" then contact a QNE.

QUESTION: 094 (1.00)

Which of the following conditions describes a refueling interlock?

a. The refueling platform fuel grapple is loaded and the platform is moving towards the core when the fuel grapple "fully raised" limit picks up, stopping all refueling platform movement.

b. The refueling platform is moving towards the core when the mode switch is moved from SHUTDOWN to REFUEL position, stopping refueling platform movement towards the core.

c. The refueling platform is prevented from moving over the core when the mode switch is in STARTUP position.

d. The refueling platform is prevented from moving over the core when the mode switch is in STARTUP, only when all control rods are seen as NOT fully inserted.

QUESTION: 095 (1.00)

Which of the following is the expected plant response if the 4KV BUS 24-1 VOLTAGE DEGRADED alarm is received?

a. Plant will continue to operate in degraded voltage state until operator takes action.

b. Bus 24-1 supply breakers will open immediately, and unit 2 Diesel Generator will re-energize the bus.

c. If the degraded voltage condition continues for five (5) minutes, Bus 24-1 will shed from Bus 24.

d. The Unit 2 Diesel Generator will start immediately. If the degraded voltage condition continues for five (5) minutes, Bus 24-1 will shed from Bus 24.

QUESTION: 096 (1.00)

Which of the following control circuits will be DIRECTLY affected by a FUEL ZONE Level instrument failure?

a. Containment Spray logic.

b. LPCI initiation.

c. FWLC system.

d. Alternate rod insertion.

QUESTION: 097 (1.00)

Which of the following sets of parameters is an indication of an offgas fire? Sudden _____ in Steam Jet Air Ejector flow and sudden _____ in recombiner temperature.

a. INCREASE, RISE

b. DECREASE, DROP

c. INCREASE, DROP

d. DECREASE, RISE

QUESTION: 098 (1.00)

Unit 2 on line when reactor recirculation pump 2A trips. The IMMEDIATE OPERATOR ACTIONS of DOA 202-1, Reactor Recirculation Pump Trip require...

a. A reactor scram if FCL is greater than or equal to 90%.

b. A reactor scram if 2B pump speed is greater than or equal to 70%.

c. Running the 2B pump speed to 43%.

d. A reactor scram if the FCL is greater than or equal to 100% and 2B pump speed is greater than or equal to 60%.

DELETE

QUESTION: 099 (1.00)

While at 90% power condenser vacuum is observed to be decreasing. Which of the following states the expected plant response that would occur if vacuum further decreases without operator action?

a. The turbine will trip at 20" Hg vacuum which will cause a reactor scram.

b. The turbine will trip at 21" Hg vacuum resulting in a generator load reject and actuation of the select rod insert.

c. The turbine will trip and the reactor will scram from a turbine control valve fast closure at 20" Hg vacuum

d. The turbine will trip after the reactor scrams at 21" Hg vacuum.

QUESTION: 100 (1.00)

Unit 2 suffered an inadvertent MSIV isolation which generated a scram signal resulting in the following conditions:

- Approximately 25% of the control rods partially or fully inserted and the rest remained at their original at-power position.
- Reactor power is currently at 15% with both recirc pumps tripped.
- RPV water level is +15 inches.
- RPV pressure is 1120 psig with ADSV's cycling.
- Torus water temperature is currently 90 deg F and increasing.
- Drywell pressure is 1 psig.

Which of the following DEOPs must be currently entered/executed?

a. 100 "Reactor Control"
200 "Primary Containment Control"
400-5 "Failure to Scram".

b. 100 "Reactor Control"
400-5 "Failure to Scram".

c. 100 "Reactor Control"
200 "Primary Containment Control".

d. 200 "Primary Containment Control"
400-5 "Failure to Scram".

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

ANSWER: 001 (1.00)

a.

REFERENCE:

DAP 09-13, section F.4.b, page 8 of 12, 10 CFR 50.54(x)
294001A102 ..(KA's)

ANSWER: 002 (1.00)

a.

REFERENCE:

DAP 1-11, Rev. 02, page 2 of 9
294001A104 ..(KA's)

ANSWER: 003 (1.00)

a.

REFERENCE:

DAP 07-04, Rev 20, sec 2, 6
294001A103 ..(KA's)

ANSWER: 004 (1.00)

d.

REFERENCE:

DAP 9-13
294001A102 ..(KA's)

ANSWER: 005 (1.00)

a.

REFERENCE:

T.S. Figure 2.1-3, APRM FLOW BIAS SCRAM RELATIONSHIP TO NORMAL OPERATING CONDITIONS, Amend. 95.
NOTE: Above figure required to solve question.
294001A108 ..(KA's)

ANSWER: 006 (1.00)

b.

REFERENCE:

DAP 7-5, Operating Logs and Records. page 10
294001A106 ..(KA's)

ANSWER: 007 (1.00)

b.

REFERENCE:

DAP 7-1, rev 12, sec 4
294001A116 ..(KA's)

ANSWER: 008 (1.00)

b.

REFERENCE:

TH-HP-CH5-EKO-11, Rev. 0
294001K103 ..(KA's)

ANSWER: 009 (1.00)

b.

REFERENCE:

DAP 13-10, Escort Duties
294001K102 ..(KA's)

ANSWER: 010 (1.00)

b.

REFERENCE:

DAP 13-17, Supervisor's Fitness For Duty Responsibilities
10 CFR 26
294001K105 ..(KA's)

ANSWER: 011 (1.00)

a.

REFERENCE:

T.S. Table 3.2.1
294001K115 ..(KA's)

ANSWER: 012 (1.00)

a.

REFERENCE:

Dresden N-GET, p. 18.
DAP 3-1
294001K116 ..(KA's)

ANSWER: 013 (1.00)

d.

REFERENCE:

DOP 040-01.
294001K107 ..(KA's)

ANSWER: 014 (1.00)

c.

REFERENCE:

DEOP 0300-01
201001K202 ..(KA's)

ANSWER: 015 (1.00)

b.

REFERENCE:

272L-S1, Dresden Exam Bank
272000G008 ..(KA's)

ANSWER: 016 (1.00)

c.

REFERENCE:

206L-S1, High Pressure Coolant Injection, p. 45
206000A104 ..(KA's)

ANSWER: 017 (1.00)

d.

REFERENCE:

LP 216L-S1, Dresden exam bank
216000A211 ..(KA's)

ANSWER: 018 (1.00)

b.

REFERENCE:

Dresden Lesson Plan, Isolation Condenser 207L-S1 8-92, Pg. 19.
207000K109 ..(KA's)

ANSWER: 019 (1.00)

c.

REFERENCE:

Tech Specs Bases, B 3/4.4-6, Amendment No. 82
211000K503 ..(KA's)

ANSWER: 020 (1.00)

c.

REFERENCE:

LP 239L-S1
LP 218L-S1
218000K401 ..(KA's)

ANSWER: 021 (1.00)

a.

REFERENCE:

Dresden Lesson Plan 223L-S2, Section II.4 (page 9A), Objective 2b.
DAN 902(3)-5 C-9, "CHANNEL A MN STM LINE FLOW HI"
223002K101 ..(KA's)

ANSWER: 022 (1.00)

c.

REFERENCE:

239L-S1, Main Steam System, Rev. 16, p. 9.
239002K107 ..(KA's)

ANSWER: 023 (1.00)

d.

REFERENCE:

241L-S1, EHC Pressure Control and Logic System, Rev. 01, p. 5.
241000A407 ..(KA's)

ANSWER: 024 (1.00)

c.

REFERENCE:

DOA 0600-01, Rev. 11, Section B.2.a (page 3 of 7).
Dresden Lesson Plan 259L-S2, Section III.A.6.b.4) (page 14A), Objective 8a.
259002A405 ..(KA's)

ANSWER: 025 (1.00)

c.

REFERENCE:

DSLP 40, Secondary Containment, page 13
261000A301 ..(KA's)

ANSWER: 026 (1.00)

d.

REFERENCE:

DSLP 40, Secondary Containment
261000K101 ..(KA's)

ANSWER: 027 (1.00)

a.

REFERENCE:

261L-S1, Standby Gas Treatment, Rev. 3, p. 10.
261000K609 ..(KA's)

ANSWER: 028 (1.00)

a.

REFERENCE:

DSLP 2, rev 0, AC Distribution
DSLP 4, rev 0, Diesels
264000K303 ..(KA's)

ANSWER: 029 (1.00)

a.

REFERENCE:

DOP 6600-03, Rev. 11, Section F.2 (page 4 of 10).
Dresden Lesson Plan 264L-S1, Section D.6 (page 22), Objective 10b.
264000G010 ..(KA's)

ANSWER: 030 (1.00)

c.

REFERENCE:

DOA 0300-07
201003A203 ..(KA's)

ANSWER: 031 (1.00)

b.

REFERENCE:

Dresden lesson plan, RBM , sec B and C
215002A305 ..(KA's)

ANSWER: 032 (1.00)

c.

REFERENCE:

Dresden Lesson Plan 201L-S6, Rod Worth Minimizer, Rev. 01, p. 8A.
201006K510 ..(KA's)

ANSWER: 033 (1.00)

b.

REFERENCE:

202L-S1
DGP 3-3.
202001A113 ..(KA's)

ANSWER: 034 (1.00)

c.

REFERENCE:

205L-S1, Shutdown Cooling (SDC), Rev. 2, p. 8.
205000A209 ..(KA's)

ANSWER: 035 (1.00)

d.

REFERENCE:

12E-2437 sh. 2, 12E-2437A, 12E-2438A,12E-2439, 12E-2441 sh. 3
DOP 1500-02
219000A214 ..(KA's)

ANSWER: 036 (1.00)

c.

REFERENCE:

DOP 1500-2, Rev 13, page 6
219000A405 ..(KA's)

ANSWER: 037 (1.00)

a.

REFERENCE:

DEOP 200
226001A403 ..(KA's)

ANSWER: 038 (1.00)

a.

REFERENCE:

LPCI System LP 203L-SI
230000A406 ..(KA's)

ANSWER: 039 (1.00)

d.

REFERENCE:

239L-S1
239001K125 ..(KA's)

ANSWER: 040 (1.00)

d.

REFERENCE:

Dresden Lesson Plan, Low Pressure Coolant Injection 203L-S1, Pg. 22.
262001K602 ..(KA's)

ANSWER: 041 (1.00)

d.

REFERENCE:

Dresden Lesson Plan, AC Electrical Distribution Section 3.C.3
262002K401 ..(KA's)

ANSWER: 042 (1.00)

c.

REFERENCE:

Containment Isolation lesson plan
288000K105 ..(KA's)

ANSWER: 043 (1.00)

a.

REFERENCE:

DOA 0201-01, Jet Pump Failure, Rev. 05, p. 2.
DAP 07-01, Conduct of Operations, Rev. 15, step B.9.c.(4)
290002G015 ..(KA's)

ANSWER: 044 (1.00)

c.

REFERENCE:

262L-S1
295005A107 ..(KA's)

ANSWER: 045 (1.00)

b.

REFERENCE:

DGP 02-03, Unit 2/3 Reactor Scram, Rev. 18, p. 4.
295006K103 ..(KA's)

ANSWER: 046 (1.00)

b.

REFERENCE:

DOP-1300-03
295007K302 ..(KA's)

ANSWER: 047 (1.00)

c.

REFERENCE:

DOA 600-01, Rev 09, B.1.a and C.1
295009G010 ..(KA's)

ANSWER: 048 (1.00)

b.

REFERENCE:

DEOP 1 and DEOP 2 entry conditions
295010G011 ..(KA's)

ANSWER: 049 (1.00)

c.

REFERENCE:

DGA-2, Rev 2, sec C
DOA 250-1, Rev 7, sec C
DOA 202-01, Rev 7, sec C
295014G010 ..(KA's)

ANSWER: 050 (1.00)

c.

REFERENCE:

DEOP's Containment Control 200 Series lesson plan pg 21
295024A111 ..(KA's)

ANSWER: 051 (1.00)

c.

REFERENCE:

Dresden EOPs, DEOP 300-1 Secondary Containment Control.
295024G011 ..(KA's)

ANSWER: 052 (1.00)

d.

REFERENCE:

DOP 1500-02
295024K212 ..(KA's)

ANSWER: 053 (1.00)

d.

REFERENCE:

Tech Specs 1.1
295025K202 ..(KA's)

ANSWER: 054 (1.00)

d.

REFERENCE:

DEOP 0500-01, Rev 0, sec I, p. 4 of 19
295037K213 ..(KA's)

ANSWER: 055 (1.00)

d.

REFERENCE:

Failure to Scram DEOP 400-5
295037K304 ..(KA's)

ANSWER: 056 (1.00)

d.

REFERENCE:

DAN 902(3)-8 B-08 and DOA 6800-01
295003A201 ..(KA's)

ANSWER: 057 (1.00)

b.

REFERENCE:

DOA 6900-3, Rev 02, p. 3, Item B.2.e
295004A202 ..(KA's)

ANSWER: 058 (1.00)

a.

REFERENCE:

DAN 902(3)-5 E-8, RPV LVL HI
DOA 0600-01, TRANSIENT LEVEL CONTROL, Rev. 09A, p. 3.
DOP 1200-02, RWCU SYSTEM BLOWDOWN, Rev. 03, pp. 2-5.
204L-S1, Reactor Water Cleanup (RWCU), Rev. 15, p. 22.
295008K209 ..(KA's)

ANSWER: 059 (1.00)

c.

REFERENCE:

DEOP 200-1, and lp 200-1, obj 8
TS 3.7.A.c pg 3/4.7-2
295013A102 ..(KA's)

ANSWER: 060 (1.00)

c.

REFERENCE:

DEOP 200-01
295013G011 ..(KA's)

ANSWER: 061 (1.00)

c.

REFERENCE:

DSSP 100-CR
295016G010 ..(KA's)

ANSWER: 062 (1.00)

c.

REFERENCE:

Lesson Plan, DEOP 300-2, Radioactive Release Control, Section III.C.2,
295017K302 ..(KA's)

ANSWER: 063 (1.00)

b.

REFERENCE:

276L-S1
295018A102 ..(KA's)

ANSWER: 064 (1.00)

a.

REFERENCE:

DOA 4700-01, pgs 9 and 10 sect 2.a,b.e.n
295019K201 ..(KA's)

ANSWER: 065 (1.00)

c.

REFERENCE:

DEOP 200-1, Rev. 02, LP 295L-S2, Sec. II B.6, Obj. 3b
295026K301 ..(KA's)

ANSWER: 066 (1.00)

a.

REFERENCE:

DAN 902(3)-4 B-16, DRYWELL PNEU SPLY TROUBLE, Rev. 02, pp. 1-2.
295020K301 ..(KA's)

ANSWER: 067 (1.00)

b.

REFERENCE:

DEOP 200-01
295026A203 ..(KA's)

ANSWER: 068 (1.00)

a.

REFERENCE:

205L-S1
295021A203 ..(KA's)

ANSWER: 069 (1.00)

a.

REFERENCE:

DOA 0300-01, Control Rod Drive System Failure, Rev. 09A, p. 2.
295022A102 ..(KA's)

ANSWER: 070 (1.00)

b.

REFERENCE:

Dresden EOPs, DEOP 300-1 Secondary Containment Control.
295032G012 ..(KA's)

ANSWER: 071 (1.00)

c.

REFERENCE:

DEOP 200-1, Primary Containment Control, Rev. 02.
DEOP's Containment Control 200 Series, Rev. 1, Objective 5.
295030K201 ..(KA's)

ANSWER: 072 (1.00)

d.

REFERENCE:

261L-S1, Rev 2. p. 10 of 17
295034K203 ..(KA's)

ANSWER: 073 (1.00)

c.

REFERENCE:

DEOP 300-1
295036A102 ..(KA's)

ANSWER: 074 (1.00)

d.

REFERENCE:

Fuel Pool Cooling and Cleanup System Lesson Plan, Rev 10; pp.11
295023A102 ..(KA's)

ANSWER: 075 (1.00)

c.

REFERENCE:

DEOP 300-1
295032G011 ..(KA's)

ANSWER: 076 (1.00)

d.

REFERENCE:

DSSP 100-T11
295016A108 ..(KA's)

ANSWER: 077 (1.00)

a.

REFERENCE:

DEOP 200-01
295028A105 ..(KA's)

ANSWER: 078 (1.00)

c.

REFERENCE:

DAP 9-13
294001A109 ..(KA's)

ANSWER: 079 (1.00)

d.

REFERENCE:

DAP 3-5
294001K102 ..(KA's)

ANSWER: 080 (1.00)

a.

REFERENCE:

DFP 800-1, Rev 26, Page 5 of 27.
294001A110 ..(KA's)

ANSWER: 081 (1.00)

d.

REFERENCE:

EPIP 100-01
294001A116 ..(KA's)

ANSWER: 082 (1.00)

b.

REFERENCE:

DSLP 25, Main Turbine
212000A211 ..(KA's)

ANSWER: 083 (1.00)

d.

REFERENCE:

212L-S1 4-89, Pg.7.
DEOP 0500-2, Partial 1/2 or Full Scram Actuation, pp 2
212000K106 ..(KA's)

ANSWER: 084 (1.00)

d.

REFERENCE:

Dresden Lesson Plan, Off-Gas 271L-S1 8-31-92, PG. 10.
271000K508 ..(KA's)

ANSWER: 085 (1.00)

d.

REFERENCE:

DEOP 100
295030K204 ..(KA's)

ANSWER: 086 (1.00)

a.

REFERENCE:

278L-S1, Instrument Air System, pp 20, Objective 11a
DOA 4700-1, Instrument Air System Failure, pp 4 and 5
295019K212 ..(KA's)

ANSWER: 087 (1.00)

b. and a.

REFERENCE:

295L-S2, Rev 1, Objective 2e, p. 25 of 38
295029K206 ..(KA's)

ANSWER: 088 (1.00)

a.

REFERENCE:

Dresden Exam Bank
295021K304 ..(KA's)

ANSWER: 089 (1.00)

b.

REFERENCE:

DOA 1000-01
218000G005 ..(KA's)

ANSWER: 090 (1.00)

d.

REFERENCE:

DEOP 100, Rev 02, Detail 100-A
295031K101 ..(KA's)

ANSWER: 091 (1.00)

a.

REFERENCE:

DAN 902(3)-3 E-05
209001A205 ..(KA's)

ANSWER: 092 (1.00)

d.

REFERENCE:

DAN 902-6 H03
259002K607 ..(KA's)

ANSWER: 093 (1.00)

b.

REFERENCE:

DOA 300-12
Obj. C938-01-03
201001G001 ..(KA's)

ANSWER: 094 (1.00)

c.

REFERENCE:

DOS 800-01
234000K401 ..(KA's)

ANSWER: 095 (1.00)

c.

REFERENCE:

DGA 12
DAN 902-8 H10
DAN 902-8 E03
262001A211 ..(KA's)

ANSWER: 096 (1.00)

a.

REFERENCE:

Dresden Lesson Plan, Nuclear Boiler Instrumentation 261L-S1 4-89, Pg. 18
216000K305 ..(KA's)

ANSWER: 097 (1.00)

b.

REFERENCE:

Dresden Lesson Plan 271L-S1, Obj. 2d
DAN 902(3)-7,C13
DOP 5400-14.
295017A102 ..(KA's)

ANSWER: 098 (1.00)

d. delete - NO CORRECT ANSWER

REFERENCE:

DOA 202-1, Rev 07, p. 2 of 7
295001A101 ..(KA's)

ANSWER: 099 (1.00)

d.

REFERENCE:

245L-S1, Rev 1, p. 35 of 44
212L-S1, Rev 0, p. 16 of 35
295002K103 ..(KA's)

ANSWER: 100 (1.00)

b.

REFERENCE:

295L-S8
295015G011 ..(KA's)

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

A N S W E R K E Y

MULTIPLE CHOICE

001	a
002	a
003	a
004	d
005	a
006	b
007	b
008	b
009	b
010	b
011	a
012	a
013	d
014	c
015	b
016	c
017	d
018	b
019	c
020	c
021	a
022	c
023	d
024	c
025	c
026	d
027	a
028	a
029	a
030	c
031	b
032	c
033	b
034	c
035	d
036	c
037	a
038	a
039	d
040	d
041	d
042	c
043	a
044	c
045	b

A N S W E R K E Y

046	b	069	a
047	c	070	b
048	b	071	c
049	c	072	d
050	c	073	c
051	c	074	d
052	d	075	c
053	d	076	d
054	d	077	a
055	d	078	c
056	d	079	d
057	b	080	a
058	a	081	d
059	c	082	b
060	c	083	d
061	c	084	d
062	c	085	d
063	b	086	a
064	a	087	b and a
065	c	088	a
066	a	089	b
067	b	090	d
068	a	091	a

A N S W E R K E Y

092 d

093 b

094 c

095 c

096 a

097 b

~~098 d~~ delete

099 d

100 b

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