U. S. NUCLEAR REGULATORY COMMISSION

REGION III

Report No. 50-237/OL-95-01, 50-249/OL-95-01

Docket Nos. 50-237; 50-249

License Nos. DPR-19; DPR-25

Licensee: Commonwealth Edison Company
Opus West III
1400 Opus Place - Suite 300
Downers Grove, IL 60515

Facility Name: Dresden Nuclear Power Station, Units 2 and 3

Examination Administered At: Morris, IL

Examination Conducted: Week of February 13, 1995

Examiner: E. Plettner, NRC Region III

Chief Examiner: E. Plettner 3/21/95
E. Plettner Date

Approved By: E Plettner for 3/21/95
M. J. Jordan, Chief Date
Operator Licensing Section 1

Examination Summary

Examinations were administered during the week of February 13, 1995 (Report No. 50-237/OL-95-01, 50-249/OL-95-01): Retake written examinations were given to two individuals applying for Reactor Operator (RO) licenses. One additional individual was applying for a Limited Senior Reactor Operator (LSRO) license and was scheduled for both a written and operating exam.
Initial Licensed Operator Examination Results:
All individuals taking the written examination (RO and LSRO) passed. The two RO's were issued a license on February 27, 1995. The LSRO was scheduled to complete the operating portion of the exam on March 20, 1995. On March 16 the NRC received your letter (95-0031) requesting the LSRO application for license be withdrawn. This resulted in denying the LSRO candidate a license.

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

R. Weidner, Training Supervisor (Acting Service Director)
J. Kluch, Operations Training Supervisor
J. Hech, Operations Training Instructor

An exit meeting was conducted via the phone on March 20, 1995.

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.

a. Written Examination

The initial RO retake license examination given was a standard 100 question examination as prescribed by NUREG 1021, Revision 7. The initial LSRO license examination given was a standard 50 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 via the phone to discuss the results of the exam on March 20, 1995. 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: MASTER

FACILITY: Dresden 2 & 3

REACTOR TYPE: BWR-GE3

DATE ADMINISTERED: 95/02/13

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

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)

While you are in one of the emergency diesel generator rooms, you hear a loud alternating wavering tone over the public address system. What does it mean?

a. Fire Alarm.

b. GSEP Alarm.

c. Cardox Alarm.

d. Radiation Alarm.

QUESTION: 002 (1.00)

Which of the following statements provides guidance concerning Daily Orders, Operating Orders and approved procedures, when they provide conflicting information?

a. Daily Orders take precedence over Operating Orders, but NOT approved procedures.

b. Operating Orders take precedence over Daily Orders, but NOT over approved procedures.

c. Daily Orders take precedence over Operating Orders, but only during the time frame that the Daily Orders are valid.

d. Operating Orders and Daily Orders take precedence over approved procedures, but only for the time frame that the Orders are valid.

QUESTION: 003 (1.00)

While reviewing a surveillance to be done on one of the Emergency Diesel Generators, you as NSO determine that a specific step is NOT applicable to present plant conditions. The surveillance lacks clearly stated conditions for the use of N/A. What should you do?

a. Follow the procedure verbatim until a temporary procedure change can be implemented.

b. Mark the specific step N/A, initial and date it and then continue with the procedure.

c. Have the Unit Supervisor waive the specific step by marking it N/A, with a comment, and initialing and dating the comment.

d. Report the condition to the Unit NSO, receive his concurrence the specific step is NOT applicable, and continue with the procedure.

QUESTION: 004 (1.00)

You are assigned to perform independent verifications in the plant using the Apart in Time technique. Part of the system you are verifying is in a high dose area. You may skip verifying that part if:

a. you have permission from the Shift Manager.

b. the area is locked due to high radiation levels.

c. you determine the cumulative exposure would be greater than 100 mrem.

d. you determine the cumulative exposure would be greater than 10 mrem and you contact the Shift Operations Supervisor by the next working day.

QUESTION: 005 (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: 006 (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: 007 (1.00)

Your schedule is:

Thursday - Day off
Friday - Day off
Saturday - 6 am to 2 pm
Sunday - 6 am to 2 pm
Monday - 6 am to 6 pm
Tuesday - 6 am to 6 pm
Wednesday- 6 am to _?_

How late can you work on Wednesday without exceeding any overtime restrictions? (turnover time is NOT included)

a. Noon

b. 4:00 pm

c. 6:00 pm

d. Midnight

QUESTION: 008 (1.00)

The NSO is contacted by Bulk Power Operations (BPO) and requests a load increase from 90% to 100% power be performed immediately. Which of the following communications is correct?

a. NSO notifies the QNE who then notifies the BPO. QNE notifies BPO when the load change begins and upon completion.

b. NSO notifies the Unit Supervisor who then approves the load change. NSO notifies BPO when the load change is completed.

c. NSO notifies the Unit Supervisor, the Unit Supervisor notifies the BPO of his/her approval for the load change. Unit Supervisor notifies BPO when the load change is complete.

d. NSO notifies the BPO that the change is in progress. When the increase is complete the NSO notifies the Unit Supervisor who then notifies BPO of the completed power change.

QUESTION: 009 (1.00)

An area with radiation levels of 120 mrem per hour should be posted as:

a. Caution - Radiation Area

b. Caution - Restricted Area

c. Danger - High Radiation Area

d. Caution - Radiologically Posted Area

QUESTION: 010 (1.00)

You are establishing the conditions necessary for refueling. The Steam Dryer has just been removed. How is ALARA maintained after the removal and prior to flooding all cavities?

a. Workers are issued respirators.

b. The dryer is wrapped in plastic.

c. The dryer is dried off and cleaned.

d. The dryer is kept wet by sprayers in the Dryer-Separator Pit.

QUESTION: 011 (1.00)

A motor operated valve has been operated (started) 5 times in the last minute. What is the MINIMUM cooling off time required prior to operating that valve again? (Assume no accident conditions exist.)

a. 10 minutes

b. 20 minutes

c. 30 minutes

d. 40 minutes

QUESTION: 012 (1.00)

You must enter the drywell to assess a leaking valve just after a scram. Which of the following air qualities is the MINIMUM acceptable for entry?

a. 10 % oxygen

b. 15 % oxygen

c. 20 % oxygen

d. 25 % oxygen

QUESTION: 013 (1.00)

To assure that there is never an explosive mixture of gas in the Generator during filling it is purged with ...

a. Hydrogen before being purged with Air.

b. Air before being purged with Hydrogen.

c. Nitrogen before being purged with Hydrogen.

d. Carbon Dioxide before being purged with Hydrogen.

QUESTION: 014 (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 turbine will trip due to high torus level.

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

c. It 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: 015 (1.00)

Given:

A small-break LOCA occurred.
Feed pumps have failed.
HPCI responded as expected, and the system is cycling based on its automatic start and stop setpoints.
The break is slowly de-pressurizing the reactor.

The HPCI system will ...

a. isolate at approximately 80 psig.

b. isolate at approximately 450 psig.

c. trip its turbine at approximately 150 psig.

d. remain aligned and unisolated, but eventually the reactor steam will NOT be able to drive the turbine.

QUESTION: 016 (1.00)

HPCI is in standby mode. You receive in the control room annunciator 902-3 C-7 HPCI AUTO ISOL INITIATED, however the signal was determined to be a spurious, momentary high area temperature which is now clear. After you reset the isolation, what else, if anything, must be done to restore HPCI to a state where an auto-initiation signal will start the system?

a. Manually open the 2301-4 and 2301-5 valves.

b. The local operator must reset the Local Manual Trip Lever.

c. Nothing; an auto-initiation signal will be able to start the system.

d. The local operator must depress and hold the HPCI REMOTE TURB TRIP pushbutton while you press and hold the RESET VLVS 2-2301-4 & 5 on Panel 902-3.

QUESTION: 017 (1.00)

Which of the following statements explains how valve 1101-1 (Standby Liquid Control inner containment isolation valve) is verified to be in the OPEN position.

a. The final valve line up is performed and verified during Drywell closeout.

b. The valve is locked in the open position, with remote position indication in the control room.

c. The valve is a fail-open valve, with the air supply removed from the valve during normal operation.

d. The valve is opened and the motor operator is deenergized prior to securing the drywell.

QUESTION: 018 (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 reduce reactor pressure to less than or equal to 150 psig within 24 hours.

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

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

QUESTION: 019 (1.00)

How is inadvertent isolation of the Isolation Condenser prevented?

a. The RX INLET ISOL valve is restricted to 10% of full-open.

b. The RX INLET ISOL valve switch must be held in place for 5-seconds before movement starts.

c. A four-second time delay is built into the high-radiation isolation circuitry.

d. The RX INLET ISOL valve can NOT be closed until all Isolation Condenser initiation signals are clear.

QUESTION: 020 (1.00)

How is water hammer in the Core Spray System normally prevented?

a. Gravity and CST elevation keep the line full.

b. Gravity and torus elevation keep the line full.

c. The ECCS Fill system keeps it full and pressurized to 85 psig.

d. The ECCS Fill system keeps it full and pressurized to 150 psig.

QUESTION: 021 (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: 022 (1.00)

Given:

In startup with Mode switch in STARTUP/HOT STANDBY
You notice that IRMs #11 and #14 have failed upscale.
The other IRMs are reading near 70/125 of scale.
NO alarms came in.

How do you respond?

a. Insert a full Scram.

b. Increase the range for all IRMs.

c. Insert a half-scram on RPS Channel A.

d. Insert a half-scram on RPS Channel B.

QUESTION: 023 (1.00)

When should you use IRMs as the main indication of reactor power?

a. At powers of 5% and lower.

b. Below 25% power until IRMs are on Range 3.

c. Any time SRMs are on scale and the mode switch is NOT in run.

d. Any time IRMs are on scale and the mode switch is NOT in run.

QUESTION: 024 (1.00)

For which condition will the IRM system cause a rod block?

a. IRM Downscale while in RUN.

b. IRM Module unplugged while in REFUEL.

c. IRM Reading 100% of Range 1 while in RUN.

d. IRM Reading 2% of Range 1 while in STARTUP.

QUESTION: 025 (1.00)

Which of the following APRM or LPRM signals always cause a scram in at least one RPS channel?

a. LPRM Upscale while in RUN.

b. LPRM Downscale while in RUN.

c. APRM reading of 12 % while in RUN.

d. APRM reading of 16 % while in STARTUP.

QUESTION: 026 (1.00)

Which control Circuitry will NOT be affected by a medium range level instrument FAILURE?

a. FWLC System

b. Main Turbine Trip

c. Reactor Feedwater Pump

d. Diesel Generating Starting

QUESTION: 027 (1.00)

Given:

You are at the beginning of a startup.
All automatic systems are responding correctly.
The reactor coolant temperature is at 160 degrees Fahrenheit.

How do actual level and indicated Narrow Range (NR) level respond as coolant temperature is increased to 205 degrees F?

a. Actual level increases, indicated level increases.

b. Actual level increases, indicated level remains the same.

c. Actual level remains the same, indicated level decreases.

d. Actual level remains the same, indicated level remains the same.

QUESTION: 028 (1.00)

The reactor is at 100% power. Level control is Single Element Automatic. The selected level input signal fails low. What effect will this have on the Feed Water Reg Valves (FWRV)?

a. Both FWRVs will lock-up.

b. Both FWRVs will swap to manual control.

c. NO effect; they will continue to hold level as before.

d. Both FWRVs will open to try to correct the level error.

QUESTION: 029 (1.00)

Which, if any, of the following blocks will prevent use of the EMERGENCY IN to provide control rod movement?

a. SRM Inop.

b. IRM Inop.

c. RWM Insert Block.

d. None; Emergency In bypasses all blocks.

QUESTION: 030 (1.00)

Which of the following will 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. Deenergize the ADS Logic.

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: 031 (1.00)

Which of the following signal failures of the Core Spray system could affect ADS automatic initiation?

a. Pump Current fails downscale.

b. Core Spray Flow fails downscale.

c. Core Spray Header A/B dP fails upscale.

d. Discharge Header Pressure fails downscale.

QUESTION: 032 (1.00)

How does the Drywell/Torus Differential Pressure Control (Pumpback) system work?

a. It keeps the Torus about 1.0 psid less than the drywell by taking suction from the torus and discharging directly to the drywell.

b. It keeps the Torus about 0.1 psid less than the drywell by taking suction from the torus and discharging to the Reactor Building Ventilation System.

c. It keeps the Torus at 0.1 psig by taking suction from the torus and discharging to a receiver; it attempts to maintain the 0.1 psig regardless of drywell pressure.

d. It keeps the Torus about 1.0 psid less than the drywell by taking suction from the torus and discharging to a receiver. Output from the receiver sent to the drywell to maintain the 1.0 psid as sensed by a DP cell.

QUESTION: 033 (1.00)

At power, when you turn the switch of a Safety /Relief Valve (Target Rock) to MANUAL, what actually starts the opening process?

a. Pressure from Nitrogen.

b. Pressure from Service Air.

c. Pressure from Instrument Air.

d. Relief of Pressure from Service Air.

QUESTION: 034 (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 top of the torus 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: 035 (1.00)

Given:
The reactor is running at 100 % power.
All nuclear boiler pressure instrumentation fails upscale.
NO high pressure actually exits.

How do the safety, safety/relief, and relief valves respond?

a. They remain shut.

b. Only four Electromatic Relief Valves (ERV) lift.

c. Only Four Electromatic Relief Valves (ERV) and the Safety/Relief valve lift.

d. All Electromatic Relief Valves (ERV), Safety/Relief Valves, and Safety Valves lift.

QUESTION: 036 (1.00)

You reduce the reactor power from 100% to 95% power 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: 037 (1.00)

Per DGP 2-1, during the initial part of a cooldown (reactor pressure decreasing from 825 psig to 775 psig), how is the EHC system used?

a. The Load Limit is used to reach the desired final pressure.

b. The EHC must be defeated otherwise pressure could NOT be decreased.

c. The Bypass Valve Opening Jack is used to reach the desired final pressure.

d. EHC Pressure Regulator Set lowered until max combined flow limit reached.

QUESTION: 038 (1.00)

The output of both EHC pressure regulators fail high causing a bypass valve to open. Which EHC control can be used to close the bypass valve?

a. Load Limit

b. Bypass Jack

c. Pressure Set

d. Maximum Combined Flow Limit

QUESTION: 039 (1.00)

To what frequency must the Diesel Generator be set to assure it comes to speed and voltage in the event of an Auto Start?

a. 58 Hz

b. 59 Hz

c. 60 Hz

d. 61 Hz

QUESTION: 040 (1.00)

Given:

A startup is in progress.
The first three rods have been pulled.
An electrical fault causes Primary Containment Pressure signals to spike to 3 psig for 2 seconds, then return to normal.

How does SBGT respond?

a. SBGT starts.

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

c. SBGT does NOT start because NO Group II Isolation occurred.

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

QUESTION: 041 (1.00)

Of what condition does annunciator 902-5 G-2 ACCUMULATOR LVL HI/PRESS LO warn you in the Control Rod Drive (CRD) system?

a. Insufficient reactor pressure to scram the rod.

b. An excessive level of water in the nitrogen side of the accumulator.

c. An insufficient level of water in the water side of the accumulator.

d. Insufficient pressure in the CRD Hydraulic System charging water.

QUESTION: 042 (1.00)

Which of the following is a load on the 24 VDC battery system?

a. TIPs.

b. MCC Control Power.

c. Process Radiation Monitoring.

d. Breaker Control for 480V buses.

QUESTION: 043 (1.00)

Given:

Unit 2 is at 100% power.
Recirc Pump A trips.
You did the required immediate valve manipulations, but nothing else.

How does this affect jet pump flow?

a. Net Core Flow is reduced to 75%.

b. Flow reverses through the A-side Jet Pump Diffusers.

c. Flow reverses thorough the A-side recirculation loop piping.

d. Pump B provides flow to all jet pumps through the ring header.

QUESTION: 044 (1.00)

Given:

A reactor startup is in progress on Unit 2.
An operator is withdrawing control rods.
The operator inadvertently withdraws a control rod to position 10 instead of stopping at position 8 as designated in the Control Rod Sheet Pull.

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: 045 (1.00)

Given:

The reactor is shut down.
NO recirc pumps are running.
One loop of shutdown cooling is in use.
Vessel level starts dropping rapidly.

How will a drop to +4" level affect shutdown cooling?

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 isolate, the pumps trip when inlet valves leave the full open position.

QUESTION: 046 (1.00)

During rod movements at 100% power, the Rod Block Monitor (RBM) fails. This failure is not detected by the operator. What problem could go undetected without the RBM?

a. None; the RBM is NOT in operation at this power level.

b. Rod Withdrawal Blocks would NOT be inserted even though the LPRM power was too high.

c. Rod Withdrawal Blocks would NOT be inserted even though the APRM power was too high.

d. Rod Withdrawal Blocks would NOT be inserted even though the wrong rod was selected.

QUESTION: 047 (1.00)

Given:

You are in torus cooling.
LPCI pump flow has stabilized.

The LPCI "A" Heat Exchanger CCSW should be:

a. 3000 gpm

b. 5000 gpm

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

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

QUESTION: 048 (1.00)

Given:

LPCI A started on a valid initiation signal.
LPCI B is OOS.
LPCI is holding level.
Torus Sprays are required.

To get the MAXIMUM flow to Torus Sprays you must align it and:

a. throttle closed the LPCI VLV MO 2-1501-21A, NO time delay prevents this.

b. wait five minutes from the LPCI initiation signal then throttle closed LPCI VLV MO 2-1501-21A.

c. place keylock switch 316 in MANUAL to bypass the LPCI VLV open time-delay then throttle closed LPCI VLV MO 2-1501-21A.

d. place keylock switch 317 to MANUAL OVERRD to bypass the LPCI initiation signal, then throttle closed LPCI VLV MO 2-1501-21A.

QUESTION: 049 (1.00)

Given the following set of initial plant conditions:

Load set 90% Pressure set 920
Load limit 100% Max combined flow 105%
100% power 100% core flow
recirc flow in master manual
equalizing header pressure 950 psig

Which of the following would be the current control valve/bypass valve lineup?

a. control valve demand 100%, bypass valve demand 0% open.

b. control valve demand 90%, bypass valve demand 10% open.

c. control valve demand 80%, bypass valve demand 20% open.

d. control valve demand 70%, bypass valve demand 30% open.

QUESTION: 050 (1.00)

Given:

Unit 3 is in cold shutdown.
RPV water level below the main steam lines.
Vessel head has been removed.

Why can't the Electromatic Relief Valves (ERV) be tested?

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: 051 (1.00)

The reactor is at 45% power when the MSIV 203-1A test pushbutton is depressed and held. Which of the following is the expected system response?

a. The valve slowly closes within 45 to 60 seconds.

b. The valve goes to 90% open then re-opens to 100%.

c. NO response since the control switch has NOT been moved.

d. The valve goes to 90% open and remains there until the button is released.

QUESTION: 052 (1.00)

Which of the following failures prevent HPCI operation.

a. Detected HPCI Steam Flow of 210%.

b. 100% break of MSL B before inboard MSIV.

c. 100% break of the main steam equalizing header.

d. Detected HPCI Turbine exhaust pressure of 110 psig.

QUESTION: 053 (1.00)

Dresden 2 has just experienced a loss of offsite power concurrent with a +2.5 psig Drywell pressure. The diesels fast start as designed. Which of the following states the timed starting sequence for the emergency bus equipment?

a. 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.

b. 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.

c. 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.

d. 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.

QUESTION: 054 (1.00)

The reactor is at 100% power in a normal alignment. You observe the Reactor Feed Pump (RFP) Suction Header pressure drop to 175 psig. What automatic response to this pressure decrease do you expect?

a. One RFP to trip.

b. If in standby mode an idle RFP to start.

c. The Cond/Cond Boost Pump Min Flow to close.

d. If in standby mode an idle Cond/Cond Boost pump to start.

QUESTION: 055 (1.00)

Which of the following describes the operation of the Emergency Drain Valves for the "B," "C," and "D" FeedWater Heaters? They need air to ...

a. Open; they drain to the condenser.

b. Close; they drain to the condenser.

c. Open; they drain to the downstream heater.

d. Close; they drain to the downstream heater.

QUESTION: 056 (1.00)

Given:

You just increased power by 5% using recirculation flow.
Alarm 903-3 D-2 OFF GAS RAD HI alarms.
5 minutes later, Alarm 903-3 C-2 OFF GAS RAD HI HI alarms.
Both alarms are valid.

What do these alarms indicate?

a. In 5 more minutes, the SJAE will be lost.

b. The HI HI radiation condition has existed for 15 minutes.

c. In 10 more minutes, the Chimney Isolation Valve will close.

d. In 15 more minutes, the pressurized drain tank will be isolated from the pressurized drain pump.

QUESTION: 057 (1.00)

Given:

The reactor is at 100% power.
Alarm on the XL3 Panel Annunciator 11-18 Alm/Trouble Smoke Det. 3-4131-118, 3RB 517 NE Above TIP is received.

How should you respond?

a. Notify Station Fire Marshall.

b. Initiate the Plant Fire Siren.

c. Attempt to Reset the Alarm to test its validity.

d. Dispatch an operator to determine the cause of the alarm.

QUESTION: 058 (1.00)

Given:

Alarm 923-5 H-2 CONTROL RM HVAC FIRE PROT PNL TROUBLE.
Smoke is accumulating in the control room.

You should:

a. Set up fire watches until the panel is repaired.

b. Trip/Verify Tripped Control Room HVAC exhaust fan.

c. Put on an MSA Air Pack and activate Breathing Air System.

d. Trip/Verify Tripped AFU and Control Room Kitchen and Exhaust fans.

QUESTION: 059 (1.00)

Given:

Three bundles have been transferred from Unit 2 to the spent fuel pool.
Control rod maintenance is necessary.
All the conditions for rod movement have been completed.

Per Technical Specifications, what is the MAXIMUM number of rods you could withdraw under these conditions?

a. One rod.

b. Two rods -- each three control cells from each other.

c. Three rods -- each two control cells from each other.

d. Four rods -- each four control cells from each other.

QUESTION: 060 (1.00)

For an individual fuel cell, which of the following is an indication of correct fuel assembly orientation?

a. The channel fasteners should be at the center of the four bundle array.

b. The fuel channel spacer buttons should be on outside surfaces of the four bundle array.

c. The lugs on the bundle lifting handles should point away from the center of the four bundle array.

d. The assembly identification number can be read while looking towards the center of the fuel assembly.

QUESTION: 061 (1.00)

Given:

The reactor is at 100% power.
Recirculation pump "A" flow has unexpectedly increased 3%.
The pump speed is unchanged.

What should you do?

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 Unpredicted Reactivity Addition.

QUESTION: 062 (1.00)

Given:

The reactor is in RUN.
A small leak has been slowly filling the Drywell Sump.

Prior to pumping the drywell sump, which of the following is NOT an acceptable way of determining that the drywell radiological conditions are acceptable?

a. Obtaining an acceptable drywell air sample.

b. Obtaining an acceptable reactor coolant sample.

c. The drywell CAM indicates normal activity with NO unexplained changes.

d. Verifying reactor water level, drywell pressure, and main steam radiation monitors are within normal limits.

QUESTION: 063 (1.00)

Given:

The reactor is at 30% power.
The Main Turbine Generator trips.

The reactor ...

a. automatically scrams because the MSIVs go closed.

b. automatically scrams because the Turbine Stop Valves close.

c. must be scrammed if the generator indicates reverse power.

d. must be scrammed if the turbine stop valves are NOT closed.

QUESTION: 064 (1.00)

Given:

Power is unexpectedly increasing.
The Unit Supervisor orders you to insert a manual scram.

Which of the following accurate 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: 065 (1.00)

Given:

A transient occurred and the Reactor scrammed from 100% power.
The MSIVs closed.
The drywell pneumatics, HPCI, and the isolation condenser were NOT operational.
Reactor pressure is 1050 psig and increasing.

You use the safety/relief valves to mitigate this by ...

a. allowing the ADS valves to operate automatically to control pressure.

b. manually cycling the Target-Rock valve to maintain pressure.

c. allowing the Target-Rock valve to operate automatically to control pressure.

d. manually cycling the electromatic ADS valves to control pressure.

QUESTION: 066 (1.00)

Given:

The reactor is at 90% power.
The feedwater heaters trip.
The reactor power increases to the scram setpoint.

The automatic scram was designed to prevent ...

a. Exceeding 280 cal/gm fuel limit.

b. Entering a region of power instability.

c. Going below the minimum shutdown margin.

d. Going below the minimum critical power ratio (MCPR).

QUESTION: 067 (1.00)

Given:

Reactor power is at 50%.
Reactor water level is at 20 inches and slowly decreasing.
Feedwater Regulating Valve (FRV) is placed in manual control with NO response.
A and C feedpumps are running.
B feed pump is tagged "Out-Of-Service" for maintenance.

In accordance with DOA 600-1, "Transient Level Control", which of the following is an immediate operator action?

a. Insert the CRAM arrays

b. Open the Reactor Low Flow FRV

c. Decrease reactor power with recirculation flow

d. Increase feedwater flow by opening feedwater heater bypass valve, MO 2(3)-3203

QUESTION: 068 (1.00)

Given:

The reactor was just starting up.
20 rods have been pulled.
Scram signal was received but NO rods moved.
Unit supervisor has directed that the Jumper/reset/repeat-scrams technique be used to shutdown the reactor.

What other rod insertion method can be used simultaneously without conflicting with the Jumper/reset/repeat-scrams?

a. ARI

b. Vent Scram Air Header.

c. Individual scram switches.

d. Vent the CRD overpiston area.

QUESTION: 069 (1.00)

Given:

A LOCA occurred.
Drywell pressure is 4.0 psig.
Chemistry has completed the necessary preparations at the High Radiation Sampling System (HRSS) panel.

How do you sample the primary containment atmosphere under these conditions?

a. HRSS automatically started sampling the drywell due to the LOCA signals.

b. The mode switch must NOT be in run, the HRSS ISOL SIGNAL SAMPLING BYP switch must be momentarily placed in the AIR position, and a path established.

c. The mode switch does NOT affect the sampling process; the scram signals must be reset, the HRSS ISOL SIGNAL SAMPLING BYP switch must be momentarily placed in the AIR position and a path established.

d. The mode switch does NOT affect the sampling process; the scram signals must be reset, and all conditions which caused the Group II isolation must be cleared; the flowpath is automatically established when the isolation is cleared.

QUESTION: 070 (1.00)

Given:

An accident has occurred.
Drywell pressure is high and increasing.
Unit Supervisor has directed you to do containment venting.

You will have to vent though the Augmented Primary Containment Venting (APCV) system if:

a. The torus can NOT be vented.

b. The Torus 2-inch vent valve fails open.

c. Torus Water Level rises to greater than 30 feet.

d. The SBGT fails to maintain pressure below the containment pressure limit.

QUESTION: 071 (1.00)

Given:

The reactor is at 50% power.
The Rod Worth Minimizer is unavailable.
A break occurs and drywell pressure increases to 4 psig.
RPS sends a scram signal.
Only about 40% of the rods insert fully.

How can the Reactor Manual Control System (RMCS) be used immediately to mitigate this event?

a. It can be used to drive in rods only immediately after the scram is reset.

b. It is useless because of the rod blocks present until the mode switch is changed out of RUN.

c. It can be used to drive in rods after the charging water line is closed regardless of scram status.

d. It can be used immediately to drive in rods without any valve manipulations regardless of scram reset status.

QUESTION: 072 (1.00)

While in pressure control mode, how is HPCI used to mitigate a high reactor pressure?

a. It must be manually aligned to inject water from the CST to the CST.

b. It must be manually aligned to inject water from the CST into the reactor.

c. It will start and align to pressure control mode if the HPCI AUTO INITIATE pushbutton is pressed.

d. It starts and aligns to pressure control mode automatically if the reactor exceeds an initiation setpoint.

QUESTION: 073 (1.00)

Given:

RPV Level is 0.
Reactor power is 40%.
Torus Temp. is 115 degrees F.
Drywell pressure is 3 psig.

You have been directed to lower level to reduce power. You should immediately stop the level decrease if...

a. you reach TAF.

b. the power instrumentation fails.

c. you observe large power oscillations.

d. you observe large level oscillations.

QUESTION: 074 (1.00)

Given:

The reactor is at 100% power.
Feedwater Level Control (FWLC) fails and fills the vessel to +52 inches, at which point a small-break LOCA occurs.
Level starts to drop.
Drywell pressure increases.

When level drops to 0 inches, drywell pressure is +2.5 psig. What is the expected status of the feedwater and HPCI systems at this point?

a. Feedwater tripped, HPCI standby.

b. Feedwater injecting, HPCI standby.

c. Feedwater tripped, HPCI injecting.

d. Feedwater injecting, HPCI injecting.

QUESTION: 075 (1.00)

Other than core submergence how else can adequate core cooling be maintained?

a. core spray

b. head spray

c. steam cooling

d. alternate SBLC

QUESTION: 076 (1.00)

Given:

You are operating Unit 2.
The reactor is at 100% power.
2A and 2B Recirc PPs are operating at 92% of rated speed.
FCL is 101.2.

You receive annunciator 902-4 C-2 2A RECIRC M-G GEN GROUND and observe the expected automatic actions. How do you immediately respond?

a. Scram.

b. Lower the running Recirc pump speed to 40 to 45% of rated speed.

c. Lower the running Recirc pump speed to 60 to 65% of rated speed.

d. Close the tripped pump's discharge bypass valve after five minutes.

QUESTION: 077 (1.00)

Given:

The plant is operating at 20% power.
You note that condenser vacuum is slowly dropping.
You receive annunciator 902-7 H-3 TURB VACUUM LO.
A few minutes later, you receive annunciator 902-5 F-5 CONDR VACUUM LO.
You note that condenser vacuum continues to slowly drop.

In response ...

a. the turbine should trip.

b. the reactor should be scrammed.

c. the Condenser Mechanical Vacuum Pump should be started to recover vacuum.

d. the bypass valves have received auto-close signals so the turbine takes the energy.

QUESTION: 078 (1.00)

The reactor was manually scrammed from 100% power. Just after the rods went in, you noted that a Degraded Voltage on Bus 34 is present. Bus 34 will start shedding loads ...

a. within 7 seconds.

b. within 5 minutes.

c. only if the diesels start.

d. immediately and it will refuse any additional loads.

QUESTION: 079 (1.00)

Given:

The generator was just synched to the grid during a startup.
In rapid succession:
Alarm 902-5 E-8, RPV LVL HI comes in.
Reactor Feedwater Pumps trip.
The main turbine trips, but level continues to increase.

How can you use the Reactor Water Cleanups (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: 080 (1.00)

The reactor is at 100% power. Which of the following indicates that the Drywell Air Cooling System is operating abnormally?

a. Drywell Temperature of 135 F.

b. Drywell Temperature of 155 F.

c. Makeup N2 pressure of 1.0 psig.

d. Drywell N2 Makeup Flow of 10 scfh.

QUESTION: 081 (1.00)

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

a. Increased off gas dilution steam flow.

b. Trip of the operating Steam Jet Air Ejector.

c. Failure to achieve recombination in the recombiner.

d. Resin intrusion due to condensate demineralizer failure.

QUESTION: 082 (1.00)

Which of the following Emergency Operating Procedures (EOPs) would be entered if the U2 E 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: 083 (1.00)

Given:

The reactor is at 100% power.
You receive alarm 923-1 C-1 U2 OR U3 RBCCW TRIP.
NO standby pump starts, but all other systems respond as expected.

What system could this loss damage?

a. The Drywell Coolers.

b. The Reactor Water Cleanup Pump.

c. The Non-Regenerative Heat Exchanger.

d. The Recirculation Pump seals and bearings.

QUESTION: 084 (1.00)

Instrument air pressure is decreasing. Which of the following strategies requires the Shift Manager's permission?

a. Opening the dryer bypass valve.

b. Opening the Service Air Backup valve.

c. Opening the Unit 1 and 2 Instrument Air Crossties.

d. Opening the Unit 2 and 3 Instrument Air Crossties.

QUESTION: 085 (1.00)

Given:

The reactor is in STARTUP.
You have pulled two rods.
You are pulling the third rod.
The CRD pump A trips.
The accumulator trouble light for the rod you are pulling illuminates.
You note CRD system pressure is decreasing.

Other than cease rod movement, how do you respond?

a. Immediately scram.

b. Start CRD pump B per DOP 0300-01.

c. Scram if you receive eight more accumulator trouble lights; do not start CRD pump B until 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: 086 (1.00)

Given:

The reactor is at 100% power.
HPCI is being run in Full Flow Test.
You receive annunciator 902-4 C-22 TORUS NARROW RANGE WTL LVL HI.
The control room indicates that Torus Water level is -1.0 inches.

How do you respond?

a. Enter DEOP 200-1.

b. Verify HPCI automatically isolates.

c. Verify HPCI automatically swaps its suction to the torus.

d. Transfer water to the Torus from the CST with a LPCI pump.

QUESTION: 087 (1.00)

Given:

You are operating Unit 2.
You receive, among others, alarm 902-8 D-10, LOSS OF 125 V DC POWER.
The sequence of Events Recorder indicates a loss of the U2 Main Bus.

Which of the following systems is still available to assist in plant shutdown?

a. LPCI System I

b. Isolation Condenser

c. Core Spray System I

d. Standby Gas Train I

QUESTION: 088 (1.00)

DEOP 300-2 requires Emergency Depressurization whenever...

a. it is determined that the leak is unisolable.

b. radiation level are substantially increased above the entry conditions.

c. a primary system needed to shutdown the reactor is discharging outside primary containment and cannot be isolated.

d. offsite release rate is approaching or exceeds the General Emergency level and an unisolable steam leak is discharging into the turbine building.

QUESTION: 089 (1.00)

Given:

A small-break LOCA occurred.
Drywell pressure is 3.0 psig.
Feedwater system is tripped.
RPS inserted a scram successfully.
HPCI is maintaining 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: 090 (1.00)

Given:

Reactor Building Ventilation (RBV) Exhaust radiation is increasing.
Levels increase from background to 7 mr/h.
Expected automatic actions occur.
Personnel in the plant report a fire and heavy smoke in the reactor building.

Under these conditions, you may...

a. defeat the high-radiation isolation and re-start the RBV.

b. restart the RBV ONLY if the exhaust radiation level decreases below the isolation level.

c. defeat the high-radiation isolation and re-start the RBV ONLY if an area temperature exceeds it maximum normal operating temperature.

d. restart the RBV ONLY if local readings show the radiation levels to be below the isolation level because the Exhaust Detector is in the isolated section of ductwork so it NO longer shows true radiation conditions.

QUESTION: 091 (1.00)

Given:

You are the Unit 3 NSO.
The control room must be abandoned.

Where do you go?

a. Technical Support Center.

b. Safe Shutdown Staging Area.

c. Auxiliary Electric Equipment Room.

d. Follow Shift Manager and Unit Supervisor.

QUESTION: 092 (1.00)

Given:

The reactor is at 100%.
One Relief Valve is leaking.
You have started the A and D LPCI pumps and placed them in Torus Cooling.

What happens to the A and D LPCI pumps if a LPCI initiation signal occurs?

A and D LPCI pumps ...

a. align for LPCI; the Torus Cooling is isolated.

b. continue in Torus Cooling, but the heat exchanger bypass valves are automatically opened.

c. align for LPCI; however, you must immediately close the TORUS CLG/TEST valves MO 2-1501-20A & 38A.

d. continue running in Torus Cooling because the CNMT SP/TORUS CLG PERMISSIVE keylock switches are in MANUAL.

QUESTION: 093 (1.00)

Given:

The reactor is at 100% power.
You receive annunciator 902-4 B-16, DRYWELL PNEU SPLY TROUBLE.
You observe that DW SUPPLY ISOL VLV AO 2-4722 and AO 2-4723 are both closed, and they will NOT open.

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

a. The MSIVs will close.

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

c. The feedwater reg valves will go closed so to 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: 094 (1.00)

Given:

One pump of Shutdown cooling is in service.
The recirc loop temperature rises unexpectedly to 360 F.

You should ...

a. Isolate/verify isolated the SDC system.

b. Place an additional SDC loop in service.

c. Raise flow through the operating SDC pump.

d. Raise RBCCW flow rate by opening the RBCCW OUTLET VLV.

QUESTION: 095 (1.00)

Given the following plant conditions on Unit 2:

RPV pressure 100 psig.
TR 2(3)-1340-1 on panel 902-2(3).
Point 9 = 295 degrees F.
Point 10 = 305 degrees F.
Reactor Building temperature = 203 degrees F.

Which of the following is a valid RPV water level reading?

a. -305 inches fuel zone.

b. -60 inches medium range.

c. -16 inches wide range.

d. +17 inches wide range.

QUESTION: 096 (1.00)

Given:

An unisolable leak is pressurizing the reactor building at a rate of 0.5 psi/hr.
SBGT and normal ventilation systems failed.
The reactor building is currently at 0 psig.

At this rate, how long do you have to stop the pressure increase before the Blow-off panels are blown out?

a. 1/2 hour

b. 1 hour

c. 2 hours

d. 4 hours

QUESTION: 097 (1.00)

Which of the following conditions require entry into DEOP 300?

a. You receive alarm 902-7 G-15, CONDR PIT WTR LVL HI-HI.

b. Equipment Attendant reports 1" of water in the Condensate Pump Room.

c. You receive both alarms 902-4 D-19, LPCI/CS WEST SUMP LVL HI and 902-4 C-19 LPCI/CS EAST SUMP LVL HI.

d. You receive alarm 902(3)-4 D-19, LPCI/CS WEST SUMP LVL HI and an Equipment Attendant reports 0.5" water on the floor.

QUESTION: 098 (1.00)

The Rod Worth Minimizer (RWM) is required to be operational at less than 20% power decreasing as determined by the Low Power Set Point (LPSP). Which of the following parameters activates the LPSP and enables the RWM rod blocks?

a. APRM reference 19%

b. Total feedwater flow 19%.

c. Total main steam flow 19%.

d. 1st stage turbine pressure 919 psig

QUESTION: 099 (1.00)

The overflow weirs to one of the skimmer surge tanks from the Fuel Storage Pool has become plugged during normal operation of the Fuel Pool Cooling and Cleanup System.

Which of the following correctly describes the system response to this system malfunction?

a. NO trip of the operating pump will occur since the only trip of the Fuel Pool Cooling Pumps is low suction pressure at 6 psig.

b. NO trip of the operating pumps will occur since the trip system requires low low level in both Skimmer Surge Tanks to trip the operating pumps.

c. A low Low level trip of the operating Fuel Pool Cooling Pumps will result when the level in the effected Skimmer Surge Tank drops to the trip set point of 17 inches.

d. NO trip of the operating pump will occur since there is an equalizing line which will maintain Skimmer Surge Tank level, even if the inlet line to one tank is plugged.

QUESTION: 100 (1.00)

The LPCI motor operated heat exchanger bypass valves (1501-11A/B) are interlocked open on an ECCS initiation signal. Which of the following describes proper valve operation?

a. 30 seconds after the LPCI initiation signal is received, the valves may be closed.

b. 30 seconds after the LPCI initiation signal is received, the valve is automatically closed.

c. These valves are interlocked open for 5 minutes to provide maximum LPCI injection flow.

d. The valves may be closed by operating the control switches to Pull-To-Lock (PTL) position to bypass the interlock.

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

ANSWER: 001 (1.00)

a.

REFERENCE:

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

ANSWER: 002 (1.00)

b.

REFERENCE:

DAP 7-03, Rev. 08, pages 2.

294001A103 ..(KA's)

ANSWER: 003 (1.00)

c.

REFERENCE:

DAP 9-13, Rev. 2, Section E.7.b.

294001A102 ..(KA's)

ANSWER: 004 (1.00)

a.

REFERENCE:

DAP 07-27, Independent Verifications, Rev. 05, p. 6.
294001A102 ..(KA's)

ANSWER: 005 (1.00)

a.

REFERENCE:

DAP 7-17, Rev.3, Section E.1.a
294001A104 ..(KA's)

ANSWER: 006 (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: 007 (1.00)

c.

REFERENCE:

DAP 07-21, Control of Operations Overtime, Rev. 3, p 3.
294001A109 ..(KA's)

ANSWER: 008 (1.00)

b.

REFERENCE:

DAP 07-02, Rev 20, Section E.20
294001A111 ..(KA's)

ANSWER: 009 (1.00)

c.

REFERENCE:

Dresden NGET pp. 37-38.
294001K103 ..(KA's)

ANSWER: 010 (1.00)

d.

REFERENCE:

233L-S1, Fuel Pool Cooling & Cleanup (FPC), Rev. 10, p. 22.

294001K104 ..(KA's)

ANSWER: 011 (1.00)

c.

REFERENCE:

DOP 0040-001 Rev. 06, page 2 of 8 Section F.3.

294001A102 ..(KA's)

ANSWER: 012 (1.00)

c.

REFERENCE:

DAP 03-14, Confined Space Entry and Work, Rev. 2, p. 7.

294001K113 ..(KA's)

ANSWER: 013 (1.00)

d.

REFERENCE:

ILT 252L-S1, Generator Hydrogen Control, Rev. 1, p. 5.

294001K115 ..(KA's)

ANSWER: 014 (1.00)

c.

REFERENCE:

206L-S1, High Pressure Coolant Injection, p. 45
Event 27950 (Monticello)

206000A104 ..(KA's)

ANSWER: 015 (1.00)

a.

REFERENCE:

DOP 2300-3, HPCI System Manual S/U and Operation, Rev. 15, p. 8.

206000K608 ..(KA's)

ANSWER: 016 (1.00)

a.

REFERENCE:

DAN 902(3) C-7, HPCI AUTO ISOL INITIATED, Rev. 07.
DOP 2300-01,, HPCI System Standby Operation Rev. 11

206000K610 ..(KA's)

ANSWER: 017 (1.00)

b.

REFERENCE:

Dresden Lesson Plan, Standby Liquid Control System 211L-S1
4-2-92, Pg. 8.
Learning Objective 3 & 5.

211000A206 ..(KA's)

ANSWER: 018 (1.00)

b.

REFERENCE:

Dresden Lesson Plan, Isolation Condenser 207L-S1, Pg. 7, 10, and 13.
Learning Objective 10.
T.S. 3.5.E.3
207000K607 ..(KA's)

ANSWER: 019 (1.00)

a.

REFERENCE:

DOP 1300-02, Automatic Operation of Isolation Condenser, Rev. 8.

207000G010 ..(KA's)

ANSWER: 020 (1.00)

c.

REFERENCE:

DOP 1400-03, ECCS Fill System, Rev. 09.
209L-S1, Core Spray, Rev. 02, p. 8.

209001K402 ..(KA's)

ANSWER: 021 (1.00)

b.

REFERENCE:

DOA 0300-01, CONTROL ROD DRIVE SYSTEM FAILURE, Rev. 11.

201001A207 ..(KA's)

ANSWER: 022 (1.00)

c.

REFERENCE:

DOP 0700-02, Intermediate Range Monitors (IRM) Operation, Rev. 8, p. 3.
DAN 902(3)-5 C-10, CHANNEL A IRM HI HI/INOP, Rev. 05.
DAP 07-01, Conduct of Operations, p. 17.

215003A202 ..(KA's)

ANSWER: 023 (1.00)

d.

REFERENCE:

215L-S3, Intermediate Range Monitoring System, Rev. 1, p. 20

215003G001 ..(KA's)

ANSWER: 024 (1.00)

b.

REFERENCE:

215L-S3, Intermediate Range Monitoring System, Rev. 1, p. 17.

215003K102 ..(KA's)

ANSWER: 025 (1.00)

d.

REFERENCE:

215L-S5, Average Power Range Monitoring System, Rev. 1, p. 11.

215005K402 ..(KA's)

ANSWER: 026 (1.00)

a.

REFERENCE:

216L-S1, Nuclear Boiler Instrumentation, Rev. 1, p. 15, Section I.B.1.g.1)a (3) and I.B.1.j.

216000A210 ..(KA's)

ANSWER: 027 (1.00)

b.

REFERENCE:

PQ-0600.07, FACIL JPM QUESTION BANK

216000K510 ..(KA's)

ANSWER: 028 (1.00)

c.

REFERENCE:

259L-S2, Feedwater Level Control System, Rev. 2, p. 15A

216000K313 ..(KA's)

ANSWER: 029 (1.00)

c.

REFERENCE:

201L-S2, Reactor Manual Control and RPIS System, Rev. 1, p. 11.

201002A204 ..(KA's)

ANSWER: 030 (1.00)

a.

REFERENCE:

218L-S1, Automatic Depressurization System, Rev. 1, pp 13-14.

218000A206 ..(KA's)

ANSWER: 031 (1.00)

d.

REFERENCE:

218L-S1, Automatic Depressurization System, Rev. 1, p. 15.

218000K102 ..(KA's)

ANSWER: 032 (1.00)

d.

REFERENCE:

223L-S3, Primary Containment Systems, Rev. 0, p. 2A
Objective 223L-S3-03.

223001K103 ..(KA's)

ANSWER: 033 (1.00)

a.

REFERENCE:

239L-S1, Main Steam System, Rev. 16, p. 12.

239002K105 ..(KA's)

ANSWER: 034 (1.00)

c.

REFERENCE:

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

ANSWER: 035 (1.00)

c.

REFERENCE:

239L-S1, Main Steam System, Rev. 16, pp. 2-3, 11.
239002K601 ..(KA's)

ANSWER: 036 (1.00)

d.

REFERENCE:

241L-S1, EHC Pressure Control and Logic System, Rev. 01, p. 5.

241000A407 ..(KA's)

ANSWER: 037 (1.00)

c.

REFERENCE:

DGP 02-01, Unit 2(3) Normal Unit Shutdown, Rev. 27, p. 21

241000K130 ..(KA's)

ANSWER: 038 (1.00)

d.

REFERENCE:

241L-S1, EHC Pressure Control and Logic System, Rev. 1, Section E.1.v.
241000A107 ..(KA's)

ANSWER: 039 (1.00)

d.

REFERENCE:

DOP 6600-02, Diesel Generator 2(3) Startup, Rev. 12, p. 4.
DOP 6600-03, Diesel Generator 2(3) Shutdown, Rev. 09, p. 3, Section G.6
264000A304 ..(KA's)

ANSWER: 040 (1.00)

a.

REFERENCE:

261L-S1, Standby Gas Treatment, Rev. 3, p. 10.

261000K609 ..(KA's)

ANSWER: 041 (1.00)

b.

REFERENCE:

201L-S1, Control Rod Drive Hydraulic, Rev. 1, pp. 11-12.

201003G008 ..(KA's)

ANSWER: 042 (1.00)

c.

REFERENCE:

263L-S3, 24/48 VDC Distribution, Rev. 0, p. 3.

263000K201 ..(KA's)

ANSWER: 043 (1.00)

b.

REFERENCE:

202L-S1, Recirculation System, Rev. 02, p. 25.
202001K106 ..(KA's)

ANSWER: 044 (1.00)

c.

REFERENCE:

Dresden Lesson Plan 201L-S6, Rod Worth Minimizer, Rev. 01, p. 8A.

201006K510 ..(KA's)

ANSWER: 045 (1.00)

c.

REFERENCE:

205L-S1, Shutdown Cooling (SDC), Rev. 2, p. 8.

205000A209 ..(KA's)

ANSWER: 046 (1.00)

b.

REFERENCE:

215L-S2, Rod Block Monitor System, Rev. 1, p. 6.

215002K302 ..(KA's)

ANSWER: 047 (1.00)

c.

REFERENCE:

DOP 1500-2, Rev 17, page 8

219000A405 ..(KA's)

ANSWER: 048 (1.00)

c.

REFERENCE:

DOP 1500-03, CONTAINMENT SPRAY COOLING MODE OF LOW PRESSURE COOLANT INJECTION SYSTEM, Rev. 13, p, 3, Section E.

230000A406 ..(KA's)

ANSWER: 049 (1.00)

b.

REFERENCE:

248L-S1, Electro-Hydraulic Control System, Rev. date 8-11-92, Pg. 17. Learning Objective 6.c.4.

245000A312 ..(KA's)

ANSWER: 050 (1.00)

d.

REFERENCE:

239L-S1, Main Steam System, Rev. 16, p. 9.

239001K125 ..(KA's)

ANSWER: 051 (1.00)

a.

REFERENCE:

239L-S1, Main Steam System, Rev. 16, p. 18.
DOS 0250-01, Partial Closure Operability test of Main Steam Isolation Valves, Rev. 08.

239001A401 ..(KA's)

ANSWER: 052 (1.00)

d.

REFERENCE:

DOP 2300-03, High Pressure Coolant Injection System Manual S/U and Initiation, Rev. 15, pp. 7-8.

239001K310 ..(KA's)

ANSWER: 053 (1.00)

a.

REFERENCE:

Dresden Lesson Plan, Low Pressure Coolant Injection 203L-S1,
Rev. 4-92, Pg. 22.
Learning Objective 8

262001K602 ..(KA's)

ANSWER: 054 (1.00)

d.

REFERENCE:

DAN 902(3)-6 G-8, RFP Suction Press Lo, Rev. 04, p. 1.

256000A302 ..(KA's)

ANSWER: 055 (1.00)

b.

REFERENCE:

260L-S1, Feedwater Heating (FWHTR), Rev. 0, p. 18.

256000A412 ..(KA's)

ANSWER: 056 (1.00)

d.

REFERENCE:

DGA-16, Coolant High Activity/Fuel Element Failure, Rev. 05, pp. 2-3.
DAN 902(3)-3 C-2, OFF GAS RAD MONITOR HI HI, Rev. 03.

271000A112 ..(KA's)

ANSWER: 057 (1.00)

d.

REFERENCE:

DAN XL3 DEVICE 11-01 THRU DEVICE 11-28, Rev. 01, p. 1.

286000G002 ..(KA's)

ANSWER: 058 (1.00)

c.

REFERENCE:

DOA (DAN) 923-5 H-2, CONTROL RM HVAC FIRE PROT PNL TROUBLE, Rev. 2A
DOA 5750-04, SMOKE, NOXIOUS FUMES OR AIRBORNE CONTAMINANTS IN THE CONTROL ROOM, Rev. 09.

290003G015 ..(KA's)

ANSWER: 059 (1.00)

b.

REFERENCE:

Technical Specifications 3/4.10.D, Amendment no. 82.
DFP 1800-16, Rev. 10
234000G005 ..(KA's)

ANSWER: 060 (1.00)

a.

REFERENCE:

FHIT, Fuel, Rev.1, page 11.
234000K505 ..(KA's)

ANSWER: 061 (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: 062 (1.00)

b.

REFERENCE:

DOP 2000-24, DRYWELL SUMP OPERATION, Rev. 03, p. 2, Section E.

268000K502 ..(KA's)

ANSWER: 063 (1.00)

d.

REFERENCE:

DOA 5600-01, Turbine Trip, Rev. 06, p.3.

295005K201 ..(KA's)

ANSWER: 064 (1.00)

b.

REFERENCE:

DGP 02-03, Unit 2/3 Reactor Scram, Rev. 18, p. 4.

295006K103 ..(KA's)

ANSWER: 065 (1.00)

d.

REFERENCE:

295L-S1, Dresden Emergency Operating Procedures DEOP 100 Reactor Control, Rev. 1, p. 35.
Objective 15 (# 29501LK033)

295007A104 ..(KA's)

ANSWER: 066 (1.00)

d.

REFERENCE:

TS 1.1, Fuel Cladding Integrity, Amend. No. 121.

295014G003 ..(KA's)

ANSWER: 067 (1.00)

c.

REFERENCE:

1. DOA 600-1, sec C, rev 11

295009G010 ..(KA's)

ANSWER: 068 (1.00)

d.

REFERENCE:

295L-S9, DEOP 500 Series/Support Procedures, Rev. 02, pp. 34A-35A.

295015A101 ..(KA's)

ANSWER: 069 (1.00)

b.

REFERENCE:

233L-S3, Primary Containment Systems, Rev. 2, p. 18A.
DOP 1600-15, Post-Accident Operation Venting and Sampling of the Primary Containment Atmosphere and Reactor Water Sampling, Rev. 09, pp. 1-5

295010A104 ..(KA's)

ANSWER: 070 (1.00)

d.

REFERENCE:

DEOP 500-04, Containment Venting, Rev. 06, pp. 3-4.
Objective 233L-S3-09.h
Objective 223L-S3-12
295024K307 ..(KA's)

ANSWER: 071 (1.00)

c.

REFERENCE:

DEOP 500, Alternate Insertion of Control Rods, Rev. 1, p. 7.
295L-S9, DEOP 500 Series/Support Procedures, Rev. 01, pp. 36A-37A.
295015K202 ..(KA's)

ANSWER: 072 (1.00)

a.

REFERENCE:

DOP 2300-03, High Pressure Coolant Injection System Manual Startup and Operation, Rev. 13, p. 6.
295025K206 ..(KA's)

ANSWER: 073 (1.00)

a.

REFERENCE:

DEOP 400-5, Failure to Scram, Rev. 03.
Licensed Operator Training, DEOP's Failure to Scram/400-5, Rev. 0, Learning Objective 6.

295031K103 ..(KA's)

ANSWER: 074 (1.00)

c.

REFERENCE:

295L-S2, Feedwater Level Control System, Rev. 2, p. 15A.
DAN 902(3)-6 F-7 Rev. 06, Reactor Feed Pump Trip

295031K206 ..(KA's)

ANSWER: 075 (1.00)

c.

REFERENCE:

DEOP 100 lesson plan, Rev. 01, page 14, Section IV.

295031A204 ..(KA's)

ANSWER: 076 (1.00)

c.

REFERENCE:

DOA 0202-01, Recirculation Pump Trip - One or Both Pumps, Rev. 10, p. 2.

295001G005 ..(KA's)

ANSWER: 077 (1.00)

b.

REFERENCE:

DAN 902(3)-7 H-3, TURB VACUUM LO, Rev. 02.
DAN 902(3)-5 F-5, CONDR VACUUM LO, Rev. 03.
295002K202 ..(KA's)

ANSWER: 078 (1.00)

b.

REFERENCE:

DOA 6500-08, Unit 3 4KV Emergency Bus Degraded Voltage (W-1), Rev. 1, p. 4.
262L-S1, AC Distribution System, Rev. 0, Objective 262L-S1-08.e.

295003K303 ..(KA's)

ANSWER: 079 (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: 080 (1.00)

b.

REFERENCE:

239L-S3, PRIMARY CONTAINMENT SYSTEMS, Rev. 03, p. 12A

295012G011 ..(KA's)

ANSWER: 081 (1.00)

d.

REFERENCE:

DGA-16, Coolant High Activity/Fuel Element Failure, Rev. 04, p. 5
295017A204 ..(KA's)

ANSWER: 082 (1.00)

c.

REFERENCE:

Dresden EOPs, DEOP 300-1 Secondary Containment Control.

295024G011 ..(KA's)

ANSWER: 083 (1.00)

d.

REFERENCE:

DOA 3700-01, Loss of Cooling by Reactor Building Closed Cooling Water (RBCCW) System, Rev. 11, p. 5.

295018K101 ..(KA's)

ANSWER: 084 (1.00)

c.

REFERENCE:

DOA 4700-01, Instrument Air System Failure, Rev. 10A, p. 4.
278L-S1, Instrument Air System, Rev. 1, p. 20.

295019G001 ..(KA's)

ANSWER: 085 (1.00)

a.

REFERENCE:

DOA 0300-01, Control Rod Drive System Failure, Rev. 09A, p. 2.

295022A102 ..(KA's)

ANSWER: 086 (1.00)

a.

REFERENCE:

DAN 902(3)-4 C-22, TORUS NARROW RANGE WTR LVL HI Rev. 05, p. 1.

295029G005 ..(KA's)

ANSWER: 087 (1.00)

d.

REFERENCE:

DOA 6900-02, Failure of Unit 2 125 VDC Power Supply, Rev. 01, pp. 2-5.

295004A102 ..(KA's)

ANSWER: 088 (1.00)

d.

REFERENCE:

Dresden L.O. Continuing DEOPs Containment Control 200 Series, Rev. 1, p. 25.

295029K301 ..(KA's)

ANSWER: 089 (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: 090 (1.00)

b.

REFERENCE:

DEOP 300-1, SECONDARY CONTAINMENT CONTROL, Rev. 02A.
Licensed Operator Training, DEOP's Secondary Containment Control/300's, Rev. 0, p. 4.

295034K202 ..(KA's)

ANSWER: 091 (1.00)

b.

REFERENCE:

DSSP 100-CR, Hot Shutdown Procedure - Control Room Evacuation, Rev. 03, p. 5.
Facility JPM Question Bank SQ-0100.02

295016K202 ..(KA's)

ANSWER: 092 (1.00)

a.

REFERENCE:

DOP 1500-02, Torus Water Cooling Mode of Low Pressure Coolant Injection System, Rev. 17, p. 5.

295013A101 ..(KA's)

ANSWER: 093 (1.00)

a.

REFERENCE:

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

295020K301 ..(KA's)

ANSWER: 094 (1.00)

a.

REFERENCE:

DOA 1000-1, Residual Heat Removal Alternatives, Rev. 01, pp. 2-6.
295021A204 ..(KA's)

ANSWER: 095 (1.00)

d.

REFERENCE:

DEOP 100, RPV Control, Table 100-C, Rev. 03.

295028A203 ..(KA's)

ANSWER: 096 (1.00)

b.

REFERENCE:

233L-S1, Primary and Secondary Containment, Rev. 1, p. 17.
Objective 223L-S1-06.b.2
295035K204 ..(KA's)

ANSWER: 097 (1.00)

d.

REFERENCE:

DAN 902(3)-4 D-19, LPCI/CS WEST SUMP LVL HI, Rev. 02.
DEOP 300-1, SECONDARY CONTAINMENT CONTROL, Rev. 03.

295036A102 ..(KA's)

ANSWER: 098 (1.00)

c.

REFERENCE:

201L-S6, ROD WORTH MINIMIZER, Rev. 01, p. 31A, Section 3.A.1.a.1.
201006K409 ..(KA's)

ANSWER: 099 (1.00)

d.

REFERENCE:

ILT 233L-S1, Rev. 10, Section C.4.b.1-6

233000G007 ..(KA's)

ANSWER: 100 (1.00)

a.

REFERENCE:

LPCI lesson plan, Rev. 1, Section B.3.d.2.b.
DEOP 100 RPV/L
226001A403 ..(KA's)

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

A N S W E R K E Y

MULTIPLE CHOICE

001	a
002	b
003	c
004	a
005	a
006	a
007	c
008	b
009	c
010	d
011	c
012	c
013	d
014	c
015	a
016	~~a~~ C 2/16/95 DER 2/27/95 EGP
017	b
018	b
019	a
020	c
021	b
022	c
023	d
024	b
025	d
026	a
027	b
028	c
029	c
030	a
031	d
032	d
033	a
034	c
035	c
036	d
037	c
038	d
039	d
040	a
041	b
042	c
043	b
044	c
045	c

A N S W E R K E Y

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

A N S W E R K E Y

092 a

093 a

094 a

095 d

096 b

097 d

098 c

099 d

100 a

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

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

CANDIDATE'S NAME: MASTER

FACILITY: Dresden 2 & 3

REACTOR TYPE: BWR-GE3

DATE ADMINISTERED: 95/02/13

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

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	___
002	a	b	c	d	___
003	a	b	c	d	___
004	a	b	c	d	___
005	a	b	c	d	___
006	a	b	c	d	___
007	a	b	c	d	___
008	a	b	c	d	___
009	a	b	c	d	___
010	a	b	c	d	___
011	a	b	c	d	___
012	a	b	c	d	___
013	a	b	c	d	___
014	a	b	c	d	___
015	a	b	c	d	___
016	a	b	c	d	___
017	a	b	c	d	___
018	a	b	c	d	___
019	a	b	c	d	___
020	a	b	c	d	___
021	a	b	c	d	___
022	a	b	c	d	___
023	a	b	c	d	___
024	a	b	c	d	___
025	a	b	c	d	___
026	a	b	c	d	___
027	a	b	c	d	___
028	a	b	c	d	___
029	a	b	c	d	___
030	a	b	c	d	___
031	a	b	c	d	___
032	a	b	c	d	___
033	a	b	c	d	___
034	a	b	c	d	___
035	a	b	c	d	___
036	a	b	c	d	___
037	a	b	c	d	___
038	a	b	c	d	___
039	a	b	c	d	___
040	a	b	c	d	___
041	a	b	c	d	___
042	a	b	c	d	___
043	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	___
047	a	b	c	d	___
048	a	b	c	d	___
049	a	b	c	d	___
050	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 (2.00)

An event occurs on the refuel floor that causes radiation levels to reach 120 mr/hr on the refuel floor. Assuming reactor building ventilation is in operation prior to the event, what will be the final ventilation lineup if all components work as designed?

a. Present ventilation lineup remains in operation.

b. Reactor building ventilation isolated, SBGT running.

c. SBGT running supplementing reactor building ventilation.

d. Reactor building ventilation aligned to discharge through SBGT.

QUESTION: 002 (2.00)

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: 003 (2.00)

As the off-going Fuel Handling Supervisor preparing for turnover, which of the following is NOT required of you for proper shift turnover?

a. Ensure the tagboard is up to date.

b. Notify the crew on the Refueling Platform of relief.

c. Notify relief of any special conditions or problems with the refueling platform.

d. Remain on the refueling floor until the oncoming Unit NSO has received a satisfactory turnover and is fully aware of existing conditions.

QUESTION: 004 (2.00)

You are establishing the conditions necessary for refueling. Steam Dryer has just been removed. How is ALARA maintained after the removal and prior to flooding all cavities?

a. Workers are issued respirators.

b. The dryer is wrapped in plastic.

c. The dryer is dried off and cleaned.

d. The dryer is kept wet by sprayers in the Dryer-Separator Pit.

QUESTION: 005 (2.00)

For an individual fuel cell, which of the following is an indication of correct fuel assembly orientation?

a. The channel fasteners should be at the center of the four bundle array.

b. The fuel channel spacer buttons should be on outside surfaces of the four bundle array.

c. The lugs on the bundle lifting handles should point away from the center of the four bundle array.

d. The assembly identification number can be read while looking towards the center of the fuel assembly.

QUESTION: 006 (2.00)

The overflow weirs to one of the skimmer surge tanks from the Fuel Storage Pool has become plugged during normal operation of the Fuel Pool Cooling and Cleanup System. Which of the following correctly describes the system response to this system malfunction?

a. NO trip of the operating pump will occur since the only trip of the Fuel Pool Cooling Pumps is low suction pressure at 6 psig.

b. NO trip of the operating pumps will occur since the trip system requires low low level in both Skimmer Surge Tanks to trip the operating pumps.

c. A low Low level trip of the operating Fuel Pool Cooling Pumps will result when the level in the effected Skimmer Surge Tank drops to the trip set point of 17 inches.

d. NO trip of the operating pump will occur since there is an equalizing line which will maintain Skimmer Surge Tank level, even if the inlet line to one tank is plugged.

QUESTION: 007 (2.00)

How do you assure that the NSO in the control room is aware of plant condition with regards to refueling?

a. Unit NSO directs all movements.

b. Control room nuclear observer relays all movements to unit NSO before the actual movements.

c. Control room nuclear observer is kept in continuous contact with personnel on refueling bridge.

d. Each step of the Nuclear Component Transfer List is read aloud over the communication link to the Control room before the step is done.

QUESTION: 008 (2.00)

While performing fuel movements within the spent fuel pool, the following conditions exist:

Movement of a Unit 2 fuel assembly from a high density rack is in progress.

The assembly becomes stuck during movement in the high density rack.

Which of the following is the proper action(s) associated with this condition?

a. Stop movement of the assembly and contact the Shift Manager.

b. Increase the load limit on the fuel grapple and attempt to continue raising the fuel assembly.

c. Move the tool back and forth (laterally) in a rocking motion while lowering the assembly to its original position.

d. Move the tool back and forth (laterally) in a rocking motion. When freed, relocate the assembly to a new location designated by the Nuclear Engineer.

QUESTION: 009 (2.00)

How is new fuel moved during inspection? Each bundle is lifted out of the metal shipping container by:

a. hooking the bundle restraints.

b. hooking the lower and upper tie plates.

c. hooking the handle on the upper tie plate.

d. removing three sides of the shipping container.

QUESTION: 010 (2.00)

A component on the refuel floor is not function properly. It will be 18 months (1 refuel outage) before it can be corrected. For this time duration which of the following is NOT acceptable to indicate this?

a. Permanent Label on the component.

b. Large Caution Card on the component.

c. Out of service card on the component.

d. Procedure change indicating malfunctioning component.

QUESTION: 011 (2.00)

A fuel assembly is being lowered into the reactor core. Which of the following correctly describes the conditions that will change as the fuel assembly seats into the fuel support piece.

a. The hoist unloaded indicator lamp will light and grapple motion will be prohibited.

b. The hoist loaded indicator lamp will light and the slack cable light will go out. Grapple motion will NOT be prohibited.

c. The hoist loaded indicator lamp will extinguish and the slack cable indicator illuminates. Grapple motion will be prohibited.

d. The slack cable indicator lamp will illuminate and the hoist unloaded indicator lamp will light. Grapple motions will be prohibited.

QUESTION: 012 (2.00)

Your schedule is:

Thursday - Day off
Friday - Day off
Saturday - 6 am to 2 pm
Sunday - 6 am to 2 pm
Monday - 6 am to 6 pm
Tuesday - 6 am to 6 pm
Wednesday- 6 am to _?_

How late can you work on Wednesday without exceeding any overtime restrictions? (turnover time is not included)

a. Noon

b. 4:00 pm

c. 6:00 pm

d. Midnight

QUESTION: 013 (2.00)

Which statement below is correct regarding the duties of the second verifier on the refueling platform during core unload and reload? The second verifier shall:

a. update the tag board upon completion of each move.

b. initial the original copy of the Nuclear Component Transfer List by the end of the work shift.

c. obtain permission from the Unit Reactor Operator, prior to beginning the step listed on the Nuclear Component Transfer List.

d. give positive confirmation to the grapple operator that the grapple is positioned over the correct fuel assembly prior to the bundle being latched.

QUESTION: 014 (2.00)

In accordance with DAP 9-13, Procedural Response to Abnormal Conditions, prolonged operation outside the Technical Specifications is permitted provided that:

a. The Shift Manager has considered the situation carefully and approved continued operation.

b. The Station Manager and the Nuclear Operations Duty Officer concur that continued operation is acceptable.

c. The NRC Operations Center, concurs that continued operation has been properly justified based on present plant conditions.

d. The Shift Technical Advisor (STA) concurs or the Unit Supervisor that due to operating outside the Technical Specifications NO license violation has occurred.

QUESTION: 015 (2.00)

How does the Off-Gas system process radioactive gasses?

a. They are adsorbed on charcoal filters so they can decay.

b. They are held in the condenser for 30 min so they can decay.

c. They are recombined by the addition of hydrogen into the off-gas system.

d. They are heated to 350 degrees F and undergo catalytic recombination.

QUESTION: 016 (2.00)

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

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

a. Unit 3 NSO.

b. Fuel Handling Foreman.

c. Nuclear Materials Custodian.

d. Control Room Nuclear Observer.

QUESTION: 017 (2.00)

Which of the following describes the MINIMUM T.S. Requirements for core monitoring during core alteration?

a. Two SRMs in the quadrant being altered, each with at least 3 cps.

b. One SRM in the quadrant being altered, one SRM in an ADJACENT quadrant, each with at least 3 cps.

c. One SRM in the quadrant being altered, one SRM in ANY other quadrant, each with at least 3 cps.

d. One SRM in the quadrant being altered, one in an ADJACENT quadrant, at least 3 cps unless all rods are fully inserted in which case NO minimum count rate is required.

QUESTION: 018 (2.00)

The reactor head was removed last shift. A station black-out occurs, and the reactor starts to boil. What prevents over-pressurization of the Reactor Building?

a. At a pressure of .2 psid, the normal ventilation supply and exhaust dampers open to equalize the pressure to the outside atmosphere.

b. At a pressure of .4 psid, the Air Lock Isolation Bypass Valves open to equalize the pressure to the outside atmosphere.

c. At a pressure of .5 psid, the Torus Vacuum Relief Valves relieve pressure from the reactor building to the torus.

d. At a pressure of .5 psid, the Blowout Panels part from the beams on the refueling floor to equalize pressure to the outside atmosphere.

QUESTION: 019 (2.00)

During refueling, the reactor building ventilation system isolates. Which additional condition would require entry into DEOP 300-1, "SECONDARY CONTAINMENT CONTROL?"

a. Cleanup system area radiation of 33 mr/hr.

b. Reactor building vent radiation of 3 mr/hr.

c. Failure of SBGT to auto-start upon ventilation system isolation.

d. Reactor building to atmosphere differential pressure of - 0.1 inches of water.

QUESTION: 020 (2.00)

Which of the following conditions will result in the bypass of the IRM HI HI and INOP scram functions? The Reactor Mode Switch:

a. is in RUN, and the companion APRM is on scale.

b. is in STARTUP, and the companion APRM is on scale.

c. is in RUN, and the IRM detector is fully withdrawn from the core.

d. is in STARTUP, and the IRM detector is fully withdrawn from the core.

QUESTION: 021 (2.00)

A fuel bundle is in transit through the cattle chute from the vessel to the storage racks. Level in the fuel pool is observed to be slowly decreasing. Which of the following actions is the Fuel Handler required to take.

a. The spent fuel bundle must be returned to the original core position from which it was removed.

b. The spent fuel bundle must be placed in the nearest open fuel storage rack or reactor location.

c. The spent fuel bundle must be lowered to the lowest level that can be obtained for the present location.

d. The movement of the spent fuel bundle must be suspended immediately regardless of its position.

QUESTION: 022 (2.00)

Which of the following describes the core orifice location and purpose?

a. Located in the lower tie plate; provide MAXIMUM flow to fuel bundles in the central region.

b. Located in the fuel support pieces; provide EVEN flow distribution throughout the core.

c. Located in the lower tie plate; provide EVEN flow distribution throughout the core.

d. Located in the fuel support pieces; provide MAXIMUM flow to fuel bundles in the central region.

QUESTION: 023 (2.00)

Which of the following correctly describes the initial filling of the dryer-separator and reactor well with water?

a. Main condenser hotwell water is used via the CRD pumps.

b Main condenser hotwell water is used via the condensate/condensate booster pump.

c. Main condenser hotwell water is used via the Fuel Pool Cooling system.

d. With the CRD System in operation, the fuel pool is filled using the RWCU System.

QUESTION: 024 (2.00)

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: 025 (2.00)

Shutdown cooling will isolate on either __(1)___ reactor water level or on 350 degrees F __(2)____ temperature.

	(1)	(2)
a.	+8 inches,	SDC pump suction
b.	+8 inches,	recirculation loop
c.	+48 inches,	SDC pump suction
d.	+48 inches,	recirculation loop

QUESTION: 026 (2.00)

Which of the following will prevent the main hoist from being raised?

a. Main Hoist loaded with 1650 pounds.

b. Main hoist loaded and ENGAGE/RELEASE switch in ENGAGE.

c. Main hoist loaded with 400 pounds and both grapple hooks NOT OPEN.

d. Bridge near or over Spent Fuel Pool with NO control rods withdrawn.

QUESTION: 027 (2.00)

Given:

Unit 2 is at 100% power.

Unit 3 mode switch is in STARTUP; heat up is in progress.
Unit 3 refueling platform is OOS.

What interlocks, if any, prohibit the Unit 2 refueling platform from being moved from the Unit 2 fuel pool to the Unit 3 fuel pool?

a. None.

b. Rails do NOT connect to maintain unit separation.

c. Control rods withdrawn on Unit 2 and mode switch in RUN.

d. Control rods withdrawn on Unit 3 and mode switch in STARTUP.

QUESTION: 028 (2.00)

The following radiological conditions exist in the plant:

General area radiation of 120 mRem per hour.
Smearable contamination of 70 counts above background.

Which of the following postings should be applied to this area?

a. Radiation area.

b. Contamination area.

c. High radiation area.

d. Locked High radiation area.

QUESTION: 029 (2.00)

Which of the following is the MINIMUM period of time that an operator must abstain from drinking alcoholic beverages before assuming his/her on-shift duties inside a vital area?

a. 3 Hours

b. 5 Hours

c. 8 Hours

d. 12 Hours

QUESTION: 030 (2.00)

Which of the following individual's approval is required prior to the installation of a Temporary Alteration per DAP 05-08?

a. Shift Manager

b. Unit Supervisor

c. Onsite Review Committee

d. Station Operations Manager

QUESTION: 031 (2.00)

Which of the following is a prohibited area for transmitting via a portable radio?

a. Cable Tunnel

b. HPCI Pump Room

c. Security Gate House

d. Diesel Generator Room

QUESTION: 032 (2.00)

Which of the following is NOT correct, per DAP 7-7, Conduct of Refueling Operations?

a. During shutdown margin checks, the doors to the refueling floor shall be locked.

b. The fuel handling supervisor will request that all personnel NOT having duties on the refueling floor leave.

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

d. During functional checks with reactor water level above 450 inches, personnel in the reactor building must be at least one floor below the level of the fuel loading platform.

QUESTION: 033 (2.00)

Given:

The reactor is shut down.
NO recirc pumps are running.
One loop of shutdown cooling is in use.
Vessel level starts dropping rapidly.

How will a drop to +4" level affect shutdown cooling?

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 isolate, the pumps trip when inlet valves leave the full open position.

QUESTION: 034 (2.00)

Identify from the list below, the required arrangement of fuel bundles to provide support to a control blade when removing or replacing fuel in the reactor? The blade must be supported by:

a. 1 fuel bundle at all times.

b. 2 adjacent fuel bundles at all times.

c. 2 diagonal adjacent fuel bundles at all times.

d. 3 fuel bundles at all times.

QUESTION: 035 (2.00)

Which of the following is the responsibility of Fuel Handlers?

a. Installation of main steam line plugs.

b. Changing SRM shorting links as required.

c. Removal of the dryer-separator pit blocks.

d. Verification that hoist cables properly lay on takeup reels.

QUESTION: 036 (2.00)

DFP 0800-32 requires that for fuel that has been out of the core for less than 90 days, a/an _____ foot water clearance must be maintained.

a. 3

b. 5

c. 6

d. 8

QUESTION: 037 (2.00)

During installation of the reactor gate between the reactor and the spent fuel pool it is necessary to check the gates for leaks. Which of the following is the required action should a leak be identified?

a. Loosen the hold down bolts and lower reactor side water.

b. Lower reactor side water level and tighten hold down bolts.

c. Raise reactor side water level and tighten hold down bolts.

d. Open tell-tale drain between the gates and calculate leakage. If leakage is less than 1 gpm increase spent fuel pool side water level and tighten hold down bolts.

QUESTION: 038 (2.00)

Which of the following systems can be used to supplement the heat removal capability of the Fuel Pool Cooling and Cleanup system?

a. Service Water System

b. Shutdown Cooling System

c. Reactor Water Cleanup System

d. Low Pressure Coolant Injection System

QUESTION: 039 (2.00)

Which of the following individuals has the initial responsibility of assuming the position of "Fire Chief"?

a. Shift Manager

b. Unit Supervisor

c. Security Shift Supervisor

d. Radwaste Shift Supervisor

QUESTION: 040 (2.00)

After clearing the Out-Of-Service card on a valve, the operator can return the valve to the required alignment position by referring to the associated:

a. P&ID

b. Technical Manual

c. Out-Of-Service Card

d. Equipment Outage Checklist

QUESTION: 041 (2.00)

For which of the following is evacuation of the Refuel Floor MANDATORY (NOT at the discretion of Rad Protection)

a. Tornado Warning.

b. Dropped New Fuel.

c. Dropped Spent Fuel.

d. Decreasing water level in fuel pool & reactor cavity and the Refuel Floor Area Radiation Monitor Alarms and is confirmed.

QUESTION: 042 (2.00)

Which of the following will PREVENT refueling platform motion towards the core?

a. Refueling platform is near the core and the mode switch is in REFUEL.

b. The mode switch is in REFUEL and one control rod is NOT fully inserted.

c. The mode switch is in STARTUP and the refueling platform is near the core.

d. Refueling platform is near the core and the fuel grapple is loaded and fully raised.

QUESTION: 043 (2.00)

Given the following:

2A and 2B Fuel Pool Cooling pumps running.
The feed breakers from Bus 24 to 24-1 trip open.
All emergency diesel generators respond as expected.

With NO operator action, the status of Fuel Pool Cooling is ...

a. 2A pump running.

b. 2B pump running.

c. 2A and 2B pumps off.

d. 2A and 2B pumps running.

QUESTION: 044 (2.00)

Which of the following will result in an automatic initiation of the SBGT system?

a. Low Reactor Water Level of +20".

b. High Drywell pressure of 1.75 psig.

c. High Drywell radiation monitor reading of 10 R/hr.

d. High Refuel Floor radiation monitor reading of 100 mr/hr.

QUESTION: 045 (2.00)

During flooding of the Reactor Cavity (Well) for refueling operations, why is the fill stopped two (2) feet above the vessel flanges?

a. Allow Health Physics to take Radiation Surveys.

b. Drywell entry is made to check for leaks on the bellows seals.

c. The removable gate between the reactor well and the fuel storage pool is inserted.

d. The removable blocks on the dryer-separator pit are removed to allow flooding of the pit along with the reactor well.

QUESTION: 046 (2.00)

Given:

CR = Count Rate, cps
S = Source Term, neutrons per second
k = multiplication

Which of the following describes how the count rate in a subcritical reactor varies as a function of the multiplication constant?

a. CR is directly proportional to S(1-k)

b. CR is directly proportional to S(k-1)

c. CR is directly proportional to S/(k-1)

d. CR is directly proportional to S/(1-k)

QUESTION: 047 (2.00)

Compare the following values of the moderator temperature coefficient of reactivity, Tm, where Tm is in units of (delta k/k)/degree F. (Remember that -0.5 is greater than -0.6)

Tm(T = 100 F) _(1)__ Tm(T = 400 degree F)

Tm(Beginning of cycle) _(2)__ Tm(End of cycle)

	(1)	(2)
a.	less than,	less than
b.	less than,	greater than
c.	greater than,	less than
d.	greater than,	greater than

QUESTION: 048 (2.00)

Contrast the moderator temperature (Tm, delta k/k/degree F(moderator)), Doppler (D, delta k/k/degree F(fuel)), and void (V, delta k/k/(% void-fraction) coefficients of reactivity.

Given:

Moderator Temperature increases by 5 degree F
Fuel Temperature increases by 100 degree F
% void-fraction increases by 2%
Beginning of core life.

Rank the magnitude of the change in reactivity introduced by the above changes.

a. Doppler effect is greatest, void least.

b. Moderator temperature effect is greatest, Void least.

c. Void effect is greatest, moderator temperature least.

d. Moderator temperature effect is greatest, Doppler least.

QUESTION: 049 (2.00)

Describe how the Xenon-135 concentration varies after a scram.

a. It reaches MAXIMUM about nine hours after a scram.

b. It reaches a MINIMUM about nine hours after a scram.

c. It will be stable at the pre-scram levels for about nine hours.

d. It will be at one-half its pre-scram levels after about nine hours.

QUESTION: 050 (2.00)

How is burnable poison used in the reactor?

a. Gadolinium is placed in some control rods for flux shaping.

b. Gadolinium is placed in all control rods to extend their lives.

c. Samarium is placed in some fuel rods in the fuel bundles to provide reactivity control.

d. Gadolinium is placed in some fuel rods in the fuel bundles to flatten axial power distribution.

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

ANSWER: 001 (2.00)

b.

REFERENCE:

1. DEOP 300-1, SECONDARY CONTAINMENT CONTROL, Rev. 03.
2. Licensed Operator Training, DEOP's Secondary Containment Control/300's, Rev. 0, p. 4.

295034K202 ..(KA's)

ANSWER: 002 (2.00)

a.

REFERENCE:

1. Dresden Exam Bank

295021K304 ..(KA's)

ANSWER: 003 (2.00)

d.

REFERENCE:

1. DFP 0800-01 Rev. 21, Attachment 4.

294001A102 ..(KA's)

ANSWER: 004 (2.00)

d.

REFERENCE:

1. 233L-S1, Fuel Pool Cooling and Cleanup, Rev. 10, Page 22.

294001K104 ..(KA's)

ANSWER: 005 (2.00)

a.

REFERENCE:

1. FHIT, Fuel, Rev.1, page 11.
   234000K505 ..(KA's)

ANSWER: 006 (2.00)

d.

REFERENCE:

1. ILT 233L-S1, Rev. 10, Section C.4.b.1-6
   233000G007 ..(KA's)

ANSWER: 007 (2.00)

d.

REFERENCE:

1. DFP 0800-01, Master Refueling Procedure, Rev. 22, page 9.
   234000G002 ..(KA's)

ANSWER: 008 (2.00)

a.

REFERENCE:

1. DFP 0800-01, Rev. 22, Attachment 5, Item 6.
2. DFP 0800-09, Rev. 16, Precaution #2.
   234000G009 ..(KA's)

ANSWER: 009 (2.00)

c.

REFERENCE:

1. FHIT, Fuel, Rev. 1, page 10.
   234000K102 ..(KA's)

ANSWER: 010 (2.00)

b.

REFERENCE:

1. DAP 03-08, Rev. 13, pages 1-2.
   294001K102 ..(KA's)

ANSWER: 011 (2.00)

c.

REFERENCE:

1. DFP 0800-09, Rev. 16, Section G.4.k.
2. Vender manual on new refuel platform document #70581400, Rev. 0.0, p.3-4
   234000K501 ..(KA's)

ANSWER: 012 (2.00)

c.

REFERENCE:

DAP 07-21, Control of Operations Overtime, Rev. 3, p 3.
294001A109 ..(KA's)

ANSWER: 013 (2.00)

d.

REFERENCE:

1. DFP 0800-07, Rev. 13, Attachment A, item 4.
   234000G013 ..(KA's)

ANSWER: 014 (2.00)

a.

REFERENCE:

1. DAP 9-13, Procedural Response to Abnormal Conditions, Rev. 02, p. 5
   294001A109 ..(KA's)

ANSWER: 015 (2.00)

a.

REFERENCE:

1. ILT 271L-S1, Rev. 0, Section C.4.
   271000K508 ..(KA's)

ANSWER: 016 (2.00)

d.

REFERENCE:

1. DFP 800-1 Rev. 21, p 10.
   234000G001 ..(KA's)

ANSWER: 017 (2.00)

b.

REFERENCE:

1. TS 3/4.10.B
   295023G003 ..(KA's)

ANSWER: 018 (2.00)

d.

REFERENCE:

1. ILT 223L-S1, Rev. 1, Section 6.a.3.
   290001K402 ..(KA's)

ANSWER: 019 (2.00)

a.

REFERENCE:

1. DEOP 300-1, Rev. 03.
290001A203 ..(KA's)

ANSWER: 020 (2.00)

a.

REFERENCE:

1. ILT 215l-S3, Rev.1, Section E.3.e.2.b.
215003K402 ..(KA's)

ANSWER: 021 (2.00)

b.

REFERENCE:

1. DFP 850-01, Rev. 0, Section C.2.
295023G010 ..(KA's)

ANSWER: 022 (2.00)

b.

REFERENCE:

1. ILT 223L-S4, Rev.1, Section 10.10.9.3, p. 19.
290002K403 ..(KA's)

ANSWER: 023 (2.00)

b.

REFERENCE:

1. ILT 233L-S1, Rev. 10, Section F.4.k.
   233000A404 ..(KA's)

ANSWER: 024 (2.00)

c.

REFERENCE:

1. ILT 233L-S1, Rev.10, Section D.2.f.3
   233000K403 ..(KA's)

ANSWER: 025 (2.00)

b.

REFERENCE:

1. DOP 1000-003, Rev. 12, p. 5
   205000K401 ..(KA's)

ANSWER: 026 (2.00)

a.

REFERENCE:

1. LP 201F-03, Rev. 0, Section VI.5.a.
2. Vender manual on the new refuel platform document # 70581400 Rev. 0.0 p.3

   234000A302 ..(KA's)

ANSWER: 027 (2.00)

a.

REFERENCE:

1. DFP 800-1, Rev. 22, Attachment 3.
   234000A301 ..(KA's)

ANSWER: 028 (2.00)

c.

REFERENCE:

1. 10 CFR 20, para. 20.203 "Caution Signs, Labels, Signals, and Controls
294001K103 ..(KA's)

ANSWER: 029 (2.00)

b.

REFERENCE:

1. DAP 13-17 e.3.A.(1)
294001K105 ..(KA's)

ANSWER: 030 (2.00)

b.

REFERENCE:

1. DAP 05-08, Rev 0, section F.1.e.(9)
294001A109 ..(KA's)

ANSWER: 031 (2.00)

a.

REFERENCE:

1. DAP 7-17, Rev.3, Section E.1.a
294001A104 ..(KA's)

ANSWER: 032 (2.00)

d.

REFERENCE:

1. DAP 7-7, Rev. 4, Section F.3.
   294001A110 ..(KA's)

ANSWER: 033 (2.00)

c.

REFERENCE:

1. 205L-S1, Shutdown Cooling (SDC), Rev. 2, p. 8.
   205000A209 ..(KA's)

ANSWER: 034 (2.00)

c.

REFERENCE:

1. DFP 800-07, Rev. 13, Section E.1.
   234000G007 ..(KA's)

ANSWER: 035 (2.00)

d.

REFERENCE:

1. Fuel Handler, Refueling Operations, Rev. 0, p. 6
   234000G001 ..(KA's)

ANSWER: 036 (2.00)

d.

REFERENCE:

1. DFP 0800-32, Rev. 5, Section G.2. (NOTE)
   234000K503 ..(KA's)

ANSWER: 037 (2.00)

b.

REFERENCE:

1. DFP 0800-06, Rev 06, Section G.2.c.
234000G004 ..(KA's)

ANSWER: 038 (2.00)

b.

REFERENCE:

1. 205L-S1, Rev. 2, Section A.3.b
2. 233L-S1, Rev. 10, Section D.1.e, p 11 of 26
205000K305 ..(KA's)

ANSWER: 039 (2.00)

d.

REFERENCE:

1. DAP 03-01, Rev 05, p. 8 of 44, Item 3.b.(1)
294001A112 ..(KA's)

ANSWER: 040 (2.00)

d.

REFERENCE:

1. DAP 3-5, rev 27, Section F.30.g.
294001K102 ..(KA's)

ANSWER: 041 (2.00)

d.

REFERENCE:

1. DFP 0850-01, Rev. 0, Section C.1, p 2 of 5
295023K301 ..(KA's)

ANSWER: 042 (2.00)

c.

REFERENCE:

1. DFP 0800-01, Rev. 21, Section F.12
234000K401 ..(KA's)

ANSWER: 043 (2.00)

a.

REFERENCE:

1. 262L-S1, Rev. 1, obj 5.b p. 18.
264000K101 ..(KA's)

ANSWER: 044 (2.00)

d.

REFERENCE:

1. ILT 261L-S1, Rev. 3, Section III.B.2.
261000K401 ..(KA's)

ANSWER: 045 (2.00)

b.

REFERENCE:

1. Fuel Handling and Refueling Equipment lesson plan
295023G001 ..(KA's)

ANSWER: 046 (2.00)

d.

REFERENCE:

1. RT/CH. III, Reactor Kinetics, p. 8.
292003K101 ..(KA's)

ANSWER: 047 (2.00)

c.

REFERENCE:

1. RT/CH. IV. Coefficients of Reactivity, Rev. 1, pp. 8-9
292004K102 ..(KA's)

ANSWER: 048 (2.00)

c.

REFERENCE:

1. RT/CH. IV. Coefficients of Reactivity, Rev. 1, pp 8, 14, 22
292004K114 ..(KA's)

ANSWER: 049 (2.00)

a.

REFERENCE:

1. RT/CH. VI. Poisons, Rev. 1, p. 7
292006K107 ..(KA's)

ANSWER: 050 (2.00)

d.

REFERENCE:

1. RT/CH. VI. Poisons, Rev. 1, p. 10
2. FHIT, Fuel, Rev. 1, Obj. 2.1, p. 7
   292007K101 ..(KA's)

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

A N S W E R K E Y

MULTIPLE CHOICE

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

A N S W E R K E Y

046 d

047 c

048 c

049 a

050 d

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