UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION II
101 MARIETTA STREET, N.W.
ATLANTA, GEORGIA 30323

ENCLOSURE 1

EXAMINATION REPORT - 50-259/92-300

Facility Licensee: Tennessee Valley Authority

Facility Name: Browns Ferry Nuclear Plant

Facility Docket Nos.: 50-259, 50-260, and 50-296

The NRC administered examinations at the Browns Ferry Nuclear Plant near Decatur, Alabama.

Chief Examiner: D. Bartley for D. Charles Payne — 10/21/92 Date Signed

Approved By: Michael E. Ernstes — 10/21/92 Date Signed
Michael E. Ernstes, Chief
Operator Licensing Section 2
Division of Reactor Safety

SUMMARY

Scope: Written examinations and operating tests were administered to five Senior Reactor Operator (SRO) and seven Reactor Operator (RO) applicants on September 18 and September 21 - 24, 1992.

Results: Four SROs and seven ROs passed these examinations. All others failed.

A Browns Ferry training program strength was noted in the area of reference materials (para 4.c).

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REPORT DETAILS

1. Facility Employees Attending Exit

   T. Albright, Simulator System Manager
   D. Ashley, Operations Training Manager/Nuclear Training
   R. Davenport, QA Manager
   M. DeRoche, Operations Training Manager
   T. Dexter, Training Manager
   M. Herrel, Operations Manager
   M. Meek, Shift Operations Supervisor, Instructor
   R. Moll, Operations Superintendent
   G. Pierce, Site Licensing Manager
   P. Salas, Compliance Manager
   J. Scalice, Plant Manager

2. Examiners

   J. Bartley, Region II
   M. Mitchell, PNL
   C. Payne, Chief Examiner, Region II
   M. Riches, PNL

3. Other NRC Personnel Attending Exit

   W. Bearden, Resident Inspector
   C. Patterson, Senior Resident Inspector
   L. Vick, OLB, NRR

4. Discussion

   a. Procedures

      (1) Technical Specification Table 3.2.K.1 (for the Stack Gas monitors) specified only 1 channel of RM-90-147A and B is required. This does not reflect the plant configuration of two channels, RM-90-147 and RM-90-148, which have indicators in the Control Room (147A and 148A) and on the Shutdown Panel (147B and 148B).

      (2) Surveillance Instruction O-SI-A4.8.B.1.a.1, "Airborne Effluent Release Rate," step 7.8.1.1 specified a series of keystrokes to recall data from the Continuous Air Monitoring System Operator Console, O-CONS-90-361A or 362A. The series of keystrokes did not work to obtain the required data for performance of the SI.

(3) EOI Appendix 7K, "Alternate RPV Injection System Lineup - Fire System", Step 4 required the operator to "OPEN or DISPATCH personnel to open the following valves to RHR System I." This step did not remind the operator that three of the specified valves are on Panel 2-9-3 (as does Step 5). This resulted in an unnecessary delay by one operator in lining up an injection source to the core because he dispatched operators to locally open valves which he could have opened from the control room.

b. Material Condition of the Plant

(1) The examiners identified lead seals missing or improperly attached to manual isolation valves and drain valves for RPS and ECCS instrumentation. This item was turned over to the Senior Resident Inspector for follow-up.

(2) The handle on the door for Panel 9-15, Bay 1 was missing making access to the interior of the cabinet difficult. This panel contains EOI jumper connections.

(3) There was no thermometer in the Unit 2 toolbox for the Hydraulic Control Units (HCU). Procedure 2-OI-85, "Control Rod Drive System," Section 8.3, Step 8.3.15 requires pressurizing the Hydraulic Control Unit (HCU) accumulator until the pressure is in accordance with Illustration 2. Illustration 2 requires the operator to know ambient temperature at the HCU to determine the correct HCU accumulator pressure.

(4) During a walkthrough examination, an examiner found two closed maintenance requests laying on the floor. These were MR #896508 (closed 7/12/89) and MR #896597 (closed 1/7/91).

(5) The examiners found several lights burned out around the Unit 2 torus, near the RHR Drain pumps.

(6) Several phones in the plant were not working. These were reported to the Control Room by the candidates.

c. Reference Material

The reference material submitted by the facility was complete and properly bound. Of particular note was an extensive index which was cross-referenced to NUREG-1123 "Knowledge and Abilities Catalog for Nuclear Power Plant Operators: Boiling Water Reactors." This index made the materials easy to use and aided the exam preparation process.

d. Simulator Fidelity

During one scenario a Main Steam Relief Valve (MSRV) was failed open with a concurrent failure of that MSRV's acoustic monitor. This scenario was complicated by two problems with the MSRV tailpipe temperature recorder, TR-1-1 on panel 2-9-47, which almost resulted in a candidate failure. A mechanical problem with the recorder caused it to indicate an incorrect point number corresponding with the print head. The temperature recorder itself is from a different manufacturer and does not lock in on the alarming point as does the one in the Control Room.

5. Exit Meeting

At the conclusion of the site visit, the examiners met with those representatives of the plant staff indicated in paragraph 1, to discuss the results of the examinations and inspection findings. Support offered by the training staff was both helpful and appreciated. The licensee did not identify as proprietary any material provided to or reviewed by the examiners.

ENCLOSURE 2

SIMULATOR FIDELITY REPORT

Facility Licensee: Tennessee Valley Authority

Facility Name: Browns Ferry Nuclear Plant

Facility Docket Nos.: 50-259, 50-260, and 50-296

Operating Tests Administered On: September 21 - 24, 1992

This form is to be used only to report observations. These observations do not constitute, in and of themselves, audit or inspection findings and are not, without further verification and review, indicative of noncompliance with 10 CFR 55.45(b). These observations do not affect NRC certification or approval of the simulation facility other than to provide information which may be used in future evaluations. No licensee action is required solely in response to these observations.

During the conduct of the simulator portion of the operating tests, the following items were observed:

ITEM	DESCRIPTION
Relief Valve Tailpipe temperature recorder TR-1-1 on Panel 2-9-47	The temperature recorder for the Main Steam Relief Valves, TR-1-1 on Panel 2-9-47, is from a different manufacturer and does not lock in on the alarming point as does the one in the Main Control Room. This is scheduled to be corrected during the next simulator outage in December 1992.

Nuclear Regulatory Commission
Operator Licensing
Examination

This document is removed from
Official Use Only category on
date of examination.

Browns Ferry
Master 92-300

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

CANDIDATE'S NAME: _____

FACILITY: Browns Ferry 1,2,3

REACTOR TYPE: BWR-GE4

DATE ADMINISTERED: 09/18/92

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

ANSWER SHEET

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	___

ANSWER SHEET

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	___

ANSWER SHEET

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)

WHICH ONE of the following is the Safety Limit for RPV pressure?

a. 1105 psig

b. 1148 psig

c. 1250 psig

d. 1375 psig

QUESTION: 002 (1.00)

A Reactor startup is in progress on Unit 2 when the operating CRD Pump trips due to motor overload. The backup pump is under repair and is expected to be operable in 2 hours. The following plant conditions exist:

Rx Power is 5%
Reactor Pressure is 700 psig
Charging Water Pressure is 1400 psig [decreasing slowly]
1 Accumulator light on Full Core Display illuminated
1 CRD High Temperature alarm
CRD Low Pressure alarm

Which ONE of the following would be the correct IMMEDIATE action to take in accordance with 2-AOI-85-3, "CRD System Failure"?

a. A Manual Scram is required under current conditions.

b. A Manual Scram is required if another Control Rod High Temperature alarm is received in conjunction with the LOW CRD WATER PRESSURE alarm.

c. A Manual Scram is required if cooling water flow is not re-established within one hour.

d. A Manual Scram is required if Reactor Pressure decreases to below 600 psig.

QUESTION: 003 (1.00)

A cold reactor startup is in progress. Group 2 rods are currently being withdrawn. A reactor operator trainee places the reactor mode switch in RUN. WHICH ONE of the following describes the expected plant response?

a. The reactor will scram due to main steam line low pressure and the MSIV's will remain open.

b. The MSIV's will close due to main steam line low pressure and the reactor will scram on high pressure.

c. The reactor will scram due to low condenser vacuum and the MSIV's will remain open.

d. The MSIV's will close due to main steam line low pressure and the reactor will scram due to MSIV closure.

QUESTION: 004 (1.00)

With HPCI in standby readiness, WHICH ONE of the following describes the HPCI valve logic action if Torus level increased to +7"?

a. HPCI SUPPRESSION POOL SUCTION INBOARD VALVE 73-26 and HPCI SUPPRESSION POOL SUCTION OUTBOARD VALVE 73-27 fully open, then HPCI CST SUCTION VALVE, 73-40 closes.

b. HPCI SUPPRESSION POOL SUCTION INBOARD VALVE 73-26 and HPCI SUPPRESSION POOL SUCTION OUTBOARD VALVE 73-27 start open, then HPCI CST SUCTION VALVE, 73-40 starts closed.

c. HPCI CST SUCTION VALVE, 73-40 closes, then HPCI SUPPRESSION POOL SUCTION INBOARD VALVE 73-26 and HPCI SUPPRESSION POOL SUCTION OUTBOARD VALVE 73-27 open.

d. HPCI CST SUCTION VALVE, 73-40 starts closed, HPCI SUPPRESSION POOL SUCTION INBOARD VALVE 73-26 and HPCI SUPPRESSION POOL SUCTION OUTBOARD VALVE 73-27 start open.

QUESTION: 005 (1.00)

Fuel loading is in progress on Unit 2. The following SRM readings were recorded before and after the loading of a bundle in Quadrant A. All four SRM's are completely surrounded by fuel.

	Before	After
SRM A	4 cps	5 cps
SRM B	3 cps	2 cps
SRM C	5 cps	5 cps
SRM D	3 cps	6 cps

WHICH ONE of the following describes the required action?

a. Must perform a response check of SRM C before loading more fuel.

b. Fuel loading may continue in quadrants A, C, and D.

c. Fuel loading shall be halted until SOS concurrence to continue fuel loading is received.

d. Fuel loading may continue in any quadrant.

QUESTION: 006 (1.00)

WHICH ONE of the following is NOT considered a potential cause of rod drift?

a. High accumulator pressure

b. High cooling water pressure

c. Scram outlet valve leakage

d. Low scram pilot air header pressure

QUESTION: 007 (1.00)

Unit 2 is conducting a startup, the mode switch is in RUN, reactor power is 12%. APRM B fails downscale. An operator downranges IRM H, causing it to exceed 121/125 on range 8. WHICH ONE of the following is the plant's response?

a. A rod block occurs due to the APRM downscale, and an alarm only occurs due to the IRM hi-hi.

b. A rod block occurs due to the APRM downscale, and a 1/2 scram on RPS B occurs due to the IRM hi-hi.

c. A half scram occurs on RPS B due to the APRM downscale, and an alarm only occurs due to the IRM hi-hi.

d. A half scram occurs on RPS B due to the APRM downscale, and a rod block occurs due to the IRM hi-hi.

QUESTION: 008 (1.00)

A startup of Unit 1 is in progress. After receiving word from the turbine building AUO that he has started B condensate booster pump aux oil pump, the Unit Operator places the B condensate booster pump control switch to START. WHICH ONE of the following describes the starting sequence under these circumstances?

a. B condensate booster pump will start 15 seconds after the control switch was placed to start provided that the aux lube oil pump is maintaining at least 8 psig oil pressure and suction pressure at the pump is at least 10 psig.

b. B condensate booster pump will start immediately when the handswitch is taken to START, and the aux oil pump will stop 15 seconds after the control switch was placed to start.

c. B condensate booster pump will start immediately upon placing the control switch to START provided pump lube oil pressure is greater than 8 psig regardless of suction pressure.

d. B condensate booster pump will start 10 seconds after the handswitch is taken to START provided suction pressure is at least 10 psig, regardless of oil pressure.

QUESTION: 009 (1.00)

Notification of the STA and Shift Operations Supervisor is required if the drywell delta-p compressor runs continuously for 30 minutes. WHICH ONE of the following describes why this notification is made? Run times of 30 minutes or more:

a. could overheat the compressor motor.

b. will result in excessive nitrogen makeup consumption.

c. could indicate possible cracking of containment piping.

d. indicates that the compressor discharge relief is stuck open.

QUESTION: 010 (1.00)

Unit 2 control room has been abandoned and reactor pressure is decreasing due to a controlled cooldown. Water level is being controlled with the RCIC system at remote shutdown panel 25-32, in accordance with 2-AOI-100-2, "Control Room Abandonment". When reactor pressure decreases to 50 psi, WHICH ONE of the following describes the response of the RCIC system under these circumstances?

a. RCIC will auto isolate and trip.

b. RCIC will trip but not isolate.

c. Only the inboard isolation valve, FCV-71-2, will isolate.

d. RCIC will neither trip nor isolate.

QUESTION: 011 (1.00)

WHICH ONE of the following describes an indication of an uncoupled control rod when performing a control rod coupling integrity check at position 48?

a. Receive CONTROL ROD OVERTRAVEL alarm, rod display blanks, and rod select power is de-energized by RSCS.

b. Receive CONTROL ROD OVERTRAVEL alarm, rod display blanks, and red backlighting on the full core display extinguishes.

c. Receive CONTROL ROD OVERTRAVEL and CONTROL ROD DRIFT alarms, and rod display does not change from position 48.

d. Receive CONTROL ROD OVERTRAVEL and CONTROL ROD WITHDRAWAL alarms, and rod display does not change from position 48.

QUESTION: 012 (1.00)

Given the following plant conditions: (The CSS was in a normal standby lineup prior to the event.)

RPV level	-112 inches (steady)
RPV pressure	300 psig (slowly lowering)
DW pressure	+2 psig (slowly rising)
DW temperature	223 degrees F (slowly rising)

WHICH ONE of the following describe the status of the Unit 2 Core Spray System (CSS) inboard injection valve?

a. The inboard injection valve has automatically opened.

b. The inboard injection valve can not be manually opened from Panel 9-3 unless the outboard injection valve is shut.

c. The inboard injection valve will open as soon as drywell pressure exceeds 2.45 psig.

d. The inboard injection valve can be manually opened from Panel 9-3 only if the outboard injection valve is fully closed.

QUESTION: 013 (1.00)

During performance of O-SI-4.9.A.1.a, "Diesel Generator Monthly Operability Test", the operator inadvertently leaves the generator in the SINGLE UNIT mode when parallelling across the generator output breaker. If all other steps are performed properly, WHICH ONE of the following describes the system response when the DG output breaker control switch is taken to CLOSE?

a. The output breaker will CLOSE; the generator will trip on reverse power.

b. The output breaker will CLOSE; the generator will pick up maximum load.

c. The output breaker will NOT close; the generator will trip on overspeed.

d. The output breaker will NOT close; the generator will not be affected.

QUESTION: 014 (1.00)

When the main turbine receives a TRIP signal, WHICH ONE of the following describes the status of the trip solenoids?

a. Both master trip solenoids are energized and the mechanical trip solenoid is deenergized.

b. Both master trip solenoids and the mechanical trip solenoid are energized.

c. Both master trip solenoids are deenergized and the mechanical trip solenoid is energized.

d. Both master trip solenoids and the mechanical trip solenoid are deenergized.

QUESTION: 015 (1.00)

During fuel loading on Unit 2, a Fire alarm is received. If a fuel bundle is being moved from the spent fuel pool to the reactor, and is currently suspended over the reactor, WHICH ONE of the following describes what should be done with the fuel bundle?

a. Bridge movement shall be stopped, and the bundle held where it is.

b. The bundle shall be lowered immediately and placed in a safe condition.

c. The bundle shall be taken back to the location in the SFSP (spent fuel storage pool) from which it was taken.

d. The bridge and the bundle shall be moved to a location not over the reactor vessel.

QUESTION: 016 (1.00)

WHICH ONE of the following sets of plant conditions will cause the Refuel Mode One Rod Permissive Light to illuminate? Mode switch in REFUEL and:

a. no rods selected, and all rods at full-in overtravel.

b. no rods selected, and one rod withdrawn.

c. refuel bridge over core, and one rod selected and withdrawn.

d. one rod selected, and all rods at 00.

QUESTION: 017 (1.00)

In accordance with 2-OI-76, "Containment Inerting System", WHICH ONE of the following will be used to exhaust primary containment atmosphere during inerting if the purge filter fan is inoperable?

a. Existing differential pressure between primary containment and the reactor building.

b. Reactor building exhaust fans only.

c. Standby Gas Treatment System.

d. Drywell Delta-p Compressor.

QUESTION: 018 (1.00)

WHICH ONE of the following statements describes the response of the Motor Gear Unit (MGU) to a loss of signal from the flow controller?

a. Will fail high and run the RFPT to about 5500 rpm.

b. Will fail low and run the RFPT to about 2000 rpm.

c. Will fail high and run the RFPT speed to the setting of the Motor Speed Changer (MSC)

d. Will fail "as is" and run the RFPT at its present RPM.

QUESTION: 019 (1.00)

WHICH ONE of the following describes the differences between normal rod insertion and rod insertion using the "emergency in" control switch? Insertion using the "emergency in" control switch bypasses the rod motion timer and:

a. results in a loss of the rod settle function, but does NOT override the RWM insert block or any select block.

b. does NOT result in a loss of the rod settle function, and overrides the RWM insert block, but NOT the select block.

c. results in a loss of the rod settle function, and overrides the select block, but NOT the RWM insert block.

d. does NOT result in a loss of the rod settle function, and overrides all rod insert blocks.

QUESTION: 020 (1.00)

2-OI-3, "Reactor Feedwater System", recommends that the Aux Oil Pump remain in operation until RFPT speed reaches _____ rpm to preclude the possibility of RFPT trip on low oil pressure.

a. 2250

b. 2750

c. 4000

d. 4200

QUESTION: 021 (1.00)

With Unit 3 operating at 100% power, a fault in the "A" RFP control system causes the pump to decrease to minimum speed. The Unit Operator observes a runback of the recirc pumps to 75% speed. WHICH ONE of the following sets of conditions caused the runback?

a. Total feedwater flow less than 20% and RPV level less than +27 inches.

b. Total feedwater flow less than 20%.

c. Any individual feedpump flow less than 20%.

d. Any individual feedpump flow less than 20% and RPV level less than +27 inches.

QUESTION: 022 (1.00)

Suppression pool temperature is 145 degrees F, level is above the setpoint for transfer from CST to suppression pool suction. WHICH ONE of the following describes the reason that the HPCI suppression pool water level suction transfer logic interlock is defeated and HPCI is operated with a suction from the CST?

a. The suppression pool provides insufficient NPSH to the HPCI pump and cavitation may occur at rated flow.

b. The HPCI shaft pump seals are not designed to operate at temperatures in excess of 140F and may fail.

c. The HPCI lube oil will exceed allowable temperatures and the HPCI function could be lost due to damaged bearings.

d. The HPCI turbine exhaust pressure is likely to exceed the trip setpoint at elevated suppression pool temperatures.

QUESTION: 023 (1.00)

Power ascension is in progress on Unit 2 with the main turbine on line. Control rods are being withdrawn to increase power. As power approaches 35%, the STA notes that two turbine bypass valves are open. WHICH ONE of the following states why this is of concern?

a. Prematurely removes RSCS from enforcing.

b. Raises the actual power level at which the RPS reactor scram on turbine trip is enabled.

c. Raises the actual power level for RBM to begin enforcing.

d. Prematurely removes RBM from enforcing.

QUESTION: 024 (1.00)

WHICH ONE of the following conditions would result in a main turbine trip?

a. Turbine bearing #5 vibration at 8 mils.

b. Turbine speed at 1990 rpm.

c. Stator cooling water conductivity at 10 micromhos.

d. Turbine bearing #5 temperature at 180 degrees F.

QUESTION: 025 (1.00)

WHICH ONE of the following sets of conditions will cause the auto-initiation, and support continued operation of the standby SJAE, assuming that all control board handswitches are lined up to support auto-initiation of a standby SJAE?

	Condensate Pressure	Condenser Pressure	Holdup Volume Temp. (Both Channels)
a.	65 psig	7" Hg abs	150 degrees F
b.	55 psig	8" Hg abs	145 degrees F
c.	70 psig	3" Hg abs	155 degrees F
d.	62 psig	9" Hg abs	165 degrees F

QUESTION: 026 (1.00)

Unit 2 is operating at 100% rated power when the following indications are received.

OG Post Treatment Radiation Hi-Hi alarm
OG Post Treatment Radiation Hi-Hi-Hi/Inop alarm
OG Pretreatment Radiation Hi alarm
OG Average Annual Release Limit Exceeded alarm

WHICH ONE of the following is the appropriate immediate operator action?

a. Reduce reactor power to 60% with recirc flow and manually scram the reactor.

b. Reduce recirc flow to 60% and insert control rods in reverse order to shutdown the reactor, be in hot shutdown within 1 hour.

c. Reduce recirc flow until total core flow is less than 75% and then manually scram the reactor.

d. Reduce reactor power with recirc flow to reduce the off-gas radiation levels to below the Hi-Hi-Hi release trip setpoint.

QUESTION: 027 (1.00)

Assuming all systems function normally, WHICH ONE of the following lists of PCIS groups will isolate if drywell pressure exceeds 2.45 psig?

a. Group 2, Group 3, Group 4

b. Group 2, Group 6, Group 8

c. Group 3, Group 5, Group 6

d. Group 5, Group 6, Group 8

QUESTION: 028 (1.00)

WHICH ONE of the following sets of conditions will result in the wide range level instrument (2-LI-3-58A/B) most accurately measuring actual RPV level?

a. 100% power at rated temperature and pressure.

b. Cold shutdown, recirc pumps running at minimum speed.

c. Rated temperature and pressure, with no steam flow.

d. Startup in progress, reactor pressure 800 psig.

QUESTION: 029 (1.00)

WHICH ONE of the following valves in the RCIC steam supply flowpath is CLOSED in a normal standby lineup?

a. Inboard steam isolation valve (FCV-71-2)

b. Outboard steam isolation valve (FCV-71-3)

c. Steam supply valve (FCV-71-8)

d. Trip throttle valve (FCV-71-9)

QUESTION: 030 (1.00)

With the reactor at rated pressure, WHICH ONE of the following describes indications of a failure of ONLY the #2 (outboard) recirculation pump seal?

	#1 seal pressure	#2 seal pressure
a.	1000 psig	980 psig
b.	995 psig	50 psig
c.	1000 psig	750 psig
d.	1000 psig	500 psig

QUESTION: 031 (1.00)

A LOCA has occurred on Unit 2, concurrent with a partial loss of electrical power. The RHR system receives an auto start signal. The shutdown boards are aligned as follows.

4Kv SD Bd A - deenergized
4Kv SD Bd B - normal power supply
4Kv SD Bd C - emergency diesel
4Kv SD Bd D - normal power supply

WHICH ONE of the following describes the response of the RHR pumps?

a. 2A and 2C do not start, 2B starts in 7 seconds, 2D in 21 seconds.

b. 2A does not start, 2B starts in 7 seconds, 2C in 14 seconds, 2D in 21 seconds.

c. 2A does not start, 2B starts immediately, 2C in 14 seconds, 2D in 21 seconds.

d. 2A and 2C do not start, 2B and 2D start immediately.

QUESTION: 032 (1.00)

About 30 seconds after starting the "A" Diesel Generator for a surveillance run, you notice that the DG A LOW-LOW LUBE OIL PRESSURE light on panel 9-23 is illuminated. Diesel rpm is currently 450. This light remains in solid for the next 10 seconds. No other alarms or annunciators associated with the "A" Diesel are illuminated, and no audible alarm is heard. WHICH ONE of the following courses of action is correct?

a. No action is required.

b. Hold the startup at the current point until an operator can verify local lube oil pressure and level at the machine.

c. Normal shutdown the Diesel.

d. Emergency shutdown the Diesel.

QUESTION: 033 (1.00)

While venting with SGT during post-LOCA conditions, drywell radiation levels reach 1000R. WHICH ONE of the following actions is required?

a. Isolate the Division I and II Offgas Stack Isolation Dampers within 30 minutes.

b. Secure the relative humidity heater.

c. Secure the SGT building supply fans.

d. Maintain SGT flow greater than 4000 scfm.

QUESTION: 034 (1.00)

WHICH ONE of the following describes the action of the individual rod scram test switches?

a. A single switch will de-energize both scram pilot solenoids for its associated control rod when taken to the TEST position.

b. A single switch will energize both scram pilot solenoids for its associated control rod when taken to the TEST position.

c. There are two switches per rod. Each switch de-energizes its respective scram pilot solenoid for its associated control rod when taken to the TEST position.

d. There are two switches per rod. Each switch energizes its respective scram pilot solenoid for its associated control rod when taken to the TEST position.

QUESTION: 035 (1.00)

WHICH ONE of the following signals is used by RSCS to determine if power is above the preset power level beyond which RSCS enforcement is not required.

a. APRM "C"

b. Turbine first stage pressure

c. Total feedwater flow

d. Total steam flow

QUESTION: 036 (1.00)

WHICH ONE of the following signals or sets of signals are used by the RWM for determining if power is below the LPSP?

a. Turbine first stage pressure

b. Steam flow and Feed flow

c. Turbine crossunder pressure

d. Steam flow and Generator Megawatts

QUESTION: 037 (1.00)

ALL Source Range Monitor rod blocks are automatically bypassed under WHICH ONE of the following situations?

a. All IRM's on range 8 or above.

b. The four IRM's in the same channel as the SRMs are on range 8 or above.

c. All IRM's are on range 3 or above.

d. The four IRM's in the same channel as the SRM are on range 3 or above.

QUESTION: 038 (1.00)

A TIP trace is being run in the automatic mode using TIP Channel A. While the TIP is at the top of core limit, the reactor scrams on low water level after a loss of feedwater. RPV level reaches +10 inches minimum. WHICH ONE of the following describe the response of the TIP System following the scram?

a. The TIP channel will withdraw to the indexer, and then stop.

b. The TIP channel will withdraw to the in shield limit, then the ball valve will close.

c. The TIP channel will finish the scan normally unless a high drywell pressure signal is received.

d. The TIP channel will withdraw to the bottom core limit, then the ball valve will close.

QUESTION: 039 (1.00)

WHICH ONE of the following describes the operation of the RCIC minimum flow valve (2-FCV-71-34)?

a. The minimum flow valve will open if RCIC speed exceeds 2250 rpm and flow is less than 60 gpm.

b. The minimum flow valve will open if a RCIC initiation signal is present and flow is less than 60 gpm.

c. The minimum flow valve will open if RCIC discharge pressure exceeds 450 psig and flow is less than 60 gpm.

d. The minimum flow valve will open if RCIC control oil pressure exceeds 50 psig and flow is less than 60 gpm.

QUESTION: 040 (1.00)

WHICH ONE of the following sets of conditions would result in the Unit 2 ADS 95 second timer starting? Assume all sensors, power supplies,and interlocks are operating properly.

a. RPV level remains at -125" for 4 minutes and 30 seconds, Drywell pressure peaks at 2.10 psig, "A" core spray pump discharge pressure is 175 psig, "C" core spray pump discharge pressure is 195 psig, no other ECCS pumps are running.

b. RPV level remains at -125" for 4 minutes and 30 seconds, Drywell pressure peaks at 2.10 psig, "A" core spray pump discharge pressure is 190 psig, "C" core spray pump discharge pressure is 195 psig, no other ECCS pumps are running.

c. RPV level remains at -135" for 3 minutes and 25 seconds, Drywell pressure peaks at 2.50 psig, "A" core spray pump discharge pressure is 190 psig, "B" core spray pump discharge pressure is 195 psig, no other ECCS pumps are running.

d. RPV level remains at -135" for 3 minutes and 25 seconds, Drywell pressure peaks at 2.50 psig, "B" core spray pump discharge pressure is 190 psig, "D" core spray pump discharge pressure is 175 psig, no other ECCS pumps are running.

QUESTION: 041 (1.00)

Following a reactor scram several rod positions on the full core display have no numbered position indications, and only a green background. Which ONE of the following describes their position?

a. They are stuck at an odd reed switch position between the 00 position and the 48 position.

b. They are somewhere between the 00 position and the 48 position and driving in as a result of the scram signal.

c. They over travelled beyond full in as a result of the scram signal and should settle back to 00 position after the scram is reset.

d. Their full in/full out bypass switches in the aux instrument room have been bypassed in the Full In position.

QUESTION: 042 (1.00)

A large break LOCA has occurred. The LPCI system initiates automatically as designed. After vessel level is recovered, an operator manually stops the "A" RHR pump. If vessel level subsequently falls to the LPCI initiation setpoint, WHICH ONE of the following describes the response of the "A" RHR pump?

a. It will automatically start and inject as designed.

b. It will automatically start and run on minimum flow.

c. It will automatically start and inject as designed ONLY if the initiation signal was reset after the vessel level was recovered.

d. It will automatically start ONLY if "C" RHR pump is NOT running.

QUESTION: 043 (1.00)

Due to a Loss of All Offsite Power, backfeed of the Diesel Generators is necessary. WHICH ONE of the following describes the effect of taking the DG backfeed switch to the BACKFEED position?

a. Trips and locks out the normal and alternate Unit Board supply breakers, trips the Shutdown Bus 43 switch to MANUAL, and allows the Unit Board to Shutdown Bus supply breaker to be automatically closed.

b. Trips and locks out the normal Unit Board supply breaker, trips the Shutdown Bus 43 switch to AUTO, and allows the Unit Board to Shutdown Bus supply breaker to be manually closed.

c. Trips and locks out the normal and alternate Unit Board supply breakers, trips the Shutdown Bus 43 switch to MANUAL, and allows the Unit Board to Shutdown Bus supply breaker to be manually closed.

d. Trips and locks out the normal Unit Board supply breaker, trips the Shutdown Bus 43 switch to MANUAL, and allows the Unit Board alternate supply breaker to be manually closed.

QUESTION: 044 (1.00)

Regarding Unit 1, WHICH ONE of the following lists the normal and alternate power supplies IN ORDER OF PREFERENCE, for 4 KV Shutdown Board "B"?

a. Shutdown bus 1, Shutdown bus 2, Unit 1 Diesel B, Unit 3 Diesel B via Shutdown Board 3EB

b. Shutdown bus 2, Shutdown bus 1, Unit 1 Diesel A, Unit 3 Diesel B via Shutdown Board 3EB

c. Shutdown bus 1, Shutdown bus 2, Unit 1 Diesel B, Unit 2 Diesel B via Shutdown Board 2EB

d. Shutdown bus 2, Shutdown bus 1, Unit 1 Diesel A, Unit 2 Diesel B via Shutdown Board 2EB

QUESTION: 045 (1.00)

WHICH ONE of the following signals from the Post-Treatment Radiation Monitoring System will initiate an AUTOMATIC ISOLATION of the Offgas Discharge to the main stack (FCV-66-28)?

a. High trip in channel B.

b. High-High-High trip in Channel A.

c. High trip in Channel A and Downscale trip in Channel B.

d. Downscale trip in Channel A and High-High-High trip in Channel B.

QUESTION: 046 (1.00)

Reactor power is 25%, main turbine on line, when a small air leak into the condenser starts to reduce vacuum. After performing the subsequent actions of 2-AOI-47-3, "Loss of Condenser Vacuum, condenser pressure stabilizes at 6" Hg absolute. WHICH ONE of the following actions is appropriate?

a. If condenser pressure later increases, trip the main turbine before condenser pressure reaches 23" absolute.

b. Trip the main turbine.

c. Start the mechanical vacuum pump.

d. Increase SJAE steam inlet pressure to 225 psig.

QUESTION: 047 (1.00)

WHICH ONE of the following states the reason that the running recirc pump is limited to 29,000 gallons/minute (about 54% speed) after a single recirc pump trip at power at Unit 2?

a. To prevent significant reverse flow in the idle jet pumps, which could cause nonconservative APRM flow-biased scram and rod block setpoints.

b. To prevent significant reverse flow in the idle loop, which could cause thermal stratification.

c. To prevent significant reverse flow in the idle jet pumps, which could cause excessive jet pump vibration.

d. To prevent significant reverse flow in the idle loop, which could cause recirc pump damage due to reverse rotation.

QUESTION: 048 (1.00)

WHICH ONE of the following conditions will result in a RFPT trip?

a. RFPT "B" suction pressure 95 psig for 25 seconds.

b. Condenser high pressure 20" Hg absolute.

c. RFPT (turbine) low oil pressure 6 psig.

d. RPV level +57".

QUESTION: 049 (1.00)

During a LOCA with a LPCI initiation signal present, the SRO directs you to initiate drywell sprays. With the RHR SYS I CTMT VLV SELECT switch in SELECT, to open the RHR SYS I DW SPRAY INBD VLV (2-FCV-74-61), WHICH ONE of the following conditions must be met?

a. RPV level greater than -183".

b. RPV pressure less than or equal to 230 psig.

c. Drywell temperature greater than 250 degrees F.

d. RHR pump discharge pressure greater than 100 psig.

QUESTION: 050 (1.00)

While offloading fuel bundles from the reactor, fuel pool level begins to decrease uncontrollably. WHICH ONE of the following describes a method available from the control room to add water to the fuel pool?

a. Align fuel pool cooling and cleanup heat exchanger RBCCW supply to the fuel pool to maintain level.

b. Start a condensate pump and inject to the reactor vessel to maintain fuel pool level.

c. Open emergency makeup supply valve from EECW to the fuel pool to maintain level.

d. Gravity drain the CST to the fuel pool via the main condenser hotwell to maintain level.

QUESTION: 051 (1.00)

Unit 2 is operating at 100% power when an inadvertent isolation of the "A" inboard MSIV occurs. WHICH ONE of the following describes the expected plant response?

a. No RPS actuation.

b. Half-scram only on RPS "A".

c. Half-scram only on RPS "B".

d. Full reactor scram.

QUESTION: 052 (1.00)

A full SCRAM has been inserted on both RPS channels and the rods have failed to insert. All individual blue lights for each control rod on the full-core display have illuminated.

WHICH ONE of the following is a possible cause for the failure to SCRAM?

a. Failure of scram pilot valves to open.

b. RPS "B" did not de-energize.

c. Failure of scram inlet and outlet valves to open.

d. Hydraulic lock on the scram discharge volume.

QUESTION: 053 (1.00)

Unit 2 is operating at rated power when drywell control air is lost. Subsequently the inboard MSIV's receive an isolation signal. WHICH ONE of the following describes the response of the MSIV's to this isolation?

a. The inboard MSIV's will close on spring force only, closing time requirements WILL NOT be met.

b. The inboard MSIV's will close on spring force only, closing time requirements WILL be met.

c. The inboard MSIV's will close on spring force and individual accumulator pressure, closing time requirements WILL be met.

d. The inboard MSIV's will close on spring force and individual accumulator pressure, closing time requirements WILL NOT be met.

QUESTION: 054 (1.00)

WHICH ONE of the following describes a symptom of RPV water stratification during a loss of shutdown cooling? (Neither recirc pump is running)

a. Temperature differential of 65 degrees F between bottom vessel head and feedwater sparger with moderator temperature at 145 degreesF.

b. Feedwater sparger temperature at 190 degrees F.

c. Temperature differential of 55 degrees F between bottom vessel head and feedwater sparger with moderator temperature at 165 degrees F.

d. Feedwater sparger temperature at 180 degrees F.

QUESTION: 055 (1.00)

WHICH ONE of the following is the MINIMUM suppression pool temperature that requires entry into EOI-2, "Primary Containment Control"?

a. 95 degrees F

b. 105 degrees F

c. 110 degrees F

d. 115 degrees F

QUESTION: 056 (1.00)

Unit 2 is operating at 100% power with FWLC in 3 element control, when the "A" steam flow transmitter fails downscale. WHICH ONE of the following describes the expected plant response? (Assume no operator action is taken)

a. Reactor level will stabilize about 15 inches above normal.

b. Reactor level will increase until the turbine trip setpoint is reached.

c. Reactor level will stabilize about 15 inches below normal.

d. Reactor level will decrease until the low level scram setpoint is reached.

QUESTION: 057 (1.00)

WHICH ONE of the following scram signals is effective ONLY when the mode switch is in RUN?

a. Turbine stop valve closure

b. Load Reject

c. IRM hi-hi

d. MSIV closure

QUESTION: 058 (1.00)

Unit 2 is operating at 25% power. WHICH ONE of the following combinations of events will result in a full reactor scram?

a. Both MSIV's in steam lines "A" and "D" isolate.

b. Both MSIV's in steam lines "A" and "C" isolate.

c. APRM "E" and "C" trip on hi-hi flux.

d. APRM "E" and "D" trip on hi-hi flux.

QUESTION: 059 (1.00)

An ATWS is in progress, power is 15%. EOI-1, "RPV Control", has been entered. WHICH ONE of the following describes how step RC/Q 7, TRIP THE RECIRC PUMPS is accomplished AND the reason for this method?

a. Trip ONE recirc pump at a time to prevent a transient which could cause a turbine trip if the turbine is on line.

b. Trip BOTH recirc pumps simultaneously in order to effect the most rapid power reduction possible.

c. Trip ONE recirc pump at a time to prevent a transient which could cause power/flow oscillations to start.

d. Trip BOTH recirc pumps simultaneously to maintain symmetrical core flow.

QUESTION: 060 (1.00)

WHICH ONE of the following is the HIGHEST suppression pool water level at which the drywell to suppression pool vacuum breakers will still be uncovered?

a. 20.00 feet

b. 17.75 feet

c. 11.25 feet

d. 9.75 feet

QUESTION: 061 (1.00)

The AC distribution system is initially in a NORMAL lineup, except that Shutdown Bus 1 43 switch (43-1) is in MANUAL. WHICH ONE of the following describes the normal operation of the shutdown boards if the normal supply breaker to Shutdown Bus 1 is momentarily opened and then reclosed.

a. Shutdown Board A must be manually transferred to Shutdown Bus 1 when it is re-energized.

b. Shutdown Board A will automatically transfer to Shutdown Bus 1 when it is re-energized.

c. Shutdown Board C must be manually transferred to Shutdown Bus 1 when it is re-energized.

d. Shutdown Board C will automatically transfer to Shutdown Bus 1 when it is re-energized.

QUESTION: 062 (1.00)

WHICH ONE of the following describes how the RWCU system is connected to the RPV in each of the three units?

a. Suction is from the "A" Recirc line on all units, return is via the "B" feed line for Units 1 and 2, and the "A" and "B" feed lines for Unit 3.

b. Suction is from the "A" Recirc line on all units, return is via the "B" feed line for Units 1 and 3, and the "A" and "B" feed lines for Unit 2.

c. Suction is from the "B" Recirc line on all units, return is via the "B" feed line for Units 1 and 3, and the "A" and "B" feed lines for Unit 2.

d. Suction is from the "B" Recirc line on all units, return is via the "B" feed line for Units 1 and 2, and the "A" and "B" feed lines for Unit 3.

QUESTION: 063 (1.00)

Plant conditions are as follows:

RPV level	+13 inches
RPV pressure	1050 psig
Drywell press.	2.40 psig
Torus level	-5 inches
Rx zone vent rad	75 mr/hr
Refuel zone vent rad	62 mr/hr

WHICH ONE of the following EOI groups should be entered?

a. EOI-1, "RPV Control" and EOI-2, "Primary Containment Control".

b. EOI-1, "RPV Control" and EOI-3, "Secondary Containment Control".

c. Only EOI-2, "Primary Containment Control".

d. Only EOI-3, "Secondary Containment Control".

QUESTION: 064 (1.00)

WHICH ONE of the following is the MINIMUM suppression pool level at which the drywell-to-torus downcomers will be covered?

a. 13.75 feet

b. 11.75 feet

c. 10.75 feet

d. 9.75 feet

QUESTION: 065 (1.00)

WHICH ONE of the following conditions warrants a manual reactor SCRAM?

a. Offgas Hydrogen analyzer indicates 3% Hydrogen in the offgas stream.

b. Post-treatment radiation HI-HI alarm.

c. Both recirc pumps trip in the RUN mode.

d. Drywell temperature reaches 165 degrees F after a loss of drywell cooling.

QUESTION: 066 (1.00)

WHICH ONE of the following is the reason that EOI-2, "Primary Containment Control", directs that drywell sprays be terminated if drywell pressure falls below 2.4 psig?

a. To divert water to the core that is not needed to prevent containment failure.

b. To prevent driving the containment pressure below atmospheric, which could result in de-inerting the containment.

c. To prevent drawing Torus water into the Drywell to Torus downcomers.

d. To allow the restart of Drywell blowers.

QUESTION: 067 (1.00)

WHICH ONE of the following is the power supply to the Main Steam Line Radiation monitors?

a. 24 V Neutron Monitoring Battery

b. RPS

c. I&C Bus "A"

d. Unit Preferred Panel 9-9

QUESTION: 068 (1.00)

WHICH ONE of the following will automatically initiate the Control Room Emergency Ventilation System (CREV)?

a. 67 mr/hr in the Reactor Building.

b. 250 cpm above background on ONE of the two Control Room Rad Monitors.

c. 2.45 psig drywell pressure.

d. +27 inches RPV level.

QUESTION: 069 (1.00)

WHICH ONE of the following describes the minimum requirements to satisfy the trip logic for the Reactor Building Ventilation Radiation Monitors? (Reactor Zone Ventilation Radiation Monitors and Refuel Floor Radiation Monitors)

a. One of two high level trips -OR- Two of two downscale trips.

b. Two of two high level trips -OR- One of two downscale trips.

c. One of two high level trips -OR- One of two downscale trips.

d. Two of two high level trips -OR- Two of two downscale trips.

QUESTION: 070 (1.00)

WHICH ONE of the following lists of conditions assure ADEQUATE CORE COOLING? (All rods are in.)

a. RPV level -150", no MSRV's open, no injection flow.

b. RPV level unknown, no MSRV's open, Core Spray "A" injecting at maximum flow.

c. RPV level -210", one MSRV open, HPCI injecting at maximum flow.

d. RPV level -210", 2 MSRV's open, RHR "B" and "D" injecting at maximum flow.

QUESTION: 071 (1.00)

WHICH ONE of the following will cause an automatic closure of both inboard and outboard Shutdown Cooling suction line containment isolations (74-47 and 74-48)?

a. Reactor pressure of 110 psig.

b. Loss of RPS "A".

c. RHR/FPC heat exchanger outlet temperature of 130 degrees F.

d. Refuel zone exhaust rad monitor at 69 mr/hr.

QUESTION: 072 (1.00)

Unit 2 control room is being abandoned due to a fire in the control room. While immediate actions are being performed, an operator notices that suppression pool temperature is 100 degrees F. WHICH ONE of the following states the procedures that will be used at the remote shutdown panels?

a. 2-AOI-100-2, "Control Room Abandonment", and EOI-2, "Containment Control", with EOI-2 having priority in any conflict.

b. 2-AOI-100-2, "Control Room Abandonment", and EOI-2, "Containment Control", with AOI-100 having priority in any conflict.

c. 2-AOI-100-2, "Control Room Abandonment", only.

d. EOI-2, "Containment Control", only.

QUESTION: 073 (1.00)

Five operators enter the RCA. Upon exiting, the following data as measured by the frisker were taken:

Operator 1- 225 cpm above background skin contamination.
Operator 2- 75 cpm above background skin contamination.
Operator 3- 60 cpm above background personal clothing contamination.
Operator 4- 150 cpm above background personal clothing contamination.
Operator 5- 200 cpm above background personal clothing contamination.

WHICH ONE of the following describes how many of the operators above are considered contaminated according to SSP 5.1, "Radiation Protection Plan".

a. Zero

b. One

c. Three

d. Five

QUESTION: 074 (1.00)

According to SSP 12.1, "Conduct of Operations", WHICH ONE of the following is (are) the individual(s) who should sign for review of the logs kept by operators outside the control room?

a. The unit SOS

b. The AUO responsible for the entries and the unit ASOS

c. The AUO responsible for the entries and the SOS

d. The UO in charge of the unit or the ASOS

QUESTION: 075 (1.00)

Each shift of an operating unit has designated Emergency Response Team members that remain available to carry out duties described in the Safe Shutdown Instructions. WHICH ONE of the following is the minimum number of AUOs that shall be designated as Emergency Response Team members.

a. 3 AUOs

b. 4 AUOs

c. 5 AUOs

d. 6 AUOs

QUESTION: 076 (1.00)

Under WHICH ONE of the following conditions is independent verification required according to SSP 12.6, "Independent Verification".

a. Disassembly/assembly of components controlled by Work Orders, Maintenance Instructions, Special Maintenance Instructions, Preventative Maintenance Instructions or other approved plant documents.

b. When a second party verification has been conducted in accordance with SSP 12.6 and independent verification is not specified.

c. Activities during plant emergency conditions.

d. Activities affecting components in fire protection system major flow paths.

QUESTION: 077 (1.00)

In accordance with 10 CFR 26, "Fitness for Duty Program," WHICH ONE of the following is the minimum time period to abstain from alcohol preceding any normal scheduled shift?

a. 3 hours

b. 5 hours

c. 8 hours

d. 12 hours

QUESTION: 078 (1.00)

WHICH ONE of the following whole body dose rates is the MINIMUM Tech. Spec. requirement for a locked High Radiation Area.

a. > 0.1 Rem/hr

b. > 1 Rem/hr

c. > 10 Rem/hr

d. > 100 Rem/hr

QUESTION: 079 (1.00)

For an individual with the following exposure history:

Sex:	Male
Age:	23
Lifetime Exposure:	24.80 Rem (Does not include current quarter)
Current Quarter:	250 mRem
NRC Form 4:	On file, lifetime and current quarter exposure history is documented.

WHICH ONE of the following is the remaining 10 CFR 20 whole body (WB) exposure for the current calendar quarter?

a. 0 mRem

b. 200 mRem

c. 1000 mRem

d. 2750 mRem

QUESTION: 080 (1.00)

WHICH ONE of the following individuals retains possession of the key to Key Cabinet A which is used to store high radiation area and security keys?

a. SOS

b. RADCON

c. Unit Operator, (UO)

d. ASOS

QUESTION: 081 (1.00)

In accordance with Technical Specifications, WHICH ONE of the following states the minimum number of fire brigade members to be maintained onsite at all times? Assume the number has not been temporarily reduced to accommodate an unexpected absence.

a. 4

b. 5

c. 6

d. 7

QUESTION: 082 (1.00)

According to OSIL-25, "Overtime and Leave Policy", WHICH ONE of the following is the maximum time a licensed operator is allowed to work? Consider these as excluding shift turnover time and no supervisor's permission to exceed the policy.

a. 12 hours per day for a 7-day period

b. 14 hours straight, then 16 hours off, then 14 hours straight

c. 16 hours straight

d. 18 hours straight

QUESTION: 083 (1.00)

You are escorting a visitor who is not a radworker, and has no plant security clearance, when the Assembly and Accountability siren sounds. Upon hearing the Assembly and Accountability siren, WHICH ONE of the following actions should be taken by the visitor?

a. Stay with escort, read badge into PREAS reader.

b. Proceed to the plant assembly room, contact nuclear security.

c. Proceed to the west Access Portal Exit, contact RADCON.

d. Stay with escort, Proceed to OSC staging area

QUESTION: 084 (1.00)

During the execution of Safe Shutdown Instruction 002, "Appendix R Fire", for Unit 2, WHICH ONE of the following methods of communication is the primary method to be used by personnel involved in performance of the procedure?

a. Portable radios

b. Sound Powered Phones

c. Telephone

d. Public Address (PA) System

QUESTION: 085 (1.00)

Unit 2 is operating at 50% rated power when one control rod starts continuously drifting OUT of the core. WHICH ONE of the following is the correct IMMEDIATE action?

a. Select the control rod and insert the rod to its designated position.

b. Manually scram the reactor.

c. Reduce core flow to maintain power constant.

d. Select the control rod and insert the rod to the 00 position.

QUESTION: 086 (1.00)

WHICH ONE of the following states the LOWEST pressure at which MSRVs will open due to high pressure?

a. 1040 psig

b. 1105 psig

c. 1115 psig

d. 1125 psig

QUESTION: 087 (1.00)

Unit 2 is operating at rated power when all RBCCW pumps trip and none can be restarted. WHICH ONE of the following describes the IMMEDIATE operator actions appropriate for this situation?

a. Run recirculation pumps to 45% speed, insert a manual SCRAM, Trip both recirculation pumps, and initiate a cooldown of 90F/hour.

b. IMMEDIATELY TRIP both recirc pumps and SCRAM the reactor.

c. If drywell temperature exceeds 145 degrees F, or drywell pressure exceeds 1.66 psig, insert a manual SCRAM, and trip both recirculation pumps.

d. Reduce recirculation flow to minimum, if recirc pump seal cavity temperature exceeds 200 degrees F on BOTH pumps, TRIP both recirc pumps and SCRAM the reactor.

QUESTION: 088 (1.00)

WHICH ONE of the following is the reason for the automatic isolation of the main steam lines by closure of the MSIVs when the steam tunnel area temperature reaches 194 degrees F?

a. To prevent exceeding the Environmental Qualification temperature limits on the MSIV control air solenoids.

b. To detect small steam leaks and prevent exceeding 10 CFR 100 guidelines.

c. To close the MSIV's before thermal binding makes closure impossible.

d. To protect the integrity of the secondary equipment and ensure the continued operability of safe shutdown equipment.

QUESTION: 089 (1.00)

WHICH ONE of the following describes the consequences of an MSRV tailpipe vacuum breaker failing OPEN?

a. Water from the torus could be drawn into the tailpipe after an MSRV lift.

b. Lifting of the relief could cause chugging in the torus.

c. The Drywell could be pressurized if the MSRV were to lift.

d. The open vacuum breaker would defeat the pressure suppression containment design on a LOCA.

QUESTION: 090 (1.00)

Unit 2 is operating at 100% power when a total loss of RPIS occurs. WHICH ONE of the following describes how any necessary control rod movement can be accomplished?

a. Obtain an OD-7 printout before and after moving any control rod.

b. Withdrawal of control rods is allowed using only single notch movement.

c. Control rod movement is allowed only by scram.

d. Rods can be manually driven in to shut down the reactor, or a scram can be inserted, but no other rod motion is allowed.

QUESTION: 091 (1.00)

Regarding the Rod Block Monitor, WHICH ONE of the following describes the response of each channel of the RBM to the bypassing of APRM "E"?

a. RBM "A" will shift to APRM "C" for it's input, RBM "B" will be unaffected.

b. RBM "A" will shift to APRM "C" for it's input, RBM "B" will shift to APRM "D".

c. RBM "A" will be unaffected, RBM "B" will shift to APRM "D" for it's input.

d. RBM "A" will be unaffected, RBM "B" will be unaffected.

QUESTION: 092 (1.00)

EOI-1, "RPV Control", section RC/Q directs the operator to disable the ADS auto blowdown function when Standby Liquid Control injection is begun. WHICH ONE of the following states the reason for this direction?

a. ADS operation would cause suppression pool temperature to exceed the Heat Capacity Temperature Limit curve.

b. A large power excursion could result if the low pressure systems automatically injected after depressurization.

c. ADS operation would remove boron from the core faster than the SLC system can inject it.

d. ADS operation with reactor power in the heating range will result in a violation of thermal limits.

QUESTION: 093 (1.00)

WHICH ONE of the following conditions will cause a Reactor Feed Pump minimum flow valve to open?

a. Feed pump turbine is tripped, minimum flow valve control switch in NORMAL.

b. Feed pump flow lowers from 2200 to 1500 gpm, minimum flow valve control switch in TEST/BYPASS.

c. Feed pump turbine is tripped, minimum flow valve control switch in TEST/BYPASS.

d. Feed pump flow lowers from 2200 to 1500 gpm, minimum flow valve control switch in NORMAL.

QUESTION: 094 (1.00)

EOI-2, section PC/P directs the operator to vent the primary containment regardless of radioactive release before containment pressure reaches 55 psig. WHICH ONE of the following states the reason for this instruction?

a. It is the design pressure of the containment.

b. Venting of the containment above this pressure may not be possible because of inability to operate the vent valves.

c. Containment sprays are ineffective above this pressure.

d. SRV's may not automatically open if containment pressure is above 55 psig.

QUESTION: 095 (1.00)

Unit 2 has been in an extended outage with the reactor head detensioned. Currently outdoor temperatures are near 0 degrees F. Shutdown cooling is in operation. WHICH ONE of the following states the minimum temperature that the RPV should be allowed to reach, and the method to limit this cooldown?

a. 58 degrees F, throttle RHR flow

b. 58 degrees F, throttle RHRSW flow

c. 72 degrees F, throttle RHR flow

d. 72 degrees F, throttle RHRSW flow

QUESTION: 096 (1.00)

Unit 2 is operating at 100% power when a loss of I&C bus "A" occurs. RPV level control is selected to Level "B". WHICH ONE of the following describes the expected condensate and feedwater system response?

a. RFP turbine speed will initially decrease.

b. All RFP minimum flow valves will open.

c. RFP "A" will trip on low NPSH.

d. Short Cycle valves (FCV-2-29A and 2-29B) will close.

QUESTION: 097 (1.00)

A reactor water cleanup line break in the reactor building has occurred. WHICH ONE of the following is a valid concern if an RHR pump is running during this time?

a. RMOV board 2E could be deenergized preventing the RHR min. flow valve from opening.

b. RMOV board 2D could be deenergized preventing the RHR room cooler from operating.

c. RMOV board 2C could be deenergized preventing the PSC keep fill pump from operating.

d. RMOV board 2A could be deenergized preventing the RHR suction valve from opening.

QUESTION: 098 (1.00)

A reactor shutdown is in progress with reactor power at 70% and core flow at 50%. The unit operator observes APRM oscillations of approximately 12% and various LPRM oscillations of between 15 and 30%. WHICH ONE of the following actions is appropriate?

a. Immediately scram the reactor.

b. Immediately insert control rods to less than 80% rod line.

c. Immediately reduce reactor power to less than 80%.

d. Commence an orderly reactor shutdown.

QUESTION: 099 (1.00)

During a reactor startup on Unit 2, with power at 8% and the mode switch in RUN, the operator begins to withdraw IRM's. After IRM "E" is partially withdrawn, it's drive motor blows a fuse. WHICH ONE of the following describes the replacement procedure for this fuse?

a. The fuse can be replaced only by electrical maintenance personnel, only an identical replacement is acceptable.

b. The fuse can be replaced only by electrical maintenance personnel, and if a substitute fuse is used, a WR must be written to have Engineering check the fuse selected later.

c. The fuse can be replaced by operations personnel, only an identical replacement is acceptable.

d. The fuse can be replaced by operations personnel, and if a substitute fuse is used, a WR must be written to have Electrical Maintenance and Instrument Control check the fuse selection after replacement.

QUESTION: 100 (1.00)

WHICH ONE of the following describes the symptoms of a loss of 48V DC to Unit 1, Panel 9-9 Cabinet One?

a. Sealed in alarms on Unit 1 clear, with no audible horn sounding.

b. No alarm windows illuminated on any unit, with an audible horn sounding.

c. A white light on panel 9-9 Cabinet One will be illuminated, with no audible horn sounding.

d. A white light on panel 9-9 Cabinet One will be illuminated, with an audible horn sounding.

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

ANSWER: 001 (1.00)

d.

REFERENCE:

1. T. S. Bases, 1.2

K/A: 295025G003 [3.5/4.3]

295025G003 ..(KA's)

ANSWER: 002 (1.00)

d.

REFERENCE:

1. 2-AOI-85-3 Rev 7, p 2 of 5 (immediate actions)

K/A: 295022G010 [3.7/3.5]

295022G010 ..(KA's)

ANSWER: 003 (1.00)

d.

REFERENCE:

1. Facility Question Bank #11615
2. OPL171.028, Rev 5

K/A: 239001K127 [4.0/4.1]

239001K127 ..(KA's)

ANSWER: 004 (1.00)

a.

REFERENCE:

1. Facility Question Bank #10141

K/A: 206000K419 [3.7/3.8]

206000K419 ..(KA's)

ANSWER: 005 (1.00)

c.

REFERENCE:

1. 171.60 Objective 3b, Rev.2, p. 14 of 29
2. 0-GOI-100-3, Rev 1, Precaution 3.6.13

K/A: 215004G010 [3.2/3.4]

215004G010 ..(KA's)

ANSWER: 006 (1.00)

a.

REFERENCE:

1. Facility Question Bank #10222
2. OPL 171.005 Obj 8, 12, 24, 26

K/A: 201001A307 [3.3/3.3]

201001A307. ..(KA's)

ANSWER: 007 (1.00)

b.

REFERENCE:

1. Facility Question Bank #11327
2. OPL171.022 Obj 6,7

K/A: 215005K102 [3.7/3.7]

215005K102 ..(KA's)

ANSWER: 008 (1.00)

a.

REFERENCE:

1. Facility Question Bank #11665
2. OPL171.011, Objective 6.

K/A: 256000K403 [2.8/2.8]

256000K403 ..(KA's)

ANSWER: 009 (1.00)

c.

REFERENCE:

1. Facility Question Bank #11460 (Modified)
2. 2-OI-64, Precautions & Limitations, 3.10

K/A: 223001G002 [3.0/3.9]

223001G002 ..(KA's)

ANSWER: 010 (1.00)

d.

REFERENCE:

1. Facility Question Bank #10419
2. 2-AOI-100-2, Note, Page 14 of 55
3. OPL171-040 Objective 4

K/A: 295016K303 [3.5/3.7]

295016K303 ..(KA's)

ANSWER: 011 (1.00)

b.

REFERENCE:

1. Facility Question Bank # 11059
2. OPL171.006, Objective 14
3. 2-SI-4.3.B.1.b
4. T.S. 4.3.B
5. 2-OI-85, Precaution 3.2.5

K/A: 201003K402 [3.8/3.9]

201003K402 ..(KA's)

ANSWER: 012 (1.00)

c.

REFERENCE:

1. Facility Question Bank #11381 (modified)
2. OPL171.045 Objective 3

K/A: 209001K403 [3.7/3.6]

209001K403 ..(KA's)

ANSWER: 013 (1.00)

b.

REFERENCE:

1. Facility Question Bank #11610
2. OPL171.038 Objective 11

K/A: 264000K505 [3.4/3.4]

264000K505 ..(KA's)

ANSWER: 014 (1.00)

c.

REFERENCE:

1. Facility Question Bank #10430
2. OPL171.015 Objective 3

K/A: 241000K110 [3.2/3.3]

241000K110 ..(KA's)

ANSWER: 015 (1.00)

c.

REFERENCE:

1. Facility Question Bank #10137
2. FHR103.004 Objective 15

K/A: 234000G013 [3.1/3.3]

234000G013 ..(KA's)

ANSWER: 016 (1.00)

a.

REFERENCE:

1. Facility Question Bank #10553
2. OPL171.029 Objective 6

K/A: 201002A102 [3.4/3.3]

201002A102 ..(KA's)

ANSWER: 017 (1.00)

c.

REFERENCE:

1. Facility Question Bank #11671
2. 2-OI-76, Rev 16, p.16 of 31
3. OPL171.016, Objective 12

K/A: 223001K109 [3.4/3.6]

223001K109 ..(KA's)

ANSWER: 018 (1.00)

d.

REFERENCE:

1. Facility Question Bank #8840 (modified)
2. OPL171.026 Objective 8c

K/A: 259002A401 [3.8/3.6]

259002A401 ..(KA's)

ANSWER: 019 (1.00)

a.

REFERENCE:

1. OPL171.029 Objective 11

K/A: 201002A402 [3.5/3.5]

201002A402 ..(KA's)

ANSWER: 020 (1.00)

c.

REFERENCE:

1. 2-OI-3, Rev 23, 3.8
2. Facility Question Bank #11369 (modified)

K/A: 259001G010 [3.2/3.3]

259001G010 ..(KA's)

ANSWER: 021 (1.00)

d.

REFERENCE:

1. Facility Question Bank #8770 (modified)
2. OPL171.012 Objective 7a, p. 34 of 55.

K/A: 202002K108 [3.1/3.2]

202002K108 ..(KA's)

ANSWER: 022 (1.00)

c.

REFERENCE:

1. Facility Question Bank #10526

K/A: 295026G007 [3.4/3.8]

295026G007 ..(KA's)

ANSWER: 023 (1.00)

b.

REFERENCE:

1. Facility Question Bank #10432
2. OPL171.028 Objective 13

K/A: 212000K110 [3.2/3.4]

212000K110 ..(KA's)

ANSWER: 024 (1.00)

b.

REFERENCE:

1. Facility Question Bank #11347
2. OPL171.147 Objective 4, and Table 2, p.21 of 29

K/A: 245000K405 [2.9/3.0]

245000K405 ..(KA's)

ANSWER: 025 (1.00)

a.

REFERENCE:

1. OPL171.030, Objective 3, p.11,12 of 47
2 Facility Question Bank #9400 (modified)

K/A: 245001A106 [3.3/3.2]

245000A106 ..(KA's)

ANSWER: 026 (1.00)

a.

REFERENCE:

1. Facility Question Bank #11559 (modified)
2. OPL171.074 Objective 2
3. 2-AOI-66-2 Rev 5, 4.1

K/A: 295017G010 [3.9/3.8]

295017G010 ..(KA's)

ANSWER: 027 (1.00)

b.

REFERENCE:

1. Facility Question Bank #10101
2. OPL171.017 Objective 5

K/A: 223002A301 [3.5/3.5]

223002A302 ..(KA's)

ANSWER: 028 (1.00)

c.

REFERENCE:

1. Facility Question Bank #10120
2. OPL171.003 Objective 13, p 23 of 71

K/A: 216000K501 [3.1/3.2]

216000K501 ..(KA's)

ANSWER: 029 (1.00)

c.

REFERENCE:

1. Facility Question Bank #9456
2. OPL171.040 Objective 1

K/A: 217000A403 [3.4/3.3]

217000A403 ..(KA's)

ANSWER: 030 (1.00)

b.

REFERENCE:

1. OPL171.007 Objective 4a p. 12, 13 of 94.

K/A: 202001A210 [3.5/3.9]

202001A210 ..(KA's)

ANSWER: 031 (1.00)

c.

REFERENCE:

1. Facility Question Bank #10323
2. OPL171.044 Objective 13, Rev 5, p.27 of 62

K/A: 203000K601 [3.6/3.7]

203000K601 ..(KA's)

ANSWER: 032 (1.00)

d.

REFERENCE:

1. 0-OI-82, Rev 36, Precaution 3.9
2. 0-OI-82, Rev 36, Caution, p.36 of 77

K/A: 264000G010 [3.2/3.6]

264000G010 ..(KA's)

ANSWER: 033 (1.00)

a.

REFERENCE:

1. 0-OI-65, Rev 18, Precaution 3.33
2. OPL171.030, Obj. 7

K/A: 261000G010 [3.1/3.3]

261000G010 ..(KA's)

ANSWER: 034 (1.00)

a.

REFERENCE:

1. Facility Question Bank #11430
2. OPL171.028 Objective 10, Rev 5, p.20 of 39

K/A: 212000K410 [3.3/3.6]

212000K410 ..(KA's)

ANSWER: 035 (1.00)

b.

REFERENCE:

1. Facility Question Bank #8627 (modified)
2. OPL171.25, Objective 9

K/A: 201004K404 [3.3/3.4]

201004K404 ..(KA's)

ANSWER: 036 (1.00)

b.

REFERENCE:

1. Facility Question Bank #9020
2. OPL171.024 Rev 4, p. 14 of 45

K/A: 201006K404 [3.4/3.5]

201006K404 ..(KA's)

ANSWER: 037 (1.00)

a.

REFERENCE:

1. OPL171.019 Rev 3 p. 23 of 41, Objective 5
2. Facility Question Bank #11318 (modified, concept only)

K/A: 215004K401 [3.7/3.7]

215004K401 ..(KA's)

ANSWER: 038 (1.00)

b.

REFERENCE:

1. Facility Question Bank #9008
2. OPL171.023 Objective 4, Rev 2, p. 25 of 44

K/A: 215001A201 [2.7/2.9]

215001A201 ..(KA's)

ANSWER: 039 (1.00)

b.

REFERENCE:

1. 2-OI-71, Rev 18, Precaution 3.4

K/A: 217000A301 [3.5/3.5]

217000A301 ..(KA's)

ANSWER: 040 (1.00)

b.

REFERENCE:

1. OPL171.043 Rev 3, p. 9 of 22, Objective 4

K/A: 218000K403 [3.8/4.0]

218000K403 ..(KA's)

ANSWER: 041 (1.00)

c.

REFERENCE:

1. OPL176.004
2 OPL171.029, Rev 4 Objective 1,8 p.19 of 63

K/A: 214000A202 [3.6/3.7]

214000A202 ..(KA's)

ANSWER: 042 (1.00)

c.

REFERENCE:

1. 2-OI-74, Rev 29, Precaution 3.7

K/A: 203000A302 [4.0/3.9]

203000A302 ..(KA's)

ANSWER: 043 (1.00)

c.

REFERENCE:

1. OPL 171.036, Rev 2 p. 18 of 37, Objective 12
   K/A: 295003A101 [3.7/3.8]

   295003A101 ..(KA's)

ANSWER: 044 (1.00)

a.

REFERENCE:

1. OPL171.036, Rev 2, p.17, 32 Objective 11
   K/A: 262001K406 [3.6/3.9]

   262001K406 ..(KA's)

ANSWER: 045 (1.00)

d.

REFERENCE:

1. OPL171.033 Rev 4, p. 14 of 62, Objective 3
   K/A: 272000K403 [3.6/3.9]

   272000K403 ..(KA's)

ANSWER: 046 (1.00)

b.

REFERENCE:

1. 2-AOI-47-3, Rev 4, caution, p.2 of 4

K/A: 295002A105 [3.2/3.2]

295002A105 ..(KA's)

ANSWER: 047 (1.00)

a.

REFERENCE:

1. 2-AOI-68-1, Rev 11, Caution, p. 3 of 9

K/A: 295001A101 [3.5/3.6]

295001A101 ..(KA's)

ANSWER: 048 (1.00)

d.

REFERENCE:

1. 2-OI-3, Rev 23, Precaution 3.1
2. 2-AOI-3-1, Rev 7, 3.1, 3.2

K/A: 295008K304 [3.3/3.5]

295008K304 ..(KA's)

ANSWER: 049 (1.00)

a.

REFERENCE:

1. OPL 171.044, Rev 5, p. 26 of 62

K/A: 226001A403 [3.5/3.4]

226001A403 ..(KA's)

ANSWER: 050 (1.00)

b.

REFERENCE:

1. 2-AOI-78-1, Rev 4.

K/A: 295023G006 [3.4/3.6]

295023G006 ..(KA's)

ANSWER: 051 (1.00)

d.

REFERENCE:

1. OPL171.028, Rev 5, p. 14 of 39, Objective 7

K/A: 295020K201 [3.6/3.7]

295020K201 ..(KA's)

ANSWER: 052 (1.00)

d.

REFERENCE:

1. OPL 171.005, Rev 4, p. 39 of 58, Objective 6
   K/A: 295015K201 [3.8/3.9]

295015K201 ..(KA's)

ANSWER: 053 (1.00)

c.

REFERENCE:

1. OPL171.009, Rev 2, p. 18 of 40, Objective 9 d
   K/A: 295019K205 [3.4/3.4]

295019K205 ..(KA's)

ANSWER: 054 (1.00)

c.

REFERENCE:

1. 2-AOI-74-1, Rev 7, Note, p.4 of 13.
   K/A: 295021K102 [3.3/3.4]

295021K102 ..(KA's)

ANSWER: 055 (1.00)

a.

REFERENCE:

1. EOI Flowcharts

K/A: 295013G011 [4.1/4.4]

295013G011 ..(KA's)

ANSWER: 056 (1.00)

c.

REFERENCE:

1. OPL171.012, Rev 4, p. 30 of 55

K/A: 295009A202 [3.6/3.7]

295009A202 ..(KA's)

ANSWER: 057 (1.00)

d.

REFERENCE:

1. OPL171.028, Rev 5, Table 1

K/A: 295006K201 [4.3/4.4]

295006K201 ..(KA's)

ANSWER: 058 (1.00)

d.

REFERENCE:

1. OPL171.028, Rev 5, p. 16 of 39

K/A: 295006A206 [3.5/3.8]

295006A206 ..(KA's)

ANSWER: 059 (1.00)

a.

REFERENCE:

1. EOI program manual, Rev 0, Section V-C, p. 121 of 144

K/A: 295037K301 [4.1/4.2]

295037K301 ..(KA's)

ANSWER: 060 (1.00)

b.

REFERENCE:

1. EOI Program Manual, Rev 0, Section V-D, p. 111 of 242

K/A: 295029K207 [3.5/3.8]

295029K207 ..(KA's)

ANSWER: 061 (1.00).

b.

REFERENCE:

1. Facility Question Bank #11328
2. OPL171.036, Objective 13

K/A: 262001A401 [3.4/3.7]

262001A401 ..(KA's)

ANSWER: 062 (1.00)

a.

REFERENCE:

1. OPL171.013, Rev 3, p. 8 of 33, Objective 2
2. OPL171.056, Rev 3, p. 7 of 23, Objective 1.a

K/A: 290002K114 [2.9/3.1]

290002K114 ..(KA's)

ANSWER: 063 (1.00)

b.

REFERENCE:

1. EOI flowcharts

K/A: 295034G011 [4.2/4.3]

295034G011 ..(KA's)

ANSWER: 064 (1.00)

b.

REFERENCE:

1. EOI Program Manual, Rev 0, Section V-D, p. 105 of 242

K/A: 295030K101 [3.8/4.1]

295030K101 ..(KA's)

ANSWER: 065 (1.00)

c.

REFERENCE:

1. 2-AOI-100-1, Rev 16, Attachment 6

K/A: 295028G010 [3.9/3.6]

295028G010 ..(KA's)

ANSWER: 066 (1.00)

b.

REFERENCE:

1. EOI Program Manual, Rev 0, Section V-D, p. 13 of 242

K/A: 295024K301 [3.6/4.0]

295024K301 ..(KA's)

ANSWER: 067 (1.00)

b.

REFERENCE:

1. OPL171.033, Rev 4 p. 9 of 62.
   K/A: 272000K201 [2.5/2.8]

   272000K201 ..(KA's)

ANSWER: 068 (1.00)

c.

REFERENCE:

1. OPL171.033, Rev 4, p. 33 of 62
   K/A: 290003A301 [3.3/3.5]

   290003A301 ..(KA's)

ANSWER: 069 (1.00)

a.

REFERENCE:

1. OPL171.033, Rev 4, p. 21 of 62
   K/A: 288000K105 [3.3/3.6]

   288000K105 ..(KA's)

ANSWER: 070 (1.00)

a.

REFERENCE:

1. EOI flowcharts: EOI-1, C-1, C-2, C-3.

K/A: 295031A201 [4.6/4.6]

295031A201 ..(KA's)

ANSWER: 071 (1.00)

a.

REFERENCE:

1. 2-AOI-74-1, Rev 7, Section 2.2.1, p. 1 of 13

K/A: 295021A102 [3.5/3.5]

295021A102 ..(KA's)

ANSWER: 072 (1.00)

c.

REFERENCE:

1. 2-AOI-100-2, Rev 11, Note, p. 2 of 55

K/A: 295016A204 [3.9/4.1]

295016A204 ..(KA's)

ANSWER: 073 (1.00)

c.

REFERENCE:

1. SSP 5.1, page 10
   K/A: 294001K103 [3.8/3.8]

294001K103 ..(KA's)

ANSWER: 074 (1.00)

d.

REFERENCE:

1. SSP 12.1, page 61
   K/A: 294001A106 [3.4/3.6]

294001A106 ..(KA's)

ANSWER: 075 (1.00)

b.

REFERENCE:

1. SSP 12.1, page 25
   K/A: 294001A102 [4.2/4.2]

294001A102 ..(KA's)

ANSWER: 076 (1.00)

d.

REFERENCE:

1. SSP 12.6, page 3

K/A: 294001K101 [3.7/3.7]

294001K101 ..(KA's)

ANSWER: 077 (1.00)

b.

REFERENCE:

1. 10 CFR 26, "Fitness for Duty," 26.20(a)(1)
2. SSP 1.6, page 23

K/A: 294001A103 [2.7/3.7]

294001A103 ..(KA's)

ANSWER: 078 (1.00)

b.

REFERENCE:

1. OSIL-16, page 1

K/A: 294001K103 [3.8/3.8]

294001K103 ..(KA's)

ANSWER: 079 (1.00)

c.

REFERENCE:

1. 10 CFR 20

K/A: 294001K103 [3.3/3.8]

294001K103 ..(KA's)

ANSWER: 080 (1.00)

a.

REFERENCE:

1. OSIL-16, page 1

K/A: 294001K103 [3.8/3.8]

294001K103 ..(KA's)

ANSWER: 081 (1.00)

b.

REFERENCE:

1. T.S. 6.2.2.g

K/A: 294001K116 [3.5/3.8]

294001K116 ..(KA's)

ANSWER: 082 (1.00)

c.

REFERENCE:

1. OSIL-25, page 8

K/A: 294001A109 [3.3/4.2]

294001A109 ..(KA's)

ANSWER: 083 (1.00)

a.

REFERENCE:

1. SSP 1.52, Rev 1, p. 3 of 14

K/A: 294001A116 [2.9/4.7]

294001A116 ..(KA's)

ANSWER: 084 (1.00)

a.

REFERENCE:

1. OPL171.031 Rev 3, p. 14 of 34
2. 2-SSI-002, p. 2 of 80

K/A: 294001A110 [3.6/4.2]

294001A110 ..(KA's)

ANSWER: 085 (1.00)

a.

REFERENCE:

1. 2-AOI-85-6, Rev.8 p.2 of 4
2. OPL171.074 Rev.1, Objective 2

K/A: 295014A104 [3.2/3.3]

295014A104 ..(KA's)

ANSWER: 086 (1.00)

b.

REFERENCE:

1. OPL 171.009, Rev 2, p. 12 of 40, Objective 2

K/A: 295007A104 [3.9/4.1]

295007A104 ..(KA's)

ANSWER: 087 (1.00)

a.

REFERENCE:

1. 2-AOI-70-1, Rev 8, p. 2 of 5, 4.1

K/A: 295018G010 [3.4/3.3]

295018G010 ..(KA's)

ANSWER: 088 (1.00)

b.

REFERENCE:

1. OPL171.009 Rev.2, p 21 of 40
   K/A: 295032K303 [3.8/3.9]

   295032K303 ..(KA's)

ANSWER: 089 (1.00)

c.

REFERENCE:

1. OPL171.009, Rev 2, p. 12 of 40, Objective 5.
   K/A: 239002A201 [3.0/3.3]

   239002A201 ..(KA's)

ANSWER: 090 (1.00)

c.

REFERENCE:

1. AOI-85-4
   K/A: 214000G013 [3.3/3.2]

   214000G013 ..(KA's)

ANSWER: 091 (1.00)

a.

REFERENCE:

1. OPL171.035, Rev 3, p. 32 of 45, Objective 2, 13
   K/A: 215002K101 [2.9/3.0]

215002K101 ..(KA's)

ANSWER: 092 (1.00)

b.

REFERENCE:

1. OPL171.202, Rev 0, Objective 14
   K/A: 295037G007 [3.7/3.9]

295037G007 ..(KA's)

ANSWER: 093 (1.00)

c.

REFERENCE:

1. OPL171.026, Objective 2
2. Facility Question Bank #9971 (modified)
3. OI-3
   K/A: 259001K403 [2.7/2.7]

259001K403 ..(KA's)

ANSWER: 094 (1.00)

b.

REFERENCE:

1. Facility Question #11279

K/A: 295010G012 [3.8/4.4]

194001K103 295010G012 ..(KA's)

ANSWER: 095 (1.00)

d.

REFERENCE:

1. 2-OI-74, Rev 29, Precaution 3.12

K/A: 205000G010 [3.2/3.3]

205000G010 ..(KA's)

ANSWER: 096 (1.00)

c.

REFERENCE:

1. 1-AOI-57-5A, Rev 16.

K/A: 295003G007 [3.2/3.6]

295003G007 ..(KA's)

ANSWER: 097 (1.00)

a.

REFERENCE:

1. 2-OI-74, Rev 29.

K/A: 204000G010 [3.2/3.2]

204000G010 ..(KA's)

ANSWER: 098 (1.00)

a.

REFERENCE:

1. OPL171.074 Objective 2.

K/A: 295006G010 [4.1/4.2]

295006G010. ..(KA's)

ANSWER: 099 (1.00)

c.

REFERENCE:

1. SSP-12.56, 12.1

K/A: 294001K102 [3.9/4.2]

294001K102 ..(KA's)

ANSWER: 100 (1.00)

d.

REFERENCE:

1. O-AOI-57-8, Rev 4, Section 2.0

   K/A: 295004G005 [3.5/3.5]

   295004G005 ..(KA's)

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

ANSWER KEY

MULTIPLE CHOICE

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

A N S W E R K E Y

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

A N S W E R K E Y

092 b

093 c

094 b

095 d

096 c

097 a

098 a

099 c

100 d

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

RO Exam BWR Reactor

Organized by Question Number

QUESTION	VALUE	REFERENCE
001	1.00	9000001
002	1.00	9000002
003	1.00	9000003
004	1.00	9000005
005	1.00	9000006
006	1.00	9000007
007	1.00	9000009
008	1.00	9000010
009	1.00	9000011
010	1.00	9000012
011	1.00	9000013
012	1.00	9000014
013	1.00	9000015
014	1.00	9000016
015	1.00	9000017
016	1.00	9000018
017	1.00	9000020
018	1.00	9000021
019	1.00	9000022
020	1.00	9000023
021	1.00	9000025
022	1.00	9000027
023	1.00	9000028
024	1.00	9000029
025	1.00	9000030
026	1.00	9000032
027	1.00	9000033
028	1.00	9000034
029	1.00	9000036
030	1.00	9000037
031	1.00	9000038
032	1.00	9000039
033	1.00	9000040
034	1.00	9000041
035	1.00	9000042
036	1.00	9000044
037	1.00	9000046
038	1.00	9000049
039	1.00	9000050
040	1.00	9000051
041	1.00	9000052
042	1.00	9000053
043	1.00	9000054
044	1.00	9000055
045	1.00	9000056
046	1.00	9000057
047	1.00	9000058
048	1.00	9000059
049	1.00	9000060

R O E x a m B W R R e a c t o r

O r g a n i z e d b y Q u e s t i o n N u m b e r

QUESTION	VALUE	REFERENCE
050	1.00	9000061
051	1.00	9000062
052	1.00	9000064
053	1.00	9000065
054	1.00	9000066
055	1.00	9000068
056	1.00	9000070
057	1.00	9000072
058	1.00	9000073
059	1.00	9000074
060	1.00	9000075
061	1.00	9000076
062	1.00	9000077
063	1.00	9000078
064	1.00	9000080
065	1.00	9000081
066	1.00	9000082
067	1.00	9000083
068	1.00	9000084
069	1.00	9000085
070	1.00	9000086
071	1.00	9000087
072	1.00	9000088
073	1.00	9000092
074	1.00	9000093
075	1.00	9000094
076	1.00	9000095
077	1.00	9000096
078	1.00	9000097
079	1.00	9000098
080	1.00	9000099
081	1.00	9000100
082	1.00	9000101
083	1.00	9000102
084	1.00	9000103
085	1.00	9000108
086	1.00	9000109
087	1.00	9000110
088	1.00	9000111
089	1.00	9000112
090	1.00	9000113
091	1.00	9000114
092	1.00	9000115
093	1.00	9000118
094	1.00	9000119
095	1.00	9000120
096	1.00	9000121
097	1.00	9000122
098	1.00	9000123

RO Exam BWR Reactor

Organized by Question Number

QUESTION	VALUE	REFERENCE
099	1.00	9000124
100	1.00	9000126
	100.00	
	100.00	

RO Exam BWR Reactor

Organized by KA Group

PLANT WIDE GENERICS

QUESTION	VALUE	KA
075	1.00	294001A102
077	1.00	294001A103
074	1.00	294001A106
082	1.00	294001A109
084	1.00	294001A110
083	1.00	294001A116
076	1.00	294001K101
099	1.00	294001K102
078	1.00	294001K103
073	1.00	294001K103
079	1.00	294001K103
080	1.00	294001K103
081	1.00	294001K116

PWG Total	13.00	

PLANT SYSTEMS

Group I

QUESTION	VALUE	KA
006	1.00	201001A307
016	1.00	201002A102
019	1.00	201002A402
021	1.00	202002K108
042	1.00	203000A302
031	1.00	203000K601
004	1.00	206000K419
012	1.00	209001K403
023	1.00	212000K110
034	1.00	212000K410
005	1.00	215004G010
037	1.00	215004K401
007	1.00	215005K102
028	1.00	216000K501
039	1.00	217000A301
029	1.00	217000A403
040	1.00	218000K403
009	1.00	223001G002
017	1.00	223001K109
027	1.00	223002A302
089	1.00	239002A201
014	1.00	241000K110
020	1.00	259001G010
093	1.00	259001K403

RO Exam BWR Reactor

Organized by KA Group

PLANT SYSTEMS

Group I

QUESTION	VALUE	KA
018	1.00	259002A401
033	1.00	261000G010
032	1.00	264000G010
013	1.00	264000K505
PS-I Total	28.00	

Group II

QUESTION	VALUE	KA
011	1.00	201003K402
035	1.00	201004K404
036	1.00	201006K404
030	1.00	202001A210
097	1.00	204000G010
095	1.00	205000G010
041	1.00	214000A202
090	1.00	214000G013
091	1.00	215002K101
049	1.00	226001A403
003	1.00	239001K127
025	1.00	245000A106
024	1.00	245000K405
008	1.00	256000K403
061	1.00	262001A401
044	1.00	262001K406
067	1.00	272000K201
045	1.00	272000K403
068	1.00	290003A301
PS-II Total	19.00	

Group III

QUESTION	VALUE	KA
038	1.00	215001A201
015	1.00	234000G013
069	1.00	288000K105
062	1.00	290002K114
PS-III Total	4.00	

RO Exam BWR Reactor

Organized by KA Group

PLANT SYSTEMS

QUESTION	VALUE	KA
PS Total	51.00	

EMERGENCY PLANT EVOLUTIONS

Group I

QUESTION	VALUE	KA
058	1.00	295006A206
098	1.00	295006G010
057	1.00	295006K201
086	1.00	295007A104
056	1.00	295009A202
085	1.00	295014A104
052	1.00	295015K201
066	1.00	295024K301
001	1.00	295025G003
070	1.00	295031A201
092	1.00	295037G007
059	1.00	295037K301
EPE-I Total	12.00	

Group II

QUESTION	VALUE	KA
047	1.00	295001A101
046	1.00	295002A105
043	1.00	295003A101
096	1.00	295003G007
100	1.00	295004G005
048	1.00	295008K304
055	1.00	295013G011
072	1.00	295016A204
010	1.00	295016K303
026	1.00	295017G010
087	1.00	295018G010
053	1.00	295019K205
051	1.00	295020K201
002	1.00	295022G010
022	1.00	295026G007
065	1.00	295028G010
060	1.00	295029K207
064	1.00	295030K101
063	1.00	295034G011

RO Exam BWR Reactor

Organized by KA Group

EMERGENCY PLANT EVOLUTIONS

Group II

QUESTION	VALUE	KA
EPE-II Total	19.00	

Group III

QUESTION	VALUE	KA
071	1.00	295021A102
054	1.00	295021K102
050	1.00	295023G006
088	1.00	295032K303
EPE-III Total	4.00	
EPE Total	35.00	
Test Total	100.00	

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Examination

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Browns Ferry
Master 92-300

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

CANDIDATE'S NAME: _____

FACILITY: Browns Ferry 1,2,3

REACTOR TYPE: BWR-GE4

DATE ADMINISTERED: 09/18/92

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

ANSWER SHEET

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	___

ANSWER SHEET

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	___

ANSWER SHEET

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)

WHICH ONE of the following is the Safety Limit for RPV pressure?

a. 1105 psig

b. 1148 psig

c. 1250 psig

d. 1375 psig

QUESTION: 002 (1.00)

A Reactor startup is in progress on Unit 2 when the operating CRD Pump trips due to motor overload. The backup pump is under repair and is expected to be operable in 2 hours. The following plant conditions exist:

Rx Power is 5%
Reactor Pressure is 700 psig
Charging Water Pressure is 1400 psig [decreasing slowly]
1 Accumulator light on Full Core Display illuminated
1 CRD High Temperature alarm
CRD Low Pressure alarm

Which ONE of the following would be the correct IMMEDIATE action to take in accordance with 2-AOI-85-3, "CRD System Failure"?

a. A Manual Scram is required under current conditions.

b. A Manual Scram is required if another Control Rod High Temperature alarm is received in conjunction with the LOW CRD WATER PRESSURE alarm.

c. A Manual Scram is required if cooling water flow is not re-established within one hour.

d. A Manual Scram is required if Reactor Pressure decreases to below 600 psig.

QUESTION: 003 (1.00)

A cold reactor startup is in progress. Group 2 rods are currently being withdrawn. A reactor operator trainee places the reactor mode switch in RUN. WHICH ONE of the following describes the expected plant response?

a. The reactor will scram due to main steam line low pressure and the MSIV's will remain open.

b. The MSIV's will close due to main steam line low pressure and the reactor will scram on high pressure.

c. The reactor will scram due to low condenser vacuum and the MSIV's will remain open.

d. The MSIV's will close due to main steam line low pressure and the reactor will scram due to MSIV closure.

QUESTION: 004 (1.00)

Unit 2 is operating at rated conditions with one CSS loop inoperable. A quarterly pump flow rate test is in progress on the High Pressure Coolant Injection (HPCI) System. Soon after HPCI is started, it automatically isolates due to failure of the inboard rupture disc. Estimated time to completed repairs is 72 hours. WHICH ONE of the following accurately describes the allowances and/or limitations imposed by Tech. Specs.?

a. Reactor operations may continue for up to 7 days providing RCIC is operable.

b. An orderly shutdown shall be initiated and the unit placed in COLD SHUTDOWN within 24 hours.

c. The reactor must be placed in HOT STANDBY within 6 hours, and in COLD SHUTDOWN within the following 30 hours.

d. An orderly shutdown shall be initiated and the reactor vessel pressure reduced to 150 psig or less within 24 hours.

QUESTION: 005 (1.00)

Fuel loading is in progress on Unit 2. The following SRM readings were recorded before and after the loading of a bundle in Quadrant A. All four SRM's are completely surrounded by fuel.

	Before	After
SRM A	4 cps	5 cps
SRM B	3 cps	2 cps
SRM C	5 cps	5 cps
SRM D	3 cps	6 cps

WHICH ONE of the following describes the required action?

a. Must perform a response check of SRM C before loading more fuel.

b. Fuel loading may continue in quadrants A, C, and D.

c. Fuel loading shall be halted until SOS concurrence to continue fuel loading is received.

d. Fuel loading may continue in any quadrant.

QUESTION: 006 (1.00)

Unit 2 is operating at 55% power, starting up after a refueling outage. The Unit Operator attempts to cycle the Scram Discharge Volume Vent and Drain Valves for testing. One drain valve fails to fully close. WHICH ONE of the following describes the allowances and/or limitations imposed by Tech. Specs?

a. Operations may continue indefinitely as long as the redundant drain valve is operable.

b. The reactor shall be placed in the Hot Standby Condition within 24 hours.

c. The reactor shall be placed in the Cold Standby Condition within 24 hours.

d. Operations may continue for up to 30 days as long as the redundant drain valve is operable.

QUESTION: 007 (1.00)

Unit 2 is conducting a startup, the mode switch is in RUN, reactor power is 12%. APRM B fails downscale. An operator downranges IRM H, causing it to exceed 121/125 on range 8. WHICH ONE of the following is the plant's response?

a. A rod block occurs due to the APRM downscale, and an alarm only occurs due to the IRM hi-hi.

b. A rod block occurs due to the APRM downscale, and a 1/2 scram on RPS B occurs due to the IRM hi-hi.

c. A half scram occurs on RPS B due to the APRM downscale, and an alarm only occurs due to the IRM hi-hi.

d. A half scram occurs on RPS B due to the APRM downscale, and a rod block occurs due to the IRM hi-hi.

QUESTION: 008 (1.00)

A startup of Unit 1 is in progress. After receiving word from the turbine building AUO that he has started B condensate booster pump aux oil pump, the Unit Operator places the B condensate booster pump control switch to START. WHICH ONE of the following describes the starting sequence under these circumstances?

a. B condensate booster pump will start 15 seconds after the control switch was placed to start provided that the aux lube oil pump is maintaining at least 8 psig oil pressure and suction pressure at the pump is at least 10 psig.

b. B condensate booster pump will start immediately when the handswitch is taken to START, and the aux oil pump will stop 15 seconds after the control switch was placed to start.

c. B condensate booster pump will start immediately upon placing the control switch to START provided pump lube oil pressure is greater than 8 psig regardless of suction pressure.

d. B condensate booster pump will start 10 seconds after the handswitch is taken to START provided suction pressure is at least 10 psig, regardless of oil pressure.

QUESTION: 009 (1.00)

Notification of the STA and Shift Operations Supervisor is required if the drywell delta-p compressor runs continuously for 30 minutes. WHICH ONE of the following describes why this notification is made? Run times of 30 minutes or more:

a. could overheat the compressor motor.

b. will result in excessive nitrogen makeup consumption.

c. could indicate possible cracking of containment piping.

d. indicates that the compressor discharge relief is stuck open.

QUESTION: 010 (1.00)

Unit 2 control room has been abandoned and reactor pressure is decreasing due to a controlled cooldown. Water level is being controlled with the RCIC system at remote shutdown panel 25-32, in accordance with 2-AOI-100-2, "Control Room Abandonment". When reactor pressure decreases to 50 psi, WHICH ONE of the following describes the response of the RCIC system under these circumstances?

a. RCIC will auto isolate and trip.

b. RCIC will trip but not isolate.

c. Only the inboard isolation valve, FCV-71-2, will isolate.

d. RCIC will neither trip nor isolate.

QUESTION: 011 (1.00)

WHICH ONE of the following describes an indication of an uncoupled control rod when performing a control rod coupling integrity check at position 48?

a. Receive CONTROL ROD OVERTRAVEL alarm, rod display blanks, and rod select power is de-energized by RSCS.

b. Receive CONTROL ROD OVERTRAVEL alarm, rod display blanks, and red backlighting on the full core display extinguishes.

c. Receive CONTROL ROD OVERTRAVEL and CONTROL ROD DRIFT alarms, and rod display does not change from position 48.

d. Receive CONTROL ROD OVERTRAVEL and CONTROL ROD WITHDRAWAL alarms, and rod display does not change from position 48.

QUESTION: 012 (1.00)

Given the following plant conditions: (The CSS was in a normal standby lineup prior to the event.)

RPV level	-112 inches (steady)
RPV pressure	300 psig (slowly lowering)
DW pressure	+2 psig (slowly rising)
DW temperature	223 degrees F (slowly rising)

WHICH ONE of the following describe the status of the Unit 2 Core Spray System (CSS) inboard injection valve?

a. The inboard injection valve has automatically opened.

b. The inboard injection valve can not be manually opened from Panel 9-3 unless the outboard injection valve is shut.

c. The inboard injection valve will open as soon as drywell pressure exceeds 2.45 psig.

d. The inboard injection valve can be manually opened from Panel 9-3 only if the outboard injection valve is fully closed.

QUESTION: 013 (1.00)

During performance of O-SI-4.9.A.1.a, "Diesel Generator Monthly Operability Test", the operator inadvertently leaves the generator in the SINGLE UNIT mode when parallelling across the generator output breaker. . If all other steps are performed properly, WHICH ONE of the following describes the system response when the DG output breaker control switch is taken to CLOSE?

a. The output breaker will CLOSE; the generator will trip on reverse power.

b. The output breaker will CLOSE; the generator will pick up maximum load.

c. The output breaker will NOT close; the generator will trip on overspeed.

d. The output breaker will NOT close; the generator will not be affected.

QUESTION: 014 (1.00)

When the main turbine receives a TRIP signal, WHICH ONE of the following describes the status of the trip solenoids?

a. Both master trip solenoids are energized and the mechanical trip solenoid is deenergized.

b. Both master trip solenoids and the mechanical trip solenoid are energized.

c. Both master trip solenoids are deenergized and the mechanical trip solenoid is energized.

d. Both master trip solenoids and the mechanical trip solenoid are deenergized.

QUESTION: 015 (1.00)

During fuel loading on Unit 2, a Fire alarm is received. If a fuel bundle is being moved from the spent fuel pool to the reactor, and is currently suspended over the reactor, WHICH ONE of the following describes what should be done with the fuel bundle?

a. Bridge movement shall be stopped, and the bundle held where it is.

b. The bundle shall be lowered immediately and placed in a safe condition.

c. The bundle shall be taken back to the location in the SFSP (spent fuel storage pool) from which it was taken.

d. The bridge and the bundle shall be moved to a location not over the reactor vessel.

QUESTION: 016 (1.00)

All three units are in COLD SHUTDOWN with fuel removed. Fuel handling is in progress on Unit 2, in preparation for fuel loading. During the performance of SI-4.7.B.3.c, "SGT System Train Operability Test" it is noted that SGT B flow does not meet the acceptance criteria. WHICH ONE of the following describes the limitations imposed by Tech. Specs.?

a. Fuel handling operations must be stopped immediately.

b. Fuel handling operations can continue for 24 hours.

c. Fuel handling operations can continue for 7 days.

d. Fuel handling operations can continue indefinitely.

QUESTION: 017 (1.00)

In accordance with 2-OI-76, "Containment Inerting System", WHICH ONE of the following will be used to exhaust primary containment atmosphere during inerting if the purge filter fan is inoperable?

a. Existing differential pressure between primary containment and the reactor building.

b. Reactor building exhaust fans only.

c. Standby Gas Treatment System.

d. Drywell Delta-p Compressor.

QUESTION: 018 (1.00)

WHICH ONE of the following statements describes the response of the Motor Gear Unit (MGU) to a loss of signal from the flow controller?

a. Will fail high and run the RFPT to about 5500 rpm.

b. Will fail low and run the RFPT to about 2000 rpm.

c. Will fail high and run the RFPT speed to the setting of the Motor Speed Changer (MSC)

d. Will fail "as is" and run the RFPT at its present RPM.

QUESTION: 019 (1.00)

WHICH ONE of the following describes the differences between normal rod insertion and rod insertion using the "emergency in" control switch? Insertion using the "emergency in" control switch bypasses the rod motion timer and:

a. results in a loss of the rod settle function, but does NOT override the RWM insert block or any select block.

b. does NOT result in a loss of the rod settle function, and overrides the RWM insert block, but NOT the select block.

c. results in a loss of the rod settle function, and overrides the select block, but NOT the RWM insert block.

d. does NOT result in a loss of the rod settle function, and overrides all rod insert blocks.

QUESTION: 020 (1.00)

WHICH ONE of the following statements is an expected system response to a loss of I&C "B" power supply?

a. Short cycle valve fails open.

b. RFPT minimum flow valves fail open.

c. SRM/IRM detector drive power is lost.

d. Drywell dp compressor starts.

QUESTION: 021 (1.00)

With Unit 3 operating at 100% power, a fault in the "A" RFP control system causes the pump to decrease to minimum speed. The Unit Operator observes a runback of the recirc pumps to 75% speed. WHICH ONE of the following sets of conditions caused the runback?

a. Total feedwater flow less than 20% and RPV level less than +27 inches.

b. Total feedwater flow less than 20%.

c. Any individual feedpump flow less than 20%.

d. Any individual feedpump flow less than 20% and RPV level less than +27 inches.

QUESTION: 022 (1.00)

WHICH ONE of the following is a means by which thermal duty on feedwater nozzles can be minimized during low power operations per 2-OI-3, "Reactor Feedwater System"?

a. Maximize CRD system flow.

b. Use RCIC as an alternative source of feedwater.

c. Maximize RWCU system flow.

d. Bypass the RFW heaters below 10% power.

QUESTION: 023 (1.00)

Suppression pool temperature is 145 degrees F, level is above the setpoint for transfer from CST to suppression pool suction. WHICH ONE of the following describes the reason that the HPCI suppression pool water level suction transfer logic interlock is defeated and HPCI is operated with a suction from the CST?

a. The suppression pool provides insufficient NPSH to the HPCI pump and cavitation may occur at rated flow.

b. The HPCI shaft pump seals are not designed to operate at temperatures in excess of 140F and may fail.

c. The HPCI lube oil will exceed allowable temperatures and the HPCI function could be lost due to damaged bearings.

d. The HPCI turbine exhaust pressure is likely to exceed the trip setpoint at elevated suppression pool temperatures.

QUESTION: 024 (1.00)

WHICH ONE of the following sets of conditions will cause the auto-initiation, and support continued operation of the standby SJAE, assuming that all control board handswitches are lined up to support auto-initiation of a standby SJAE?

	Condensate Pressure	Condenser Pressure	Holdup Volume Temp. (Both Channels)
a.	65 psig	7" Hg abs	150 degrees F
b.	55 psig	8" Hg abs	145 degrees F
c.	70 psig	3" Hg abs	155 degrees F
d.	62 psig	9" Hg abs	165 degrees F

QUESTION: 025 (1.00)

The Offgas system is aligned as follows:

Adsorber control switch (HS-66-113) is in BYPASS.
"A" SJAE is in service.
Adsorber train "A" inlet (FCV-66-113A) is closed..
Adsorber bypass valve (FCV-66-113B) is open.
Offgas system isolation valve (FCV-66-28) is open.

WHICH ONE of the following describes system response if ONE of the Offgas Post-Treat radiation monitors fails high?

a. Offgas Isolation valve (66-28) closes.
Adsorber inlet valve (66-113A) remains closed.

b. Offgas Isolation valve (66-28) closes.
Adsorber bypass valve (66-113B) closes.

c. Offgas Isolation valve (66-28) remains open.
Adsorber inlet valve (66-113A) remains closed.

d. Offgas Isolation valve (66-28) remains open.
Adsorber bypass valve (66-113B) closes.

QUESTION: 026 (1.00)

Unit 2 is operating at 100% rated power when the following indications are received.

OG Post Treatment Radiation Hi-Hi alarm
OG Post Treatment Radiation Hi-Hi-Hi/Inop alarm
OG Pretreatment Radiation Hi alarm
OG Average Annual Release Limit Exceeded alarm

WHICH ONE of the following is the appropriate immediate operator action?

a. Reduce reactor power to 60% with recirc flow and manually scram the reactor.

b. Reduce recirc flow to 60% and insert control rods in reverse order to shutdown the reactor, be in hot shutdown within 1 hour.

c. Reduce recirc flow until total core flow is less than 75% and then manually scram the reactor.

d. Reduce reactor power with recirc flow to reduce the off-gas radiation levels to below the Hi-Hi-Hi release trip setpoint.

QUESTION: 027 (1.00)

Assuming all systems function normally, WHICH ONE of the following lists of PCIS groups will isolate if drywell pressure exceeds 2.45 psig?

a. Group 2, Group 3, Group 4

b. Group 2, Group 6, Group 8

c. Group 3, Group 5, Group 6

d. Group 5, Group 6, Group 8

QUESTION: 028 (1.00)

WHICH ONE of the following sets of conditions will result in the wide range level instrument (2-LI-3-58A/B) most accurately measuring actual RPV level?

a. 100% power at rated temperature and pressure.

b. Cold shutdown, recirc pumps running at minimum speed.

c. Rated temperature and pressure, with no steam flow.

d. Startup in progress, reactor pressure 800 psig.

QUESTION: 029 (1.00)

During operation at 100% power, a turbine trip occurs, and subsequently a reactor scram signal is generated. Water level reaches -15 inches but is recovered by the operator using the feedwater system. Reactor pressure initially reaches 1105 psig, but is controlled normally thereafter by the turbine bypass valves. During response to the transient, the operator notes that neither recirculation pump is running. WHICH ONE of the following is the basis for the recirculation pump trip?

a. To limit the consequences of an ATWS.

b. To add negative reactivity, counteracting the positive reactivity added due to the pressure increase which resulted from the turbine trip.

c. To promote level swell in the vessel, counteracting the shrink effects caused by the turbine trip.

d. To protect the recirculation pumps from loss of adequate NPSH caused by the vessel level shrink resulting from the turbine trip.

QUESTION: 030 (1.00)

WHICH ONE of the following valves in the RCIC steam supply flowpath is CLOSED in a normal standby lineup?

a. Inboard steam isolation valve (FCV-71-2)

b. Outboard steam isolation valve (FCV-71-3)

c. Steam supply valve (FCV-71-8)

d. Trip throttle valve (FCV-71-9)

QUESTION: 031 (1.00)

With the reactor at rated pressure, WHICH ONE of the following describes indications of a failure of ONLY the #2 (outboard) recirculation pump seal?

	#1 seal pressure	#2 seal pressure
a.	1000 psig	980 psig
b.	995 psig	50 psig
c.	1000 psig	750 psig
d.	1000 psig	500 psig

QUESTION: 032 (1.00)

A LOCA has occurred on Unit 2, concurrent with a partial loss of electrical power. The RHR system receives an auto start signal. The shutdown boards are aligned as follows.

4Kv SD Bd A - deenergized
4Kv SD Bd B - normal power supply
4Kv SD Bd C - emergency diesel
4Kv SD Bd D - normal power supply

WHICH ONE of the following describes the response of the RHR pumps?

a. 2A and 2C do not start, 2B starts in 7 seconds, 2D in 21 seconds.

b. 2A does not start, 2B starts in 7 seconds, 2C in 14 seconds, 2D in 21 seconds.

c. 2A does not start, 2B starts immediately, 2C in 14 seconds, 2D in 21 seconds.

d. 2A and 2C do not start, 2B and 2D start immediately.

QUESTION: 033 (1.00)

About 30 seconds after starting the "A" Diesel Generator for a surveillance run, you notice that the DG A LOW-LOW LUBE OIL PRESSURE light on panel 9-23 is illuminated. Diesel rpm is currently 450. This light remains in solid for the next 10 seconds. No other alarms or annunciators associated with the "A" Diesel are illuminated, and no audible alarm is heard. WHICH ONE of the following courses of action is correct?

a. No action is required.

b. Hold the startup at the current point until an operator can verify local lube oil pressure and level at the machine.

c. Normal shutdown the Diesel.

d. Emergency shutdown the Diesel.

QUESTION: 034 (1.00)

WHICH ONE of the following signals is used by RSCS to determine if power is above the preset power level beyond which RSCS enforcement is not required.

a. APRM "C"

b. Turbine first stage pressure

c. Total feedwater flow

d. Total steam flow

QUESTION: 035 (1.00)

While Unit 2 is operating at rated power, the 2A RPS MG set trips. WHICH ONE of the following describes the response of the RWCU system?

a. An outboard isolation will occur. Valves 69-2 and 69-12 will close.

b. An inboard isolation will occur. Valves 69-1 and 69-12 will close.

c. An inboard and outboard isolation will occur. Valves 69-1, 69-2 and 69-12 will close.

d. The running RWCU pump will trip. No valve closures will occur.

QUESTION: 036 (1.00)

Concerning the Rod Worth Minimizer, WHICH ONE of the following will NOT cause a rod WITHDRAW ERROR?

a. A rod contained in the currently latched group is withdrawn past the group withdraw limit.

b. A rod contained in a group higher than the latched group is withdrawn past its insert limit.

c. A rod contained in a group lower than the latched group is withdrawn past its withdraw limit.

d. A rod contained in a group lower than the latched group is withdrawn past its insert limit.

QUESTION: 037 (1.00)

ALL Source Range Monitor rod blocks are automatically bypassed under WHICH ONE of the following situations?

a. All IRM's on range 8 or above.

b. The four IRM's in the same channel as the SRMs are on range 8 or above.

c. All IRM's are on range 3 or above.

d. The four IRM's in the same channel as the SRM are on range 3 or above.

QUESTION: 038 (1.00)

WHICH ONE of the following describes the Tech. Spec. basis for the 100 mr/hr trip setpoint for the refueling zone radiation monitors?

a. To prevent personnel exposure during a refueling accident from exceeding 10 CFR 20 guidelines.

b. To shift the Control Room Ventilation to recirculation mode before the Control Room becomes uninhabitable during a refueling accident.

c. To limit offsite releases of long-lived radioactive noble gases.

d. To route all activity released in a refueling accident through the SGTS system instead of normal ventilation.

QUESTION: 039 (1.00)

According to Technical Specification Bases, WHICH ONE of the following is the MOST SEVERE condition under which the Standby Liquid Control system is capable of shutting down the Unit 2 reactor?

a. From full power to cold shutdown, xenon-free assuming none of the withdrawn control rods can be inserted.

b. From full power to hot shutdown assuming none of the withdrawn control rods can be inserted.

c. From full power to cold shutdown assuming none of the withdrawn control rods can be inserted, with maximum xenon conditions.

d. From full power to hot shutdown assuming none of the withdrawn control rods can be inserted, with allowance for flooding up the reactor vessel to the head attachment flange.

QUESTION: 040 (1.00)

A TIP trace is being run in the automatic mode using TIP Channel A. While the TIP is at the top of core limit, the reactor scrams on low water level after a loss of feedwater. RPV level reaches +10 inches minimum. . WHICH ONE of the following describe the response of the TIP System following the scram?

a. The TIP channel will withdraw to the indexer, and then stop.

b. The TIP channel will withdraw to the in shield limit, then the ball valve will close.

c. The TIP channel will finish the scan normally unless a high drywell pressure signal is received.

d. The TIP channel will withdraw to the bottom core limit, then the ball valve will close.

QUESTION: 041 (1.00)

WHICH ONE of the following describes the operation of the RCIC minimum flow valve (2-FCV-71-34)?

a. The minimum flow valve will open if RCIC speed exceeds 2250 rpm and flow is less than 60 gpm.

b. The minimum flow valve will open if a RCIC initiation signal is present and flow is less than 60 gpm.

c. The minimum flow valve will open if RCIC discharge pressure exceeds 450 psig and flow is less than 60 gpm.

d. The minimum flow valve will open if RCIC control oil pressure exceeds 50 psig and flow is less than 60 gpm.

QUESTION: 042 (1.00)

WHICH ONE of the following sets of conditions would result in the Unit 2 ADS 95 second timer starting? Assume all sensors, power supplies,and interlocks are operating properly.

a. RPV level remains at -125" for 4 minutes and 30 seconds, Drywell pressure peaks at 2.10 psig, "A" core spray pump discharge pressure is 175 psig, "C" core spray pump discharge pressure is 195 psig, no other ECCS pumps are running.

b. RPV level remains at -125" for 4 minutes and 30 seconds, Drywell pressure peaks at 2.10 psig, "A" core spray pump discharge pressure is 190 psig, "C" core spray pump discharge pressure is 195 psig, no other ECCS pumps are running.

c. RPV level remains at -135" for 3 minutes and 25 seconds, Drywell pressure peaks at 2.50 psig, "A" core spray pump discharge pressure is 190 psig, "B" core spray pump discharge pressure is 195 psig, no other ECCS pumps are running.

d. RPV level remains at -135" for 3 minutes and 25 seconds, Drywell pressure peaks at 2.50 psig, "B" core spray pump discharge pressure is 190 psig, "D" core spray pump discharge pressure is 175 psig, no other ECCS pumps are running.

QUESTION: 043 (1.00)

Following a reactor scram several rod positions on the full core display have no numbered position indications, and only a green background. Which ONE of the following describes their position?

a. They are stuck at an odd reed switch position between the 00 position and the 48 position.

b. They are somewhere between the 00 position and the 48 position and driving in as a result of the scram signal.

c. They over travelled beyond full in as a result of the scram signal and should settle back to 00 position after the scram is reset.

d. Their full in/full out bypass switches in the aux instrument room have been bypassed in the Full In position.

QUESTION: 044 (1.00)

A large break LOCA has occurred. The LPCI system initiates automatically as designed. After vessel level is recovered, an operator manually stops the "A" RHR pump. If vessel level subsequently falls to the LPCI initiation setpoint, WHICH ONE of the following describes the response of the "A" RHR pump?

a. It will automatically start and inject as designed.

b. It will automatically start and run on minimum flow.

c. It will automatically start and inject as designed ONLY if the initiation signal was reset after the vessel level was recovered.

d. It will automatically start ONLY if "C" RHR pump is NOT running.

QUESTION: 045 (1.00)

Due to a Loss of All Offsite Power, backfeed of the Diesel Generators is necessary. WHICH ONE of the following describes the effect of taking the DG backfeed switch to the BACKFEED position?

a. Trips and locks out the normal and alternate Unit Board supply breakers, trips the Shutdown Bus 43 switch to MANUAL, and allows the Unit Board to Shutdown Bus supply breaker to be automatically closed.

b. Trips and locks out the normal Unit Board supply breaker, trips the Shutdown Bus 43 switch to AUTO, and allows the Unit Board to Shutdown Bus supply breaker to be manually closed.

c. Trips and locks out the normal and alternate Unit Board supply breakers, trips the Shutdown Bus 43 switch to MANUAL, and allows the Unit Board to Shutdown Bus supply breaker to be manually closed.

d. Trips and locks out the normal Unit Board supply breaker, trips the Shutdown Bus 43 switch to MANUAL, and allows the Unit Board alternate supply breaker to be manually closed.

QUESTION: 046 (1.00)

Regarding Unit 1, WHICH ONE of the following lists the normal and alternate power supplies IN ORDER OF PREFERENCE, for 4 KV Shutdown Board "B"?

a. Shutdown bus 1, Shutdown bus 2, Unit 1 Diesel B, Unit 3 Diesel B via Shutdown Board 3EB

b. Shutdown bus 2, Shutdown bus 1, Unit 1 Diesel A, Unit 3 Diesel B via Shutdown Board 3EB

c. Shutdown bus 1, Shutdown bus 2, Unit 1 Diesel B, Unit 2 Diesel B via Shutdown Board 2EB

d. Shutdown bus 2, Shutdown bus 1, Unit 1 Diesel A, Unit 2 Diesel B via Shutdown Board 2EB

QUESTION: 047 (1.00)

Reactor power is 25%, main turbine on line, when a small air leak into the condenser starts to reduce vacuum. After performing the subsequent actions of 2-AOI-47-3, "Loss of Condenser Vacuum, condenser pressure stabilizes at 6" Hg absolute. WHICH ONE of the following actions is appropriate?

a. If condenser pressure later increases, trip the main turbine before condenser pressure reaches 23" absolute.

b. Trip the main turbine.

c. Start the mechanical vacuum pump.

d. Increase SJAE steam inlet pressure to 225 psig.

QUESTION: 048 (1.00)

WHICH ONE of the following conditions will result in a RFPT trip?

a. RFPT "B" suction pressure 95 psig for 25 seconds.

b. Condenser high pressure 20" Hg absolute.

c. RFPT (turbine) low oil pressure 6 psig.

d. RPV level +57".

QUESTION: 049 (1.00)

During a LOCA with a LPCI initiation signal present, the SRO directs you to initiate drywell sprays. With the RHR SYS I CTMT VLV SELECT switch in SELECT, to open the RHR SYS I DW SPRAY INBD VLV (2-FCV-74-61), WHICH ONE of the following conditions must be met?

a. RPV level greater than -183".

b. RPV pressure less than or equal to 230 psig.

c. Drywell temperature greater than 250 degrees F.

d. RHR pump discharge pressure greater than 100 psig.

QUESTION: 050 (1.00)

While offloading fuel bundles from the reactor, fuel pool level begins to decrease uncontrollably. WHICH ONE of the following describes a method available from the control room to add water to the fuel pool?

a. Align fuel pool cooling and cleanup heat exchanger RBCCW supply to the fuel pool to maintain level.

b. Start a condensate pump and inject to the reactor vessel to maintain fuel pool level.

c. Open emergency makeup supply valve from EECW to the fuel pool to maintain level.

d. Gravity drain the CST to the fuel pool via the main condenser hotwell to maintain level.

QUESTION: 051 (1.00)

Unit 2 is operating at 100% power when an inadvertent isolation of the "A" inboard MSIV occurs. WHICH ONE of the following describes the expected plant response?

a. No RPS actuation.

b. Half-scram only on RPS "A".

c. Half-scram only on RPS "B".

d. Full reactor scram.

QUESTION: 052 (1.00)

WHICH ONE of the following is the basis for emergency depressurization during a high torus level transient?

a. To reduce the RPV pressure before exceeding the Heat Capacity Level Limit.

b. To assure adequate NPSH to the RHR and Core Spray systems.

c. To prevent MSRV tail pipe break due to depressurizing the RPV.

d. To reduce the coolant leak rate into the torus from the RPV.

QUESTION: 053 (1.00)

A full SCRAM has been inserted on both RPS channels and the rods have failed to insert. All individual blue lights for each control rod on the full-core display have illuminated.

WHICH ONE of the following is a possible cause for the failure to SCRAM?

a. Failure of scram pilot valves to open.

b. RPS "B" did not de-energize.

c. Failure of scram inlet and outlet valves to open.

d. Hydraulic lock on the scram discharge volume.

QUESTION: 054 (1.00)

Unit 2 is operating at rated power when drywell control air is lost. Subsequently the inboard MSIV's receive an isolation signal. WHICH ONE of the following describes the response of the MSIV's to this isolation?

a. The inboard MSIV's will close on spring force only, closing time requirements WILL NOT be met.

b. The inboard MSIV's will close on spring force only, closing time requirements WILL be met.

c. The inboard MSIV's will close on spring force and individual accumulator pressure, closing time requirements WILL be met.

d. The inboard MSIV's will close on spring force and individual accumulator pressure, closing time requirements WILL NOT be met.

QUESTION: 055 (1.00)

WHICH ONE of the following describes a symptom of RPV water stratification during a loss of shutdown cooling? (Neither recirc pump is running)

a. Temperature differential of 65 degrees F between bottom vessel head and feedwater sparger with moderator temperature at 145 degreesF.

b. Feedwater sparger temperature at 190 degrees F.

c. Temperature differential of 55 degrees F between bottom vessel head and feedwater sparger with moderator temperature at 165 degrees F.

d. Feedwater sparger temperature at 180 degrees F.

QUESTION: 056 (1.00)

WHICH ONE of the following describes the basis for the Drywell Spray Initiation Limit Curve?

a. To prevent unstable steam condensation in the MSRV tailpipes from exerting excessive cyclic hydraulic loads on the suppression pool structure.

b. To ensure that the rate at which the primary containment is depressurized is within the capacity of the torus to reactor building vacuum breakers.

c. To prevent chugging in the drywell to torus downcomers from exerting excessive cyclic hydraulic loads on the suppression pool structure.

d. To ensure adequate noncondensibles remain in the drywell to prevent the torus to drywell vacuum breakers from opening during drywell steam condensation.

QUESTION: 057 (1.00)

WHICH ONE of the following is the basis for the 95 degrees F Technical Specification limit on suppression pool temperature?

a. To provide for complete condensation of steam released into the containment after a LOCA.

b. To provide adequate NPSH to the RHR pumps during post-LOCA operation.

c. To prevent post-LOCA bulk boiling of suppression pool water.

d. To provide adequate NPSH to the Core Spray pumps during post-LOCA operation.

QUESTION: 058 (1.00)

Unit 2 is operating at 100% power when the "A" steam flow transmitter fails downscale. WHICH ONE of the following describes the expected control room indications after conditions stabilize? (Assume no operator action is taken)

a. Total Feed Flow 75%, Total Steam Flow 50%

b. Total Feed Flow 75%, Total Steam Flow 75%

c. Total Feed Flow 100%, Total Steam Flow 50%

d. Total Feed Flow 100%, Total Steam Flow 75%

QUESTION: 059 (1.00)

WHICH ONE of the following scram signals is effective ONLY when the mode switch is in RUN?

a. Turbine stop valve closure

b. Load Reject

c. IRM hi-hi

d. MSIV closure

QUESTION: 060 (1.00)

Unit 2 is operating at 25% power. WHICH ONE of the following combinations of events will result in a full reactor scram?

a. Both MSIV's in steam lines "A" and "D" isolate.

b. Both MSIV's in steam lines "A" and "C" isolate.

c. APRM "E" and "C" trip on hi-hi flux.

d. APRM "E" and "D" trip on hi-hi flux.

QUESTION: 061 (1.00)

An ATWS is in progress, power is 15%. EOI-1, "RPV Control", has been entered. WHICH ONE of the following describes how step RC/Q 7, TRIP THE RECIRC PUMPS is accomplished AND the reason for this method?

a. Trip ONE recirc pump at a time to prevent a transient which could cause a turbine trip if the turbine is on line.

b. Trip BOTH recirc pumps simultaneously in order to effect the most rapid power reduction possible.

c. Trip ONE recirc pump at a time to prevent a transient which could cause power/flow oscillations to start.

d. Trip BOTH recirc pumps simultaneously to maintain symmetrical core flow.

QUESTION: 062 (1.00)

WHICH ONE of the following is the HIGHEST suppression pool water level at which the drywell to suppression pool vacuum breakers will still be uncovered?

a. 20.00 feet

b. 17.75 feet

c. 11.25 feet

d. 9.75 feet

QUESTION: 063 (1.00)

Plant conditions are as follows:

RPV level	+13 inches
RPV pressure	1050 psig
Drywell press.	2.40 psig
Torus level	-5 inches
Rx zone vent rad	75 mr/hr
Refuel zone vent rad	62 mr/hr

WHICH ONE of the following EOI groups should be entered?

a. EOI-1, "RPV Control" and EOI-2, "Primary Containment Control".

b. EOI-1, "RPV Control" and EOI-3, "Secondary Containment Control".

c. Only EOI-2, "Primary Containment Control".

d. Only EOI-3, "Secondary Containment Control".

QUESTION: 064 (1.00)

WHICH ONE of the following describes an acceptable action required to exit Region 2 of the power to flow operating map?

a. If Region 2 was entered due to a recirc pump trip, restart the idle recirculation pump to restore core flow to greater than 45% of rated.

b. Insert control rods to less than the 80% rod line.

c. Insert control rods to reduce reactor power to less than 80%.

d. Reduce recirculation flow to minimum speed to reduce core flow to less than 45% of rated.

QUESTION: 065 (1.00)

WHICH ONE of the following is the MINIMUM suppression pool level at which the drywell-to-torus downcomers will be covered?

a. 13.75 feet

b. 11.75 feet

c. 10.75 feet

d. 9.75 feet

QUESTION: 066 (1.00)

WHICH ONE of the following conditions warrants a manual reactor SCRAM?

a. Offgas Hydrogen analyzer indicates 3% Hydrogen in the offgas stream.

b. Post-treatment radiation HI-HI alarm.

c. Both recirc pumps trip in the RUN mode.

d. Drywell temperature reaches 165 degrees F after a loss of drywell cooling.

QUESTION: 067 (1.00)

WHICH ONE of the following is the reason that EOI-2, "Primary Containment Control", directs that drywell sprays be terminated if drywell pressure falls below 2.4 psig?

a. To divert water to the core that is not needed to prevent containment failure.

b. To prevent driving the containment pressure below atmospheric, which could result in de-inerting the containment.

c. To prevent drawing Torus water into the Drywell to Torus downcomers.

d. To allow the restart of Drywell blowers.

QUESTION: 068 (1.00)

WHICH ONE of the following lists of conditions assure ADEQUATE CORE COOLING? (All rods are in.)

a. RPV level -150", no MSRV's open, no injection flow.

b. RPV level unknown, no MSRV's open, Core Spray "A" injecting at maximum flow.

c. RPV level -210", one MSRV open, HPCI injecting at maximum flow.

d. RPV level -210", 2 MSRV's open, RHR "B" and "D" injecting at maximum flow.

QUESTION: 069 (1.00)

WHICH ONE of the following will cause an automatic closure of both inboard and outboard Shutdown Cooling suction line containment isolations (74-47 and 74-48)?

a. Reactor pressure of 110 psig.

b. Loss of RPS "A".

c. RHR/FPC heat exchanger outlet temperature of 130 degrees F.

d. Refuel zone exhaust rad monitor at 69 mr/hr.

QUESTION: 070 (1.00)

Unit 2 control room is being abandoned due to a fire in the control room. While immediate actions are being performed, an operator notices that suppression pool temperature is 100 degrees F. WHICH ONE of the following states the procedures that will be used at the remote shutdown panels?

a. 2-AOI-100-2, "Control Room Abandonment", and EOI-2, "Containment Control", with EOI-2 having priority in any conflict.

b. 2-AOI-100-2, "Control Room Abandonment", and EOI-2, "Containment Control", with AOI-100 having priority in any conflict.

c. 2-AOI-100-2, "Control Room Abandonment", only.

d. EOI-2, "Containment Control", only.

QUESTION: 071 (1.00)

Step RC/P-6 of EOI-1, "RPV Control", directs that reactor pressure be lowered with MSRV's until pressure drops to 930 psig. WHICH ONE of the following is the basis for not going below 930 psig?

a. 930 psig maintains an adequate margin to the MSIV closure on low Main Steam line pressure.

b. Below 930 psig the Main Turbine Bypass valves would begin to close.

c. 930 psig maintains an adequate margin to a turbine trip if the turbine is on line.

d. Below 930 psig swell will raise level sufficiently to cause a group I isolation.

QUESTION: 072 (1.00)

WHICH ONE of the following is the Technical Specification Basis for the equilibrium coolant iodine activity limit.

a. To limit thyroid dose at the exclusion distance following a steam line break.

b. To protect plant personnel from increased exposure in the plant during high power operation.

c. To reduce exposure to plant personnel during refueling operations.

d. To assure the stack gas emissions remain within the Technical Specification limit as calculated on an annual basis.

QUESTION: 073 (1.00)

As SOS you have just declared an ALERT due to weather conditions. The Emergency Centers are NOT staffed. WHICH ONE of the following should be notified within 5 minutes after the ALERT has been declared.

a. SOS clerk

b. Operations Duty Specialist

c. NRC via Emergency Notification System

d. Site Emergency Director

QUESTION: 074 (1.00)

Five operators enter the RCA. Upon exiting, the following data as measured by the frisker were taken:

Operator 1- 225 cpm above background skin contamination.
Operator 2- 75 cpm above background skin contamination.
Operator 3- 60 cpm above background personal clothing contamination.
Operator 4- 150 cpm above background personal clothing contamination.
Operator 5- 200 cpm above background personal clothing contamination.

WHICH ONE of the following describes how many of the operators above are considered contaminated according to SSP 5.1, "Radiation Protection Plan".

a. Zero

b. One

c. Three

d. Five

QUESTION: 075 (1.00)

According to SSP 12.1, "Conduct of Operations", WHICH ONE of the following is (are) the individual(s) who should sign for review of the logs kept by operators outside the control room?

a. The unit SOS

b. The AUO responsible for the entries and the unit ASOS

c. The AUO responsible for the entries and the SOS

d. The UO in charge of the unit or the ASOS

QUESTION: 076 (1.00)

Each shift of an operating unit has designated Emergency Response Team members that remain available to carry out duties described in the Safe Shutdown Instructions. WHICH ONE of the following is the minimum number of AUOs that shall be designated as Emergency Response Team members.

a. 3 AUOs

b. 4 AUOs

c. 5 AUOs

d. 6 AUOs

QUESTION: 077 (1.00)

Under WHICH ONE of the following conditions is independent verification required according to SSP 12.6, "Independent Verification".

a. Disassembly/assembly of components controlled by Work Orders, Maintenance Instructions, Special Maintenance Instructions, Preventative Maintenance Instructions or other approved plant documents.

b. When a second party verification has been conducted in accordance with SSP 12.6 and independent verification is not specified.

c. Activities during plant emergency conditions.

d. Activities affecting components in fire protection system major flow paths.

QUESTION: 078 (1.00)

In accordance with 10 CFR 26, "Fitness for Duty Program," WHICH ONE of the following is the minimum time period to abstain from alcohol preceding any normal scheduled shift?

a. 3 hours

b. 5 hours

c. 8 hours

d. 12 hours

QUESTION: 079 (1.00)

WHICH ONE of the following whole body dose rates is the MINIMUM Tech. Spec. requirement for a locked High Radiation Area.

a. > 0.1 Rem/hr

b. > 1 Rem/hr

c. > 10 Rem/hr

d. > 100 Rem/hr

QUESTION: 080 (1.00)

For an individual with the following exposure history:

Sex:	Male
Age:	23
Lifetime Exposure:	24.80 Rem (Does not include current quarter)
Current Quarter:	250 mRem
NRC Form 4:	On file, lifetime and current quarter exposure history is documented.

WHICH ONE of the following is the remaining 10 CFR 20 whole body (WB) exposure for the current calendar quarter?

a. 0 mRem

b. 200 mRem

c. 1000 mRem

d. 2750 mRem

QUESTION: 081 (1.00)

WHICH ONE of the following individuals retains possession of the key to Key Cabinet A which is used to store high radiation area and security keys?

a. SOS

b. RADCON

c. Unit Operator, (UO)

d. ASOS

QUESTION: 082 (1.00)

In accordance with Technical Specifications, WHICH ONE of the following states the minimum number of fire brigade members to be maintained onsite at all times? Assume the number has not been temporarily reduced to accommodate an unexpected absence.

a. 4

b. 5

c. 6

d. 7

QUESTION: 083 (1.00)

During the execution of Safe Shutdown Instruction 002, "Appendix R Fire", for Unit 2, WHICH ONE of the following methods of communication is the primary method to be used by personnel involved in performance of the procedure?

a. Portable radios

b. Sound Powered Phones

c. Telephone

d. Public Address (PA) System

QUESTION: 084 (1.00)

The last three times a weekly surveillance was performed are shown below.

January 1st at 1200 hours
January 9th at 1200 hours
January 17th at 1200 hours

WHICH ONE of the following is the latest time the next performance of the surveillance can be performed and meet the Technical Specification limit?

a. January 23 at 1200 hours

b. January 24 at 0600 hours

c. January 24 at 1200 hours

d. January 25 at 1200 hours

QUESTION: 085 (1.00)

While acting as SOS, you receive reports that there has been a loss of all 250VDC Battery Boards. The plant had been operating but was shut down and is in HOT STANDBY condition. Electricians were dispatched 30 minutes ago and cannot determine the problem yet. WHICH ONE of the following EPIP classifications should be declared? (See attachment)

a. None (continue to monitor)

b. Notification of Unusual Event

c. Alert

d. Site Area Emergency

QUESTION: 086 (1.00)

Consider the following definition from BFN-EPIP-1:

> Events are in process or have occurred which involve actual or likely major failures of plant functions needed for protection of the public. Any releases are not expected to exceed EPA Protective Action Guideline exposure levels except near site boundary.

WHICH ONE of the following emergency event classifications does this describe?

a. Notification of Unusual Event

b. Alert

c. Site Area Emergency

d. General Emergency

QUESTION: 087 (1.00)

WHICH ONE of the following is the basis for injecting SLC at a suppression pool temperature of 110 degrees F?

a. to provide for the injection of Hot Shutdown Boron Weight before suppression pool temperature exceeds the Heat Capacity Temperature Limit

b. to provide for the injection of Cold Shutdown Boron Weight before suppression pool temperature exceeds the Heat Capacity Temperature Limit

c. to provide for the injection of Hot Shutdown Boron Weight before suppression pool temperature exceeds the design temperature of the torus

d. to provide for the injection of Cold Shutdown Boron Weight before suppression pool temperature exceeds the design temperature of the torus

QUESTION: 088 (1.00)

Unit 2 is operating at 50% rated power when one control rod starts continuously drifting OUT of the core. WHICH ONE of the following is the correct IMMEDIATE action?

a. Select the control rod and insert the rod to its designated position.

b. Manually scram the reactor.

c. Reduce core flow to maintain power constant.

d. Select the control rod and insert the rod to the 00 position.

QUESTION: 089 (1.00)

WHICH ONE of the following states the LOWEST pressure at which MSRVs will open due to high pressure?

a. 1040 psig

b. 1105 psig

c. 1115 psig

d. 1125 psig

QUESTION: 090 (1.00)

Unit 2 is operating at rated power when all RBCCW pumps trip and none can be restarted. WHICH ONE of the following describes the IMMEDIATE operator actions appropriate for this situation?

a. Run recirculation pumps to 45% speed, insert a manual SCRAM, Trip both recirculation pumps, and initiate a cooldown of 90F/hour.

b. IMMEDIATELY TRIP both recirc pumps and SCRAM the reactor.

c. If drywell temperature exceeds 145 degrees F, or drywell pressure exceeds 1.66 psig, insert a manual SCRAM, and trip both recirculation pumps.

d. Reduce recirculation flow to minimum, if recirc pump seal cavity temperature exceeds 200 degrees F on BOTH pumps, TRIP both recirc pumps and SCRAM the reactor.

QUESTION: 091 (1.00)

WHICH ONE of the following is the reason for the automatic isolation of the main steam lines by closure of the MSIVs when the steam tunnel area temperature reaches 194 degrees F?

a. To prevent exceeding the Environmental Qualification temperature limits on the MSIV control air solenoids.

b. To detect small steam leaks and prevent exceeding 10 CFR 100 guidelines.

c. To close the MSIV's before thermal binding makes closure impossible.

d. To protect the integrity of the secondary equipment and ensure the continued operability of safe shutdown equipment.

QUESTION: 092 (1.00)

WHICH ONE of the following describes the consequences of an MSRV tailpipe vacuum breaker failing OPEN?

a. Water from the torus could be drawn into the tailpipe after an MSRV lift.

b. Lifting of the relief could cause chugging in the torus.

c. The Drywell could be pressurized if the MSRV were to lift.

d. The open vacuum breaker would defeat the pressure suppression containment design on a LOCA.

QUESTION: 093 (1.00)

EOI-1, "RPV Control", section RC/Q directs the operator to disable the ADS auto blowdown function when Standby Liquid Control injection is begun. WHICH ONE of the following states the reason for this direction?

a. ADS operation would cause suppression pool temperature to exceed the Heat Capacity Temperature Limit curve.

b. A large power excursion could result if the low pressure systems automatically injected after depressurization.

c. ADS operation would remove boron from the core faster than the SLC system can inject it.

d. ADS operation with reactor power in the heating range will result in a violation of thermal limits.

QUESTION: 094 (1.00)

EOI-1,C-5 uses a parameter called Minimum Alternate RPV Flooding Pressure (MARFP). WHICH ONE of the following describes the significance of MARFP?

a. Once RPV pressure decreases below the MARFP, adequate core cooling is assured.

b. If there are no MSRV's open and pressure remains above the MARFP, adequate core cooling is assured.

c. If pressure cannot be maintained above the MARFP with 2 MSRV's open, it is permissible to close one MSRV to maintain pressure above MARFP.

d. Once RPV pressure decreases below the MARFP, steam flow through the core may not provide adequate core cooling.

QUESTION: 095 (1.00)

If Unit Preferred system panel 9-9 Cabinet 6 is deenergized, WHICH ONE of the following systems listed below would NOT inject to the reactor if an initiation signal was received?

a. HPCI

b. RCIC

c. RHR

d. Core Spray

QUESTION: 096 (1.00)

EOI-2, section PC/P directs the operator to vent the primary containment regardless of radioactive release before containment pressure reaches 55 psig. WHICH ONE of the following states the reason for this instruction?

a. It is the design pressure of the containment.

b. Venting of the containment above this pressure may not be possible because of inability to operate the vent valves.

c. Containment sprays are ineffective above this pressure.

d. SRV's may not automatically open if containment pressure is above 55 psig.

QUESTION: 097 (1.00)

Unit 2 is operating at 100% power when a loss of I&C bus "A" occurs. RPV level control is selected to Level "B". WHICH ONE of the following describes the expected condensate and feedwater system response?

a. RFP turbine speed will initially decrease.

b. All RFP minimum flow valves will open.

c. RFP "A" will trip on low NPSH.

d. Short Cycle valves (FCV-2-29A and 2-29B) will close.

QUESTION: 098 (1.00)

A reactor shutdown is in progress with reactor power at 70% and core flow at 50%. The unit operator observes APRM oscillations of approximately 12% and various LPRM oscillations of between 15 and 30%. WHICH ONE of the following actions is appropriate?

a. Immediately scram the reactor.

b. Immediately insert control rods to less than 80% rod line.

c. Immediately reduce reactor power to less than 80%.

d. Commence an orderly reactor shutdown.

QUESTION: 099 (1.00)

During a reactor startup on Unit 2, with power at 8% and the mode switch in RUN, the operator begins to withdraw IRM's. After IRM "E" is partially withdrawn, it's drive motor blows a fuse. WHICH ONE of the following describes the replacement procedure for this fuse?

a. The fuse can be replaced only by electrical maintenance personnel, only an identical replacement is acceptable.

b. The fuse can be replaced only by electrical maintenance personnel, and if a substitute fuse is used, a WR must be written to have Engineering check the fuse selected later.

c. The fuse can be replaced by operations personnel, only an identical replacement is acceptable.

d. The fuse can be replaced by operations personnel, and if a substitute fuse is used, a WR must be written to have Electrical Maintenance and Instrument Control check the fuse selection after replacement.

QUESTION: 100 (1.00)

WHICH ONE of the following states the BASIS for Caution #1, in the EOIs, which states "ambient temp. may effect RPV water lvl. indication and trend"?

a. Caution #1 provides a correction chart for RPV water level indication when plant conditions are different from those for which the instruments are calibrated.

b. Caution #1 defines conditions under which the value and trend of indicated level CANNOT be relied on; under extreme conditions, an increasing water level can be indicated when actual RPV level is decreasing.

c. Caution #1 defines conditions beyond which the Environmental Qualification of the RPV level instrumentation would be violated; excessive temperatures in the electronics make the indicated level and trend unreliable.

d. Caution #1 defines conditions under which drywell temperatures are high enough to interfere with the action of the condensing pots on the variable legs of the RPV level indicators.

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

ANSWER: 001 (1.00)

d.

REFERENCE:

1. T. S. Bases, 1.2

K/A: 295025G003 [3.5/4.3]

295025G003 ..(KA's)

ANSWER: 002 (1.00)

d.

REFERENCE:

1. 2-AOI-85-3 Rev 7, p 2 of 5 (immediate actions)

K/A: 295022G010 [3.7/3.5]

295022G010 ..(KA's)

ANSWER: 003 (1.00)

d.

REFERENCE:

1. Facility Question Bank #11615
2. OPL171.028, Rev 5

K/A: 239001K127 [4.0/4.1]

239001K127 ..(KA's)

ANSWER: 004 (1.00)

d.

REFERENCE:

1. Facility Question Bank #10299
2. T.S. 3.5.E.3

K/A: 206000G005 [3.6/4.3]

206000G005 ..(KA's)

ANSWER: 005 (1.00)

c.

REFERENCE:

1. 171.60 Objective 3b, Rev.2, p. 14 of 29
2. O-GOI-100-3, Rev 1, Precaution 3.6.13

K/A: 215004G010 [3.2/3.4]

215004G010 ..(KA's)

ANSWER: 006 (1.00)

a.

REFERENCE:

1. Facility Question Bank #10300
2. T.S. 3.3/4.3 F

K/A: 201001G005 [3.3/3.9]

201001G005 ..(KA's)

ANSWER: 007 (1.00)

b.

REFERENCE:

1. Facility Question Bank #11327
2. OPL171.022 Obj 6,7

K/A: 215005K102 [3.7/3.7]

215005K102 ..(KA's)

ANSWER: 008 (1.00)

a.

REFERENCE:

1. Facility Question Bank #11665
2. OPL171.011, Objective 6.

K/A: 256000K403 [2.8/2.8]

256000K403 ..(KA's)

ANSWER: 009 (1.00)

c.

REFERENCE:

1. Facility Question Bank #11460 (Modified)
2. 2-OI-64, Precautions & Limitations, 3.10

K/A: 223001G002 [3.0/3.9]

223001G002 ..(KA's)

ANSWER: 010 (1.00)

d.

REFERENCE:

1. Facility Question Bank #10419
2. 2-AOI-100-2, Note, Page 14 of 55
3. OPL171-040 Objective 4

K/A: 295016K303 [3.5/3.7]

295016K303 ..(KA's)

ANSWER: 011 (1.00)

b.

REFERENCE:

1. Facility Question Bank # 11059
2. OPL171.006, Objective 14
3. 2-SI-4.3.B.1.b
4. T.S. 4.3.B
5. 2-OI-85, Precaution 3.2.5

K/A: 201003K402 [3.8/3.9]

201003K402 ..(KA's)

ANSWER: 012 (1.00)

c.

REFERENCE:

1. Facility Question Bank #11381 (modified)
2. OPL171.045 Objective 3

K/A: 209001K403 [3.7/3.6]

209001K403 ..(KA's)

ANSWER: 013 (1.00)

b.

REFERENCE:

1. Facility Question Bank #11610
2. OPL171.038 Objective 11

K/A: 264000K505 [3.4/3.4]

264000K505 ..(KA's)

ANSWER: 014 (1.00)

c.

REFERENCE:

1. Facility Question Bank #10430
2. OPL171.015 Objective 3

K/A: 241000K110 [3.2/3.3]

241000K110 ..(KA's)

ANSWER: 015 (1.00)

c.

REFERENCE:

1. Facility Question Bank #10137
2. FHR103.004 Objective 15

K/A: 234000G013 [3.1/3.3]

234000G013 ..(KA's)

ANSWER: 016 (1.00)

c.

REFERENCE:

1. Facility Question Bank #10586
2. T. S. 3.7.B.3
3. O-SI-4.7.B.3.c, Rev 4

K/A: 261000G005 [3.0/4.1]

261000G005 ..(KA's)

ANSWER: 017 (1.00)

c.

REFERENCE:

1. Facility Question Bank #11671
2. 2-OI-76, Rev 16, p.16 of 31
3. OPL171.016, Objective 12

K/A: 223001K109 [3.4/3.6]

223001K109 ..(KA's)

ANSWER: 018 (1.00)

d.

REFERENCE:

1. Facility Question Bank #8840 (modified)
2. OPL171.026 Objective 8c

K/A: 259002A401 [3.8/3.6]

259002A401 ..(KA's)

ANSWER: 019 (1.00)

a.

REFERENCE:

1. OPL171.029 Objective 11

K/A: 201002A402 [3.5/3.5]

201002A402 ..(KA's)

ANSWER: 020 (1.00)

b.

REFERENCE:

1. Facility Question Bank #11561
2. OPL171.102 Objective 1.e

K/A: 259001K603 [2.9/3.1]

259001K603 ..(KA's)

ANSWER: 021 (1.00)

d.

REFERENCE:

1. Facility Question Bank #8770 (modified)
2. OPL171.012 Objective 7a, p. 34 of 55.

K/A: 202002K108 [3.1/3.2]

202002K108 ..(KA's)

ANSWER: 022 (1.00)

c.

REFERENCE:

1. 2-OI-3, Rev 23, 3.6
2. Facility Question Bank #11255 (modified)

K/A: 259001G010 [3.2/3.3]

259001G010 ..(KA's)

ANSWER: 023 (1.00)

c.

REFERENCE:

1. Facility Question Bank #10526

K/A: 295026G007 [3.4/3.8]

295026G007 ..(KA's)

ANSWER: 024 (1.00)

a.

REFERENCE:

1. OPL171.030, Objective 3, p.11,12 of 47
2 Facility Question Bank #9400 (modified)

K/A: 245001A106 [3.3/3.2]

245000A106 ..(KA's)

ANSWER: 025 (1.00)

c.

REFERENCE:

1. Facility Question Bank #10725
2. OPL171.030 Objective 6

K/A: 271000K602 [3.0/3.2]

271000K602 ..(KA's)

ANSWER: 026 (1.00)

a.

REFERENCE:

1. Facility Question Bank #11559 (modified)
2. OPL171.074 Objective 2
3. 2-AOI-66-2 Rev 5, 4.1

K/A: 295017G010 [3.9/3.8]

295017G010 ..(KA's)

ANSWER: 027 (1.00)

b.

REFERENCE:

1. Facility Question Bank #10101
2. OPL171.017 Objective 5

K/A: 223002A301 [3.5/3.5]

223002A302 ..(KA's)

ANSWER: 028 (1.00)

c.

REFERENCE:

1. Facility Question Bank #10120
2. OPL171.003 Objective 13, p 23 of 71

K/A: 216000K501 [3.1/3.2]

216000K501 ..(KA's)

ANSWER: 029 (1.00)

b.

REFERENCE:

1. Facility Question Bank #11043
2. OPL171.007 Objective 12

K/A: 295005K302 [3.4/3.5]

295005K302 ..(KA's)

ANSWER: 030 (1.00)

c.

REFERENCE:

1. Facility Question Bank #9456
2. OPL171.040 Objective 1

K/A: 217000A403 [3.4/3.3]

217000A403 ..(KA's)

ANSWER: 031 (1.00)

b.

REFERENCE:

1. OPL171.007 Objective 4a p. 12, 13 of 94.

K/A: 202001A210 [3.5/3.9]

202001A210 ..(KA's)

ANSWER: 032 (1.00)

c.

REFERENCE:

1. Facility Question Bank #10323
2. OPL171.044 Objective 13, Rev 5, p.27 of 62

K/A: 203000K601 [3.6/3.7]

203000K601 ..(KA's)

ANSWER: 033 (1.00)

d.

REFERENCE:

1. O-OI-82, Rev 36, Precaution 3.9
2. O-OI-82, Rev 36, Caution, p.36 of 77

K/A: 264000G010 [3.2/3.6]

264000G010 ..(KA's)

ANSWER: 034 (1.00)

b.

REFERENCE:

1. Facility Question Bank #8627 (modified)
2. OPL171.25, Objective 9

K/A: 201004K404 [3.3/3.4]

201004K404 ..(KA's)

ANSWER: 035 (1.00)

c.

REFERENCE:

1. OPL171.013, p 24, Objective 8
2. Facility Question Bank #10216.(modified)

K/A: 204000K608 [3.5/3.5]

204000K608 ..(KA's)

ANSWER: 036 (1.00)

d.

REFERENCE:

1. Facility Question Bank #9026
2. OPL171.024, Rev 4 p.15 of 45, Objective 5a.

K/A: 201006K402 [3.5/3.5]

201006K402 ..(KA's)

ANSWER: 037 (1.00)

a.

REFERENCE:

1. OPL171.019 Rev 3 p. 23 of 41, Objective 5
2. Facility Question Bank #11318 (modified, concept only)

K/A: 215004K401 [3.7/3.7]

215004K401 ..(KA's)

ANSWER: 038 (1.00)

d.

REFERENCE:

1. T.S. Bases, p. 3.2/4.2-69

K/A: 272000G006 [2.6/3.7]

272000G006 ..(KA's)

ANSWER: 039 (1.00)

a.

REFERENCE:

1. T.S. Bases, p. 3.4/4.4-5

K/A: 211000G006 [3.1/4.2]

211000G006 ..(KA's)

ANSWER: 040 (1.00)

b.

REFERENCE:

1. Facility Question Bank #9008
2. OPL171.023 Objective 4, Rev 2, p. 25 of 44

K/A: 215001A201 [2.7/2.9]

215001A201 ..(KA's)

ANSWER: 041 (1.00)

b.

REFERENCE:

1. 2-OI-71, Rev 18, Precaution 3.4

K/A: 217000A301 [3.5/3.5]

217000A301 ..(KA's)

ANSWER: 042 (1.00)

b.

REFERENCE:

1. OPL171.043 Rev 3, p. 9 of 22, Objective 4

K/A: 218000K403 [3.8/4.0]

218000K403 ..(KA's)

ANSWER: 043 (1.00)

c.

REFERENCE:

1. OPL176.004
2 OPL171.029, Rev 4 Objective 1,8 p.19 of 63

K/A: 214000A202 [3.6/3.7]

214000A202 ..(KA's)

ANSWER: 044 (1.00)

c.

REFERENCE:

1. 2-OI-74, Rev 29, Precaution 3.7

K/A: 203000A302 [4.0/3.9]

203000A302 ..(KA's)

ANSWER: 045 (1.00)

c.

REFERENCE:

1. OPL 171.036, Rev 2 p. 18 of 37, Objective 12

K/A: 295003A101 [3.7/3.8]

295003A101 ..(KA's)

ANSWER: 046 (1.00)

a.

REFERENCE:

1. OPL171.036, Rev 2, p.17, 32 Objective 11

K/A: 262001K406 [3.6/3.9]

262001K406 ..(KA's)

ANSWER: 047 (1.00)

b.

REFERENCE:

1. 2-AOI-47-3, Rev 4, caution, p.2 of 4

K/A: 295002A105 [3.2/3.2]

295002A105 ..(KA's)

ANSWER: 048 (1.00)

d.

REFERENCE:

1. 2-OI-3, Rev 23, Precaution 3.1
2. 2-AOI-3-1, Rev 7, 3.1, 3.2

K/A: 295008K304 [3.3/3.5]

295008K304 ..(KA's)

ANSWER: 049 (1.00)

a.

REFERENCE:

1. OPL 171.044, Rev 5, p. 26 of 62

K/A: 226001A403 [3.5/3.4]

226001A403 ..(KA's)

ANSWER: 050 (1.00)

b.

REFERENCE:

1. 2-AOI-78-1, Rev 4.

K/A: 295023G006 [3.4/3.6]

295023G006 ..(KA's)

ANSWER: 051 (1.00)

d.

REFERENCE:

1. OPL171.028, Rev 5, p. 14 of 39, Objective 7

K/A: 295020K201 [3.6/3.7]

295020K201 ..(KA's)

ANSWER: 052 (1.00)

c.

REFERENCE:

1. EOI Program Manual Section, Rev 0, Section V-D, p. 115 of 242
   K/A: 295029K301 [3.5/3.9]

295029K301 ..(KA's)

ANSWER: 053 (1.00)

d.

REFERENCE:

1. OPL 171.005, Rev 4, p. 39 of 58, Objective 6
   K/A: 295015K201 [3.8/3.9]

295015K201 ..(KA's)

ANSWER: 054 (1.00)

c.

REFERENCE:

1. OPL171.009, Rev 2, p. 18 of 40, Objective 9 d
   K/A: 295019K205 [3.4/3.4]

295019K205 ..(KA's)

ANSWER: 055 (1.00)

c.

REFERENCE:

1. 2-AOI-74-1, Rev 7, Note, p.4 of 13.
   K/A: 295021K102 [3.3/3.4]

   295021K102 ..(KA's)

ANSWER: 056 (1.00)

b.

REFERENCE:

1. EOI Program Manual, Section V-D, Rev 0, p.75 of 242
   K/A: 295024K101 [4.1/4.2]y

   295024K101 ..(KA's)

ANSWER: 057 (1.00)

d.

REFERENCE:

1. T.S. Bases, p. 3.7/4.7-37
   K/A: 295013G004 [3.0/4.1]

   295013G004 ..(KA's)

ANSWER: 058 (1.00)

d.

REFERENCE:

1. OPL171.012, Rev 4, p. 30 of 55
   K/A: 295009A202 [3.6/3.7]

   295009A202 ..(KA's)

ANSWER: 059 (1.00)

d.

REFERENCE:

1. OPL171.028, Rev 5, Table 1
   K/A: 295006K201 [4.3/4.4]

   295006K201 ..(KA's)

ANSWER: 060 (1.00)

d.

REFERENCE:

1. OPL171.028, Rev 5, p. 16 of 39
   K/A: 295006A206 [3.5/3.8]

   295006A206 ..(KA's)

ANSWER: 061 (1.00)

a.

REFERENCE:

1. EOI program manual, Rev 0, Section V-C, p. 121 of 144

K/A: 295037K301 [4.1/4.2]

295037K301 ..(KA's)

ANSWER: 062 (1.00)

b.

REFERENCE:

1. EOI Program Manual, Rev 0, Section V-D, p. 111 of 242

K/A: 295029K207 [3.5/3.8]

295029K207 ..(KA's)

ANSWER: 063 (1.00)

b.

REFERENCE:

1. EOI flowcharts

K/A: 295034G011 [4.2/4.3]

295034G011 ..(KA's)

ANSWER: 064 (1.00)

b.

REFERENCE:

1. 2-AOI-68-1, Rev 11, Caution, p. 2 of 9

K/A: 295001A101 [3.5/3.6]

295001A201 ..(KA's)

ANSWER: 065 (1.00)

b.

REFERENCE:

1. EOI Program Manual, Rev 0, Section V-D, p. 105 of 242

K/A: 295030K101 [3.8/4.1]

295030K101 ..(KA's)

ANSWER: 066 (1.00)

c.

REFERENCE:

1. 2-AOI-100-1, Rev 16, Attachment 6

K/A: 295028G010 [3.9/3.6]

295028G010 ..(KA's)

ANSWER: 067 (1.00)

b.

REFERENCE:

1. EOI Program Manual, Rev 0, Section V-D, p. 13 of 242

K/A: 295024K301 [3.6/4.0]

295024K301 ..(KA's)

ANSWER: 068 (1.00)

a.

REFERENCE:

1. EOI flowcharts: EOI-1, C-1, C-2, C-3.

K/A: 295031A201 [4.6/4.6]

295031A201 ..(KA's)

ANSWER: 069 (1.00)

a.

REFERENCE:

1. 2-AOI-74-1, Rev 7, Section 2.2.1, p. 1 of 13

K/A: 295021A102 [3.5/3.5]

295021A102 ..(KA's)

ANSWER: 070 (1.00)

c.

REFERENCE:

1. 2-AOI-100-2, Rev 11, Note, p. 2 of 55

K/A: 295016A204 [3.9/4.1]

295016A204 ..(KA's)

ANSWER: 071 (1.00)

b.

REFERENCE:

1. EOI Program Manual, Rev. 0, Section V-C, p. 33 of 144

K/A: 295025A103 [4.4/4.4]

295025A103 ..(KA's)

ANSWER: 072 (1.00)

a.

REFERENCE:

1. T.S.3.6.B Basis

K/A: 294001A114 [2.9/3.4]

294001A114 ..(KA's)

ANSWER: 073 (1.00)

b.

REFERENCE:

1. BNF-EPIP-3 PY
   K/A: 294001A116 [2.9/4.2]

294001A116 ..(KA's)

ANSWER: 074 (1.00)

c.

REFERENCE:

1. SSP 5.1, page 10
   K/A: 294001K103 [3.8/3.8]

294001K103 ..(KA's)

ANSWER: 075 (1.00)

d.

REFERENCE:

1. SSP 12.1, page 61
   K/A: 294001A106 [3.4/3.6]

294001A106 ..(KA's)

ANSWER: 076 (1.00)

b.

REFERENCE:

1. SSP 12.1, page 25

K/A: 294001A102 [4.2/4.2]

294001A102 ..(KA's)

ANSWER: 077 (1.00)

d.

REFERENCE:

1. SSP 12.6, page 3

K/A: 294001K101 [3.7/3.7]

294001K101 ..(KA's)

ANSWER: 078 (1.00)

b.

REFERENCE:

1. 10 CFR 26, "Fitness for Duty," 26.20(a)(1)
2. SSP 1.6, page 23

K/A: 294001A103 [2.7/3.7]

294001A103 ..(KA's)

ANSWER: 079 (1.00)

b.

REFERENCE:

1. OSIL-16, page 1

K/A: 294001K103 [3.8/3.8]

294001K103 ..(KA's)

ANSWER: 080 (1.00)

c.

REFERENCE:

1. 10 CFR 20

K/A: 294001K103 [3.3/3.8]

294001K103 ..(KA's)

ANSWER: 081 (1.00)

a.

REFERENCE:

1. OSIL-16, page 1

K/A: 294001K103 [3.8/3.8]

294001K103 ..(KA's)

ANSWER: 082 (1.00)

b.

REFERENCE:

1. T.S. 6.2.2.g

K/A: 294001K116 [3.5/3.8]

294001K116 ..(KA's)

ANSWER: 083 (1.00)

a.

REFERENCE:

1. OPL171.031 Rev 3, p. 14 of 34
2. 2-SSI-002, p. 2 of 80

K/A: 294001A110 [3.6/4.2]

294001A110 ..(KA's)

ANSWER: 084 (1.00)

b.

REFERENCE:

1. T.S. 1.LL, page 1.0-11

K/A: 294001A102 [4.2/4.2]

294001A102 ..(KA's)

ANSWER: 085 (1.00)

d.

REFERENCE:

1. BFN-EPIP-1, Attachment 1, page 4 (SS4)
   K/A: 294001A116 [2.9/4.7]

294001A116 ..(KA's)

ANSWER: 086 (1.00)

c.

REFERENCE:

1. BFN-EPIP-1, page 2
   K/A: 294001A116 [2.9/4.7]

294001A116 ..(KA's)

ANSWER: 087 (1.00)

a.

REFERENCE:

1. EOI Program Manual, Section V-D, Rev 0, p.87 of 242
   K/A: 295026K304 [3.7/4.1]

295026K304 ..(KA's)

ANSWER: 088 (1.00)

a.

REFERENCE:

1. 2-AOI-85-6, Rev.8 p.2 of 4
2. OPL171.074 Rev.1, Objective 2

K/A: 295014A104 [3.2/3.3]

295014A104 ..(KA's)

ANSWER: 089 (1.00)

b.

REFERENCE:

1. OPL 171.009, Rev 2, p. 12 of 40, Objective 2

K/A: 295007A104 [3.9/4.1]

295007A104 ..(KA's)

ANSWER: 090 (1.00)

a.

REFERENCE:

1. 2-AOI-70-1, Rev 8, p. 2 of 5, 4.1

K/A: 295018G010 [3.4/3.3]

295018G010 ..(KA's)

ANSWER: 091 (1.00)

b.

REFERENCE:

1. OPL171.009 Rev.2, p 21 of 40
   K/A: 295032K303 [3.8/3.9]

   295032K303. ..(KA's)

ANSWER: 092 (1.00)

c.

REFERENCE:

1. OPL171.009, Rev 2, p. 12 of 40, Objective 5.
   K/A: 239002A201 [3.0/3.3]

   239002A201 ..(KA's)

ANSWER: 093 (1.00)

b.

REFERENCE:

1. OPL171.202, Rev 0, Objective 14
   K/A: 295037G007 [3.7/3.9]

   295037G007 ..(KA's)

ANSWER: 094 (1.00)

d.

REFERENCE:

1. EOI Program Manual, Rev 0, Section V-I, p. 10 of 18

K/A: 295031K202 [3.8/3.9]

194001K103 295031K202 ..(KA's)

ANSWER: 095 (1.00)

b.

REFERENCE:

1. O-OI-57D, Rev 15.

K/A: 295004G007 [3.0/3.5]

194001K103 295004G007 ..(KA's)

ANSWER: 096 (1.00)

b.

REFERENCE:

1. Facility Question #11279

K/A: 295010G012 [3.8/4.4]

194001K103 295010G012 ..(KA's)

ANSWER: 097 (1.00)

c.

REFERENCE:

1. 1-AOI-57-5A, Rev 16.

K/A: 295003G007 [3.2/3.6]

295003G007 ..(KA's)

ANSWER: 098 (1.00)

a.

REFERENCE:

1. OPL171.074 Objective 2.

K/A: 295006G010 [4.1/4.2]

295006G010 ..(KA's)

ANSWER: 099 (1.00)

c.

REFERENCE:

1. SSP-12.56, 12.1

K/A: 294001K102 [3.9/4.2]

294001K102 ..(KA's)

ANSWER: 100 (1.00)

b.

REFERENCE:

1. Operator Cautions, Rev 0, Section V-B, p.9 of 16

K/A: 295028K101 [3.5/3.7]

295028K101 194001K104 ..(KA's)

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

A N S W E R K E Y

MULTIPLE CHOICE

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

ANSWER KEY

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

A N S W E R K E Y

092 c

093 b

094 d

095 b

096 b

097 c

098 a

099 c

100 b

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

S R O E x a m B W R R e a c t o r

O r g a n i z e d b y Q u e s t i o n N u m b e r

QUESTION	VALUE	REFERENCE
001	1.00	9000001
002	1.00	9000002
003	1.00	9000003
004	1.00	9000004
005	1.00	9000006
006	1.00	9000008
007	1.00	9000009
008	1.00	9000010
009	1.00	9000011
010	1.00	9000012
011	1.00	9000013
012	1.00	9000014
013	1.00	9000015
014	1.00	9000016
015	1.00	9000017
016	1.00	9000019
017	1.00	9000020
018	1.00	9000021
019	1.00	9000022
020	1.00	9000024
021	1.00	9000025
022	1.00	9000026
023	1.00	9000027
024	1.00	9000030
025	1.00	9000031
026	1.00	9000032
027	1.00	9000033
028	1.00	9000034
029	1.00	9000035
030	1.00	9000036
031	1.00	9000037
032	1.00	9000038
033	1.00	9000039
034	1.00	9000042
035	1.00	9000043
036	1.00	9000045
037	1.00	9000046
038	1.00	9000047
039	1.00	9000048
040	1.00	9000049
041	1.00	9000050
042	1.00	9000051
043	1.00	9000052
044	1.00	9000053
045	1.00	9000054
046	1.00	9000055
047	1.00	9000057
048	1.00	9000059

SRO Exam BWR Reactor

Organized by Question Number

QUESTION	VALUE	REFERENCE
049	1.00	9000060
050	1.00	9000061
051	1.00	9000062
052	1.00	9000063
053	1.00	9000064
054	1.00	9000065
055	1.00	9000066
056	1.00	9000067
057	1.00	9000069
058	1.00	9000071
059	1.00	9000072
060	1.00	9000073
061	1.00	9000074
062	1.00	9000075
063	1.00	9000078
064	1.00	9000079
065	1.00	9000080
066	1.00	9000081
067	1.00	9000082
068	1.00	9000086
069	1.00	9000087
070	1.00	9000088
071	1.00	9000089
072	1.00	9000090
073	1.00	9000091
074	1.00	9000092
075	1.00	9000093
076	1.00	9000094
077	1.00	9000095
078	1.00	9000096
079	1.00	9000097
080	1.00	9000098
081	1.00	9000099
082	1.00	9000100
083	1.00	9000103
084	1.00	9000104
085	1.00	9000105
086	1.00	9000106
087	1.00	9000107
088	1.00	9000108
089	1.00	9000109
090	1.00	9000110
091	1.00	9000111
092	1.00	9000112
093	1.00	9000115
094	1.00	9000116
095	1.00	9000117

S R O E x a m B W R R e a c t o r

O r g a n i z e d b y Q u e s t i o n N u m b e r

QUESTION	VALUE	REFERENCE
096	1.00	9000119
097	1.00	9000121
098	1.00	9000123
099	1.00	9000124
100	1.00	9000125
	100.00	
	100.00	

S R O E x a m B W R R e a c t o r

O r g a n i z e d b y K A G r o u p

PLANT WIDE GENERICS

QUESTION	VALUE	KA
084	1.00	294001A102
076	1.00	294001A102
078	1.00	294001A103
075	1.00	294001A106
083	1.00	294001A110
072	1.00	294001A114
085	1.00	294001A116
073	1.00	294001A116
086	1.00	294001A116
077	1.00	294001K101
099	1.00	294001K102
079	1.00	294001K103
074	1.00	294001K103
080	1.00	294001K103
081	1.00	294001K103
082	1.00	294001K116

PWG Total	16.00	

PLANT SYSTEMS

Group I

QUESTION	VALUE	KA
021	1.00	202002K108
044	1.00	203000A302
032	1.00	203000K601
004	1.00	206000G005
012	1.00	209001K403
039	1.00	211000G006
005	1.00	215004G010
037	1.00	215004K401
007	1.00	215005K102
028	1.00	216000K501
041	1.00	217000A301
030	1.00	217000A403
042	1.00	218000K403
009	1.00	223001G002
017	1.00	223001K109
027	1.00	223002A302
049	1.00	226001A403
092	1.00	239002A201
014	1.00	241000K110
018	1.00	259002A401
016	1.00	261000G005

S R O E x a m B W R R e a c t o r

O r g a n i z e d b y K A G r o u p

PLANT SYSTEMS

Group I

QUESTION	VALUE	KA
046	1.00	262001K406
033	1.00	264000G010
013	1.00	264000K505
PS-I Total	24.00	

Group II

QUESTION	VALUE	KA
006	1.00	201001G005
019	1.00	201002A402
034	1.00	201004K404
036	1.00	201006K402
031	1.00	202001A210
035	1.00	204000K608
043	1.00	214000A202
015	1.00	234000G013
024	1.00	2[illegible]000A106
022	1.00	259001G010
020	1.00	259001K603
025	1.00	271000K602
038	1.00	272000G006
PS-II Total	13.00	

Group III

QUESTION	VALUE	KA
011	1.00	201003K402
040	1.00	215001A201
003	1.00	239001K127
008	1.00	256000K403
PS-III Total	4.00	
PS Total	41.00	

S R O E x a m B W R R e a c t o r

O r g a n i z e d b y K A G r o u p

EMERGENCY PLANT EVOLUTIONS

Group I

QUESTION	VALUE	KA
045	1.00	295003A101
097	1.00	295003G007
060	1.00	295006A206
098	1.00	295006G010
059	1.00	295006K201
089	1.00	295007A104
058	1.00	295009A202
057	1.00	295013G004
088	1.00	295014A104
053	1.00	295015K201
070	1.00	295016A204
010	1.00	295016K303
026	1.00	295017G010
050	1.00	295023G006
056	1.00	295024K101
067	1.00	295024K301
071	1.00	295025A103
001	1.00	295025G003
023	1.00	295026G007
087	1.00	295026K304
065	1.00	295030K101
068	1.00	295031A201
093	1.00	295037G007
061	1.00	295037K301

EPE-I Total	24.00	

Group II

QUESTION	VALUE	KA
064	1.00	295001A201
047	1.00	295002A105
029	1.00	295005K302
048	1.00	295008K304
090	1.00	295018G010
054	1.00	295019K205
051	1.00	295020K201
069	1.00	295021A102
055	1.00	295021K102
002	1.00	295022G010
066	1.00	295028G010
100	1.00	295028K101
062	1.00	295029K207

S R O E x a m B W R R e a c t o r

O r g a n i z e d b y K A G r o u p

EMERGENCY PLANT EVOLUTIONS

Group II

QUESTION	VALUE	KA
052	1.00	295029K301
091	1.00	295032K303
063	1.00	295034G011
EPE-II Total	16.00	
EPE Total	40.00	
Test Total	100.00	