

FERMI 2 NUCLEAR POWER STATION

INITIAL EXAMINATION

03/2003

Question # 001
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 295019A104

QUESTION

One of the station air receivers has ruptured. Station air header pressure is 70 psig. How does the air system respond, assuming no operator action?

- a. P50-F402 Station Air to NIAS valve has CLOSED, P50-F403 NIAS Crosstie to IAS valve has OPENED.
- b. P50-F403 Div 2 NIAS Crosstie to IAS valve has OPENED, P50-F440 Div 1 Control Air Isolation valve has CLOSED.
- c. Div 1 and Div 2 Control Air Compressors are RUNNING, P50-F402 Station Air to NIAS has CLOSED.
- d. P50-F473 Station Air to IAS Isolation Valve has CLOSED, Div 1 and Div 2 Control Air Compressors are RUNNING.

ANSWER

c.

REFERENCE

ST-OP-315-0071-001

HIGHER

NEW

RO Question 22

Question # 002
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 206000K106

QUESTION

When operating the High Pressure Coolant Injection System it is required to record the suppression pool temperature at 5 minute intervals. From the statements below, select the reason for this requirement.

- a. Ensure the NPSH limits for the HPCI pump are not exceeded.
- b. Ensure the vortex limits for the HPCI pump are not exceeded.
- c. Ensure sufficient suppression capability exists to prevent exceeding design pressure in the Primary Containment during LOCA.
- d. Ensures local heating of the suppression pool at the turbine exhaust will not increase the turbine exhaust pressure and result in a turbine trip on high exhaust pressure.

ANSWER

c.

REFERENCE

ST-OP-315-0039-001

23.202

MEMORY

NEW

RO Question 20

Question # 003
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 295035A201

QUESTION

The following conditions exist:

Reactor Power.....96% and stable.
Control Room Pressure.....+ 0.175" H2O and stable.
Reactor Building Pressure.....+0.10" H2O and stable.
Turbine Building Pressure.....-0.10" H2O and stable.

Which one of the following actions is required?

- a. Enter 20.413.01, Control Center HVAC System Failure.
- b. Enter 29.100.01, Secondary Containment and Radioactive Release.
- c. Enter ARP 8D13, Turbine BLDG Press High.
- d. Enter ARP 8D9, MCR Building Pressure High/Low.

ANSWER

b.

REFERENCE

29.100.01 SH 5

ST-OP-3005-001

HIGHER

BANK

RO Question 35

Question # 004
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 201001K605

QUESTION

The plant was operating at 100% power when a malfunction caused a lockout on bus 65E. Attempts to restore the bus have been unsuccessful. The following conditions exist:

- Control Rod Drive (CRD) Pump A - Tagged for maintenance
- 3D10, CRD ACCUMULATOR TROUBLE for Control Rod 34-15 (Position 12)
- No other accumulators are in alarm.

The correct action for these conditions is:

- a. Close CRD Charging Water Header Isolation Valve to prevent depressurizing the CRD accumulators.
- b. Start CRD pump B to restore system pressure.
- c. Place Reactor Mode Switch to SHUTDOWN to ensure reactor pressure is adequate to fully insert the control rods.
- d. Restore recirculation seal purge to prevent damage to the Recirculation Pumps.

ANSWER

a.

REFERENCE

20.106.01

HIGHER

NEW

RO Question 37

Question # 005
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 201002A101

QUESTION

Fill in the blanks

The Rod Movement Control Switch is taken to "IN." The insert stabilizing valve is __ (a) __, and control rod drive insertion flow is approximately __ (b) __ gpm.

The Rod Movement Control Switch is taken to "OUT NOTCH." The withdraw stabilizing valve is __ (c) __, and control rod drive withdraw flow is approximately __ (d) __ gpm.

a. (a) closed (b) 2 (c) closed (d) 4

b. (a) closed (b) 4 (c) closed (d) 2

c. (a) open (b) 2 (c) open (d) 4

d. (a) open (b) 4 (c) open (d) 2

ANSWER

b.

REFERENCE

ST-OP-315-0010-001

MEMORY

NEW

RO Question 38

Question # 006
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 203000K201

QUESTION

Following a complete loss of off-site power, RHR pump B will become a load on which one of the following?

- a. 11EA
- b. 12EB
- c. 13EC
- d. 14ED

ANSWER

c.

REFERENCE

ST-OP-315-0141

MEMORY

NEW

RO Question 40

Question # 007
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 211000K101

QUESTION

The Core Spray System pipe break detection uses what system to provide above core plate pressure indication?

- a. Recirculation System Jet Pump Riser pressure.
- b. CRD Hydraulic System
- c. Standby Liquid Control System Injection Piping
- d. Core Level Reference Leg tap

ANSWER

c.

REFERENCE

ST-OP-315-0040-001

MEMORY

BANK

RO Question 44

Question # 008
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 212000A305

QUESTION

Following a manual reactor scram the scram is reset. A few minutes later another automatic scram signal was received. All RPV and Containment parameters remained constant prior to the second scram. The only actions taken by the P603 operator were to place the Mode Switch in Shutdown and begin driving in SRM and IRM detectors. What was the cause of the scram and why did it occur?

- a. Alarm 3D51 SRM PERIOD SHORT was received due to driving in SRM and IRM detectors and an automatic scram resulted.
- b. Alarm 3D86 MN STM LINE ISO VALVE CLOSURE CHANNEL TRIP was received due to the failure to adjust gland seal pressure resulting in an MSIV isolation on loss of vacuum and the subsequent scram.
- c. Alarm 3D94 DISCH WATER VOL HI LEVEL CHANNEL TRIP was received and the reactor scram occurred because the SDV High Level Bypass Switch was not placed in bypass and the SDV filled faster than it drained when the first scram was reset.
- d. Alarm 3D97 APRM NEUTRON FLUX UPSCALE TRIP was received due to the production of delayed neutrons from decay heat and delayed neutron precursors.

ANSWER

c.

REFERENCE

ST-OP-315-0027-001

Fermi 2 OPEX

HIGHER

BANK

RO Question 46

Question # 009
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 216000K312

QUESTION

The plant is operating at 100% power with the Feedwater Control System in 3 element control. Which one of the following failures will force the Feedwater Control System (FWCS) to Single Element Control?

- a. Failure of a RFP suction flow signal.
- b. Failure of the lead selected level signal.
- c. Failure of two steam flow signals.
- d. Failure of two level signals.

ANSWER

c.

REFERENCE

ST-OP-315-0046

MEMORY

NEW

RO Question 50

Question # 010
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 259001K406

QUESTION

Normal RFPT bearing and control oil pressures are being maintained with the Reactor Feed Pump operating. Choose the correct sequence of events in response to a lowering of Bearing and Control Oil Pressure.

- a. Standby Oil Pump auto starts, RFPT trips on low oil pressure, DC Emergency Oil Pump auto starts.
- b. Standby Oil Pump auto starts, DC Emergency Oil Pump auto starts, RFPT trips on low oil pressure.
- c. RFPT trips on low oil pressure, DC Emergency Oil Pump auto starts, Standby Oil Pump auto starts.
- d. RFPT trips on low oil pressure, Standby Oil Pump auto starts, DC Emergency Oil Pump auto starts.

ANSWER

b.

REFERENCE

ST-OP-315-007-001

MEMORY

NEW

RO Question 60

Question # 011
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 201003A202

QUESTION

During a plant startup, Control Rod 26-35 was withdrawn to position 48. During the coupling check:

- Position indication was lost
- 3D76 CONTROL ROD OVERTRAVEL alarmed
- 3D80 CONTROL ROD DRIFT alarmed

This is an indication that Control Rod 26-35 _____. The Control Room Staff should now enter and execute the following procedure:

- a. is uncoupled
AOP 20.106.1 CRD HYDRAULIC SYSTEM FAILURE.
- b. is stuck
SOP 23.106 CONTROL ROD DRIVE HYDRAULIC SYSTEM, difficult rod movement section.
- c. is uncoupled
AOP 20.106.02 UNCOUPLED/DROPPED CONTROL ROD(FROM REACTOR CORE)
- d. is stuck
AOP 20.106.05 STUCK CONTROL ROD

ANSWER

c.

REFERENCE

20.106.02, 20.106.07, 3D76, 3D80, 23.623

HIGHER

BANK

RO Question 65

Question # 012
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 201006A401

QUESTION

What action is required to be performed when the RWM is placed in Bypass during RWM surveillance testing?

- a. Immediately insert all insertable control rods.
- b. Suspend control rod movement except by scram.
- c. Rod movement must be verified by qualified member of the technical staff present at the H11-P603.
- d. The test may be performed with the permission of Reactor Engineer and CRNSO.

ANSWER

c.

REFERENCE

ST-OP-315-0013-001

Technical Specification 3.3.2.1

24.608

MEMORY

NEW

RO Question 66

Question # 013
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 205000K202

QUESTION

When the Shutdown Cooling Mode is shutdown, E1150-F008, RHR SDC Outboard Suction Isolation Valve is closed and deenergized.

Where is this valve is powered from?

- a. 72E
- b. 2PA2
- c. 72F
- d. 2PB

ANSWER

d.

REFERENCE

ST-OP-315-0041

MEMORY

BANK

RO Question 69

Question # 014
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 263000K102

QUESTION

When a 24V DC Battery Charger is placed in "Float", which one of the following statements describes the charger's response to placing a load on the DC Bus?

- a. Maintains battery voltage and supplies the load.
- b. Shifts to "Equalize" to raise bus voltage to match battery voltage.
- c. Supplies a small fraction of the load, and recharges the battery when the load is secured.
- d. Allows the battery to assume the entire load and recharges the battery when the load is secured.

ANSWER

a.

REFERENCE

23.310

MEMORY

MODIFIED

RO Question 78

Question # 015
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 290003K502

QUESTION

When the CCHVAC System is in Normal mode, how is differential pressure in the Control Center Envelope maintained?

- a. Modulating vanes on the CCHVAC Exhaust fans.
- b. The normal Intake Pressure Control damper modulates to control pressure.
- c. CCHVAC Supply fans have a larger capacity than the CCHVAC Exhaust fans.
- d. The normal Exhaust Pressure Control damper modulates to control pressure.

ANSWER

d.

REFERENCE

ST-OP-315-0073-001

HIGHER

NEW

RO Question 81

Question # 016
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 290002K403

QUESTION

What is the function of the flow orifices in the fuel support pieces?

- a. Provides a pressure drop at the fuel assembly inlets, calculated to prevent two-phase flow from occurring within the bundles.
- b. Provides a flow restriction across the high power central fuel assemblies to ensure that the fuel assemblies at the edges of the core receive adequate flow.
- c. Provides a pressure drop across the core at the orifices, to minimize the effects of two-phase flow in central bundles redirecting flow to the peripheral bundles.
- d. Provides a pressure breakdown effect in the fuel assemblies to assure equal flow through every bundle, regardless of its location in the core.

ANSWER

c.

REFERENCE

ST-OP-315-0002-001

MEMORY

BANK

RO Question 87

Question # 017
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 2.1.22

QUESTION

The reactor mode switch is in the shutdown position with average reactor coolant temperature at 95 deg F and the reactor vessel head is removed. The core is fully loaded and vessel re-assembly is in progress.

Per Technical Specifications, in which MODE is the unit considered to be operating?

- a. MODE 2
- b. MODE 4
- c. MODE 5
- d. No specified MODE.

ANSWER

c.

REFERENCE

TS Table 1.1-1

MEMORY

NEW

RO Question 89

Question # 018
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 2.2.22

QUESTION

The plant is operating at 50% power. What is the Maximum amount of total leakage allowed from the reactor coolant system?

- a. 2 gpm
- b. 5 gpm
- c. 25 gpm
- d. 50 gpm

ANSWER

c.

REFERENCE

Tech Specs section 3.4.4

MEMORY

BANK

RO Question 91

Question # 019
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 2.3.1

QUESTION

Which one of the following describes the federal limits and the Fermi 2 administrative dose guidelines for an embryo/fetus?

- a. 5000 mrem spread over the term of the pregnancy.
- b. 1500 mrem spread over the term of the pregnancy.
- c. 1000 mrem spread over the term of the pregnancy.
- d. 500 mrem spread over the term of the pregnancy.

ANSWER

d.

REFERENCE

ST-GN-508

MEMORY

BANK

RO Question 94

Question # 020
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 2.3.2

QUESTION

An operator is conducting a normal day to day rounds inspection of equipment which is located in a high radiation area. In accordance with MOP04, Shift Operations, and MRP05 , ALARA/RWPs, the operator must:

- a. preplan the inspection during turnover.
- b. conduct the inspection from the barrier to the area.
- c. obtain Radiation Protection supervisor approval.
- d. enter the area with a hand held monitoring device.

ANSWER

b.

REFERENCE

MRP05, ALARA/RWPS

MOP04

MEMORY

BANK

RO Question 95

Question # 021
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 2.3.4

QUESTION

Which one of the following is the once in a lifetime whole body exposure limit for saving a life?

- a. 35 REM
- b. 25 REM
- c. 15 REM
- d. 5 REM

ANSWER

b.

REFERENCE

EP-201-03

LP-ER-838-0001

MEMORY

BANK

RO Question 96

Question # 022
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 2.4.2

QUESTION

Select from below the answer which gives the value and the correct reason for maintaining RPV level above the low end of the RPV level band from 29.100.01 Sh 1, RPV Control, step L-2.

- a. Maintaining RPV water level above 173 inches (the low end of the control band) permits resetting of a reactor scram.
- b. Maintaining RPV water level above 173 inches (the low end of the control band) preserves the availability of steam driven equipment for use in providing makeup to the RPV.
- c. Maintaining RPV water level above 110 inches (the low end of the control band) preserves flexibility while maintaining adequate core cooling.
- d. Maintaining RPV water level above 110 inches (the low end of the control band) permits resetting of a turbine trip.

ANSWER

a.

REFERENCE

ST-OP-802-3003-001

EPG Bases

HIGHER

NEW

RO Question 97

Question # 023
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 206000A217

QUESTION

A plant startup was in progress. The second Reactor Feed Pump was started and placed in service. A while later at 70% Reactor Power a Reactor Feed Pump tripped off. The following conditions exist:

Reactor Power is 70%
Standby Feedwater is injecting at 1200 gpm
No runbacks were received on the Reactor Recirc Pumps

In the course of investigating the trip of the Reactor Feed Pump an inadvertent start and injection of HPCI occurs. What is the response of the Operating Crew?

- a. Verify or place the Recirc A & B Flow Limiter 2/3 Defeat Switch in NORMAL.
- b. Maintain Standby Feed Water flow at 1200 gpm - no other action required.
- c. Insert the CRAM array to less than 65% power.
- d. Place the reactor mode switch in SHUTDOWN.

ANSWER

d.

REFERENCE

20.107.01

20.107.01 Bases

MEMORY

BANK

RO Question 98

Question # 024
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 2.4.16

QUESTION

While reviewing the EOP flowcharts you come across a symbol that is a diamond shape with an arrow exiting the right side and another arrow out the bottom of the diamond shape. What does this symbol indicate?

- a. Concurrent Execution
- b. Decision Step
- c. Hold/Wait Point
- d. Instructional Step

ANSWER

b.

REFERENCE

SST-OP-802-3001-001

MEMORY

BANK

RO Question 99

Question # 025
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level R
K/A 2.4.46 212000

QUESTION

The plant is operating at 100% power steady state conditions when the following alarms are received:

- 3D73 Trip Actuators A1/A2 Tripped
- 3D75 Reactor Vessel High Press Channel Trip
- 3D79 Reac Vessel Water Level L3 Channel Trip
- 3D85 Primary Containment High Press Channel Trip.

The plant remained on line. Identify the cause of these alarms.

- a. A failure of the Narrow Range RPV Water Level Instrument reference line N011A.
- b. An MSIV isolation.
- c. A trip of RPS MG set A.
- d. A trip of Alternate Transformer B.

ANSWER

c.

REFERENCE

ST-OP-315-0027-001

23.316

9D70

HIGHER

NEW

RO Question 100

Question # 026
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295003K104

QUESTION

The plant was operating at 100% when a loss of offsite power occurred. The following conditions exist:

- Drywell Pressure is 1.89#
- EDG 12 has failed to start.

What ECCS equipment will be unavailable?

- a. Core Spray Pump A and RHR Pump A
- b. Core Spray Pump B and RHR Pump B
- c. Core Spray Pump C and RHR Pump C
- d. Core Spray Pump D and RHR Pump D

ANSWER

c.

REFERENCE

ST-OP-315-0065-01

MEMORY

BANK

RO Question 16 / SRO Question 1

Question # 027
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295005K101

QUESTION

The plant is at 100% power when the following conditions occur:

- Main Turbine trips.
- Bypass Valves open
- ARI air supply valves are open
- ARI vent valves are closed

The reactor will scram in anticipation of the rapid:

- a. INCREASE in thermal power
- b. INCREASE in reactor water level
- c. DECREASE in reactor water level
- d. DECREASE in main steam line pressure

ANSWER

a.

REFERENCE

ST-OP-315-0028-001

ST-OP-315-0027-001

HIGHER

BANK

RO Question 1 / SRO Question 30

Question # 028
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295006A202

QUESTION

Which of the following would indicate that all control rods are fully inserted?

- a. Accumulator low pressure alarm received on all control rods.
- b. Full In lights illuminated on all control rods.
- c. One-rod-out permissive light out when Mode Switch in shutdown.
- d. OD-7 option 2 print out shows all control rods at position 02 or lower.

ANSWER

b.

REFERENCE

ST-OP-802-3003-001

20.000.21 Bases

MEMORY

BANK

RO Question 2 / SRO Question 3

Question # 029
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295007K304

QUESTION

The plant was operating at 100 % power when a spurious MSIV closure occurred. The following conditions exist:

- All rods are in
- RPV pressure is 1000 psig, being controlled with Low Low Set (LLS) SRVs
- RPV level is being maintained between 173 to 214 inches.

Which of the following describes the reason for controlling RPV pressure with LLS?

- a. Prevent exceeding RCS Safety Limits.
- b. Prevent excessive SRV cycling.
- c. Allow rapid depressurization of the RCS in case of a LOCA.
- d. Prevent exceeding RCS design limits.

ANSWER

b.

REFERENCE

Technical Specification Basis 3.6.1.6

ST-OP-315-0005

MEMORY

NEW

RO Question 3 / SRO Question 4

Question # 030
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295009A202

QUESTION

The plant was operating at 100% when a scram signal was received and the reactor failed to scram. The following conditions exist:

- Reactor Power - 20%
- RPV pressure - 945 psig
- SLC pump 'A' running

After successful completion of 'Terminate and Prevent' for level, what is the best indication that RPV level will stabilize?

- a. Reactor power and pressure
- b. Steam flow and feed flow
- c. Reactor feed pump speed
- d. SULCV position

ANSWER

b.

REFERENCE

29.ESP.01, Enclosure A

HIGHER

NEW

RO Question 4 / SRO Question 5

Question # 031
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295010K302

QUESTION

A small break LOCA has occurred, resulting in a reactor scram and numerous system isolations and actuations. Drywell temperature is 148 deg F and drywell pressure is 1.87 psig. The EECW System has automatically initiated. Prior to restoring drywell cooling, what must be done ?

- a. Depress the Reset Pushbuttons for the EECW System IAW 20.127.01.
- b. Restart the RBCCW Pumps to reset the logic IAW 20.127.01.
- c. Turn the EECW override switch to OVERRIDE IAW 29.ESP.23.
- d. Leads must be lifted to defeat the closure signal IAW 29.ESP.23.

ANSWER

d.

REFERENCE

29.esp.08

29.esp.23

HIGHER

BANK

RO Question 5 / SRO Question 6

Question # 032
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295014A202

QUESTION

The plant is performing a reactor startup from cold shutdown with the reactor at the point of adding heat. The Control Room Supervisor instructed the operators to stop the startup for a short duration to perform a surveillance. During this time power dropped on the IRMs. The P603 operator, noting that reactor power had dropped, selected the next control rod and withdrew the control rod from 20 to 48 with continuous motion as allowed by the Rod Pull sheets. This resulted in a 20 second period. The following are the plant parameters at present:

- Reactor Pressure 80 psig
- Reactor Level 197 inches

Which one of the following describes the immediate action the P603 operator must take?

- a. Range all IRMs to range 10 and monitor overlap data between IRMs and APRMs.
- b. Perform the coupling check for the control rod, and inform the Station Nuclear Engineer of the power rise.
- c. Insert the control rod to a position which causes reactor period to be greater than 50 seconds.
- d. Withdraw the next in sequence control rod to maintain the power rise to reach the point of adding heat.

ANSWER

c.

REFERENCE

ST-OP-802-1003

23.623

22.000.02

HIGHER

BANK

RO Question 6 / SRO Question 10

Question # 033
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295015K301

QUESTION

A SCRAM signal has been received, but not all rods have inserted. Reactor power is 15%. The CRS has ordered the P603 operator to insert control rods per 29.ESP.03, Alternate Control Rod Insertion Methods. Which of the methods in 29.ESP.03 require the operator to bypass the Rod Worth Minimizer (RWM) and why must it be bypassed?

- a. Deenergize Scram Solenoids, because the Rod positions may not match the RWM sequence.
- b. Correct Answer Manual Control Rod Insertion, because Rod positions may not match the RWM sequence.
- c. Manual Control Rod Insertion, because Rod position indication from the Rod Position Information System is lost during a scram.
- d. Deenergize Scram Solenoids, because Rod position indication from the Rod Position Information System is lost during a scram.

ANSWER

b.

REFERENCE

Monticello 2002 NRC Exam Modified

29.ESP.03

MEMORY

MODIFIED

RO Question 7 / SRO Question 12

Question # 034
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295016K201

QUESTION

Following a Control Room Evacuation the plant is being controlled from the Remote Shutdown System at Panel H21-P100, per Abnormal Operating Procedure (AOP) 20.000.19, SHUTDOWN FROM OUTSIDE THE CONTROL ROOM. How are RPV water level and pressure maintained from the Remote Shutdown Panel?

- a. RPV level is maintained using SBFW pumps and Low Low SRV's A & G automatically maintain pressure.
- b. RPV level is maintained using RCIC and CRD and pressure is maintained using SRV's A & B.
- c. RPV Level is maintained using HPCI and the Turbine Bypass Valves are used to maintain pressure.
- d. RPV level is maintained using SBFW and RCIC and pressure is maintained using the Main Turbine Bypass Valves.

ANSWER

b.

REFERENCE

20.000.19, SHUTDOWN FROM OUTSIDE THE CONTROL ROOM
ST-OP-315-0044-001

MEMORY

NEW

RO Question 21 / SRO Question 13

Question # 035
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 2.2.30

QUESTION

Refueling is in progress. As a once burned fuel bundle is being placed in the core SRM counts on one of the 2 operable SRM detectors begin increasing with a steady positive period. In accordance with procedure MOP13, Refueling Operations, you IMMEDIATELY:

- a. place the mode switch in shutdown.
- b. direct the refuel floor to stop fuel movement.
- c. inform the refuel floor to remove the fuel bundle and try again.
- d. declare the improperly responding SRM INOP and insert all insertable control rods within 1 hour

ANSWER

b.

REFERENCE

MOP13, Conduct of Refueling and Core Alterations

MEMORY

BANK

RO Question 34 / SRO Question 16

Question # 036
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 2.2.22 295024

QUESTION

Venting the Drywell is in progress in accordance with 23.406. The following alarms/indications are received:

- 3D81, PRIMARY CONTAINMENT PRESSURE HIGH/LOW
- T50-R802A, Div 1 PC Pressure Recorder indicates 0.10 psig.
- T50-R802B, Div 2 PC Pressure Recorder, indicates 0.10 psig.

Which of the following is a correct statement with regard to the Fermi 2 Primary Containment Pressure Technical Specification (TS) Limiting Condition for Operation (LCO), Required Action, and Completion Time?

- a. Pressure is outside the TS LCO, restore to within limit within 1 hour.
- b. Pressure is outside the TS LCO, restore to within limit within 8 hours.
- c. Pressure is within the TS LCO, no TS Required Action, raise pressure to restore to normal band.
- d. Pressure is within the TS LCO, no TS Required Action, lower pressure to restore to normal band.

ANSWER

c.

REFERENCE

TS 3.6.1.4

3D81

HIGHER

NEW

RO Question 8 / SRO Question 18

Question # 037
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295025K305

QUESTION

Which of the following statements accurately describes a relationship between HPCI and RCIC?

- a. On either low CST level or high torus level RCIC and HPCI suction will transfer from the CST to the torus.
- b. With the RCIC system inoperable HPCI is allowed a 14 day out of service time.
- c. RPV pressure may not exceed 150 psig during a plant startup unless RCIC and HPCI are in standby.
- d. Demin water in the HPCI and RCIC keep fill lines prevent water hammer on system startup.

ANSWER

c.

REFERENCE

ST-OP-315-0043-001

22.000.02

HIGHER

BANK

RO Question 9 / SRO Question 19

Question # 038
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295025A102

QUESTION

The Reactor was manually scrammed following a loss of 65 G bus. Following the Pressure leg of the RPV Control EOP directs manually opening SRVs until RPV pressure drops to 960 psig. Why is pressure maintained above 960 psig?

- a. To prevent exceeding the 90 deg F/hr cooldown limit.
- b. To maintain the Bypass Valves fully open.
- c. To prevent Level 8 trips caused by swell.
- d. To maintain sufficient pressure to operate HPCI and RCIC.

ANSWER

b.

REFERENCE

ST-OP-802-3003-001

BWR EPGs Appendix B

MEMORY

BANK

RO Question 10 / SRO Question 20

Question # 039
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295026K305

QUESTION

The plant was operating at 100% power, when an SRV opened and remained stuck open. Which of the following identifies the correct action and the AOP bases for this action?

- a. At 110 deg F in the suppression pool, place mode switch in shutdown. This allows crew time to evaluate methods of closing the SRV.
- b. At 105 deg F in the suppression pool, start additional monitoring of pool temperature. Heat addition to the pool is allowed to continue, provided suppression pool temperature does not exceed 110 deg F.
- c. At 100 deg F in the suppression pool, place either Division 1 or Division 2 RHR in service for heat removal. Use only one loop to preclude inadequate core cooling in the event of an accident.
- d. At 95 deg F in the Suppression Pool, terminate all testing that adds heat to the and enter PC Control . Guidance and direction is provided to ensure suppression pool temperature does not exceed 185 deg F, in the event of an accident.

ANSWER

a.

REFERENCE

20.000.25 Bases

Grand Gulf December 2000 ILO Exam

HIGHER

BANK

RO Question 25 / SRO Question 21

Question # 040
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 2.4.6 295030

QUESTION

The following conditions exist:

- Reactor Mode Switch.....Shutdown
- Reactor.....All rods in
- RPV Level.....65 inches
- RPV Pressure.....1000 psig
- Reactor Building to Suppression Chamber vacuum breakers....cycling
- Torus water level.....-38 inches

What action is required and why?

- a. Shutdown LPCI to prevent exceeding LPCI NPSH requirements.
- b. Depressurize the RPV through the turbine bypass valves to preserve the torus heat capacity.
- c. Shutdown RCIC since suppression of steam discharged from RCIC can not be assured.
- d. Emergency depressurize since suppression of steam discharged from the RPV cannot be assured.

ANSWER

d.

REFERENCE

ST-OP-802-3004-001

EPG Bases

HIGHER

NEW

RO Question 28 / SRO Question 22

Question # 041
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 259002K101

QUESTION

With the plant operating at full power, RPV level is being maintained at 197 inches by the Master Feedwater Controller in AUTO. The following events occur:

- The Backup Scram Valve Relay, is momentarily activated by an I&C error and Post Scram Feedwater logic is actuated.
- Annunciator 3D157, POST SCRAM FW LOGIC ACTUATED is received.

What is the effect of placing the SULCV Mode Switch placed in START?

- a. The Master Feedwater Controller will respond to decrease level and the reactor will scram on RPV low level.
- b. Post Scram Feedwater logic is bypassed and the FW Master Controller will stabilize and maintain RPV level at 197 inches.
- c. Only the annunciator and the "Post Scram" white light on P603 will be activated because the RPS trip signal was not maintained for 6 seconds.
- d. Only the annunciator and the "Post Scram" white light on P603 will be activated because only the Div. II relay actuated to initiate the Post Scram Feedwater logic.

ANSWER

a.

REFERENCE

ARP 5D93

23.107

HIGHER

BANK

RO Question 11 / SRO Question 23

Question # 042
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295037A104

QUESTION

On direction from the CRS, an operator has placed the SLC Initiation Keylock Switch (C4100-M004) in the PMP A Run position. The following indications are noted 30 seconds later:

- C41 LIR601 (SLC Tank Level) steady
- Primer circuit continuity indicators OFF
- SLC pump A red light ON, green light OFF
- C41 PI R600 (SLC Pump Discharge Pressure) pulsating at 1400 psig
- Annunicator (3D11 SLC IGNITION CONTINUITY LOSS) activates

The above conditions indicate:

- a. Normal operation for the SLC System.
- b. C41-F004A (Pump A Squib Valve) failed to fire.
- c. C41-F008 (SLC Manual Injection Valve) closed.
- d. C41-F029A (SLC Pump A Discharge Relief Valve) failed open.

ANSWER

c.

REFERENCE

23.139

6M721-2082

HIGHER

BANK

RO Question 12 / SRO Question 24

Question # 043
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295038K302

QUESTION

The plant is operating at 100% power when the following alarms occur:

- 3D32, Div I/II RB Vent Radn Monitor Upscale
- 3D36, Div I/II RB Vent Exh Radn Monitor Upscale Trip

What actions should the CRNSO perform and why?

- a. Verify Secondary Containment isolated, to stop unfiltered release of radioactive particles to the environment.
- b. Direct a channel function test performed on all RB Vent Exhaust radiation monitors to verify readings. No isolations should have occurred.
- c. Declare the radiation monitors inoperable, notify Chemistry to take samples, and initiate a plant shutdown. These rad monitors are required by Tech Specs.
- d. Perform an immediate plant shutdown because Secondary Containment integrity can no longer be verified.

ANSWER

a.

REFERENCE

20.000.02

3D36

LP-OP-315-0166

HIGHER

BANK

RO Question 31 / SRO Question 25

Question # 044
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 500000A201

QUESTION

A transient occurred 2 hours ago resulting in the following conditions:

- Drywell pressure16.5 psig and slowly lowering
- Torus level5" and steady
- Torus water temperature.....165 deg F
- Drywell temperature.....240 deg F
- RPV water level..... -20 inches and steady
- Division 1 and 2 Primary Containment H2 Monitors are inoperable
- Division 1 and 2 Primary Containment O2 Monitors are reading 5.5%.
- The Reactor Building is inaccessible and the PASS system is unavailable

Based on these indications, which of the following describes the implications to plant safety?

- a. Exceeding the drywell spray limit challenges Primary Containment integrity.
- b. Exceeding the hydrogen combustion limit challenges Primary Containment integrity.
- c. Exceeding the RHR Vortex Limit challenges core cooling.
- d. Exceeding the RHR NPSH Limit challenges core cooling.

ANSWER

b.

REFERENCE

29.100.01 Sheet 4

LP-OP-802-3004

HIGHER

BANK

RO Question 13 / SRO Question 26

Question # 045
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295001A105

QUESTION

The plant was operating at 100 % power when the "A" recirculation pump tripped. The crew entered 20.138.01, Recirculation Pump Trip. Which of the following describes the reason for placing the Recirc A & B Flow Limiter 2/3 Defeat Switch in DEFEAT?

- a. Ensures positive control of the Recirculation System.
- b. Prevents developing excessively high component vibrations in the reactor vessel internals.
- c. Maintains the plant within the capability of one feed pump while preventing an entry into a thermal hydraulic instability region.
- d. Limits Recirculation Pump speed by limiting the demand signal.

ANSWER

a.

REFERENCE

20.138.01 Bases
ST-OP-315-0004

HIGHER

NEW

RO Question 14 / SRO Question 27

Question # 046
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295002K104

QUESTION

While operating at 4% power the following conditions exist :

- Offgas flow indication.....pegged offscale high
- Condenser vacuum.....2.1 psia (losing vacuum)
- MSIVs.....open
- All SJAEs.....in service

Given the above conditions, which of the following actions should be taken by the operating crew?

- a. Start the Mechanical Vacuum Pumps.
- b. Raise the pressure setpoint to close the Main Turbine Bypass Valves.
- c. Place the Reactor Mode Switch to SHUTDOWN and close the MSIVs.
- d. Place the Div 1 and 2 Low Condenser Vacuum Bypass Switches on Panel H11-P609 and P611 to BYPASS.

ANSWER

a.

REFERENCE

20.125.01
LP-OP-802-2001
LP-OP-315-0132

MEMORY

BANK

RO Question 15 / SRO Question 28

Question # 047
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295004K301

QUESTION

Due to an act of sabotage a total loss of Division I 130V/260V ESS Battery Busses has occurred. The plant then experienced a complete loss of offsite power. What is the impact on the emergency diesel generators?

- a. Division 1 EDGs will auto-start, load shed and load sequence Division 1 ESS loads. Division 2 EDGs will auto-start, but not load shed and load sequence.
- b. Division 1 EDGs will not auto-start, load shed and load sequence Division 1 ESS loads. Division 2 EDGs will auto start, load shed and load sequence.
- c. Both divisions of EDGs will remain fully operational, auto starting, load shedding and load sequencing.
- d. Neither Division 1 nor Division 2 EDGs will auto start, load shed, nor load sequence automatically.

ANSWER

b.

REFERENCE

ST-OP-315-0064-001

20.300.260VESF

HIGHER

BANK

RO Question 17 / SRO Question 29

Question # 048
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295008K101

QUESTION

The plant is at 100% when a Main Turbine Trip occurred. Which of the following describes the plant conditions that will cause a Main Turbine Trip and describes the basis for that trip? The Main Turbine has tripped due to:

- a. The selected narrow range level instrument at a level of 214". This will prevent the erosion of the Main Steam piping and Main Control Valves' seats from moisture carryover.
- b. Two of the narrow range level instruments at a level of 214". This will prevent the erosion of the Main Steam piping and Main Control Valves' seats from moisture carryover.
- c. The selected narrow range level instrument at a level of 214". This will prevent the erosion of the Main Turbine Blades from moisture carryover.
- d. Two of the narrow range level instruments have a level of 214". This will prevent the erosion of the Main Turbine Blades from moisture carryover.

ANSWER

d.

REFERENCE

ST-OP-315-0028

23.601

HIGHER

BANK

RO Question 18 / SRO Question 31

Question # 049
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295012K201

QUESTION

The plant was operating at 100% power when a spurious reactor scram occurred.

- The control rods are not completely inserted.
- Reactor Power is 50%.
- Drywell Pressure is .45 psig
- The EOPs have been entered and the CRS has ordered terminate and prevent based on exceeding the BIIT.

Assuming that the terminate and prevent is ended at TAF, how will the containment parameters respond during this evolution? Drywell temperature will...

- a. rise when drywell cooling fans trip.
- b. rise due to a cooling water isolation.
- c. lower due to RPV pressure and temperature lowering.
- d. lower due to dual speed fans shifting to fast speed.

ANSWER

a.

REFERENCE

ST-OP-802-3004

ST-OP-315-0017

HIGHER

BANK

RO Question 19 / SRO Question 32

Question # 050
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 2.4.11

QUESTION

The plant was operating at 100% when both Reactor Recirculation Pumps tripped. The crew has scrammed the reactor. A spurious level 2 signal has resulted in various containment isolations and actuations. Due to the loss of RPV bottom head temperature indication, what condition must be satisfied prior to restart of the RR pumps?

- a. The bottom head temperature must be estimated.
- b. Coolant temperature in the operating loop is used to determine restart.
- c. The reactor must be restarted.
- d. The reactor must be brought to cold shutdown.

ANSWER

d.

REFERENCE

20.138.01 and
20.138.01 Basis
ST-OP-315-004-001

MEMORY

BANK

RO Question 23 / SRO Question 34

Question # 051
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 2.1.2 295021

QUESTION

The plant is in Mode 3 with Division 1 Residual Heat Removal (RHR) in Shutdown Cooling (SDC) and RHR A pump running. A small break LOCA occurs which isolates SDC. The leak is isolated with RPV level at 150 inches. What actions are required to restore SDC?

1. Restore RPV level to 220 inches
2. Restore RPV level to 170 inches
3. Reset Group 3 Isolations
4. Reset Group 4 Isolations
5. Reset E1150-F015A and F015B seal-in
6. Reset E1100-F006A and F006B seal-in

- a. 2, 3, 5
- b. 1, 4, 6
- c. 1, 4, 5
- d. 2, 3, 6

ANSWER

c.

REFERENCE

SS-OP-802-2001

20.205.01

HIGHER

NEW

RO Question 33 / SRO Question 35

Question # 052
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295022A102

QUESTION

The reactor is in Mode 2, with reactor pressure at 800 psig when the operating CRD pump trips. Before any action can be taken annunciator 3D10, CRD ACCUMULATOR TROUBLE, alarms for a withdrawn Control Rod. What action is required in accordance with procedure 20.106.01, CRD Hydraulic System Failure? Why is this action required?

- a. Immediately start the standby CRD pump. Starting the standby pump should restore the system pressure to normal.
- b. Place the mode switch in SHUTDOWN. This is a conservative action to ensure reactor pressure is adequate to fully insert control rods.
- c. Within 20 minutes, close C1100-F034, CRD Charging Water Header Isolation Valve. Closing the C11-F034 with no pump running minimizes depressurization of CRD accumulators that have check valve leakage.
- d. Within 20 minutes restart at least one CRD pump or place the mode switch in SHUTDOWN. This time is reasonable to place a CRD pump into service to restore pressure.

ANSWER

b.

REFERENCE

20.106.01, CRD HYDRAULIC SYSTEM FAILURE
20.106.01Bases CRD HYDRAULIC SYSTEM FAILURE BASES
ST-OP-315-010-01, Technical Specifications

HIGHER

MODIFIED

RO Question 24 / SRO Question 36

Question # 053
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295028K203

QUESTION

The Plant has experienced a LOCA and the following plant conditions exist :

- RPV pressure.....25 psig
- RPV level.....+ 40 inches (slowly rising)
- Torus level.....+1.5 inches
- Torus temperature.....102 deg F
- Drywell pressure.....21 psig
- Drywell temperature.....296 deg F (saturated)
- Division 1 RHR..... in the torus cooling/spray mode
- Division 2 RHR.....injecting into RPV
- Core Spray.....injecting into RPV
- RPV Saturation Temperature in Drywellexceeded

Given the above conditions, identify which of the following actions is required by the operating crew.

- a. Initiate drywell sprays.
- b. Shutdown drywell cooling fans.
- c. Emergency depressurize the RPV.
- d. Enter the RPV Flooding Procedure.

ANSWER

d.

REFERENCE

29.100.01 SH 3, Reactor Flooding
29.100.01 SH 6, Curves, Cautions and Tables
ST-OP-802-3002-001
HIGHER
BANK
RO Question 26 / SRO Question 37

Question # 054
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295029K301

QUESTION

In an emergency event, in which a reactor scram signal has been initiated, the following conditions exist :

- Reactor power.....0 %
- Drywell pressure20 psig
- Drywell temperature.....275 deg F
- Torus pressure.....19 psig
- Main condenser.....available
- RPV pressure.....900 psig (stable)
- Torus levelexceeds SRVTPLL
- MSIVs.....isolated due to low vacuum
- RPV Level.....150 inches and slowly lowering

Given these conditions, the operating crew should perform which of the following, and why?

- a. Initiate torus and drywell sprays, to rapidly lower torus pressure within limits to prevent containment failure.
- b. Vent the torus irrespective of offsite radioactivity release rates, to preclude imminent torus failure.
- c. Prevent injection to the RPV from Core Spray and RHR, to limit torus level rise.
- d. Commence Emergency Depressurization irrespective of cooldown rates, to preclude SRV system damage and containment failure.

ANSWER

d.

REFERENCE

EOP 29.100.01 SH 2, TWL-10
EOP 29.100.01 SH 6, (SRVTPLL Curve)
ST-OP-315-3002-001

HIGHER

BANK

RO Question 27 / SRO Question 38

Question # 055
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295033K302

QUESTION

The plant is operating at 100% power when a high radiation level in the Secondary Containment caused the crew to enter 29.100.01 Sheet 5, Secondary Containment and Rad Release. Radiation levels approach the Max Safe Operating Rad Level and cause the crew to transition to 29.100.01 Sheet 1, RPV Control. What is the basis for this action?

- a. When the RPV is the source of radioactivity, Sheet 1 actions should be adequate to terminate any further increase in radiation levels.
- b. When containment radiation levels exceed Max Safe Operating Level in one area, the RPV must be depressurized to terminate any further increase in radiation levels.
- c. When the RPV is not the source of radioactivity, a normal reactor shutdown is prudent.
- d. When offsite release rates exceed the General Emergency level the RPV must be depressurized to reduce the driving force of systems discharging outside containment.

ANSWER

a.

REFERENCE

ST-OP-802-3005-001

HIGHER

NEW

RO Question 29 / SRO Question 39

Question # 056
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295034A103

QUESTION

The plant is in an accident condition in which fuel failure has occurred. The following plant conditions exist:

- Reactor.....All rods in
- RPV pressure.....920 psig
- RPV water level.....+ 45 inches (dropping slowly)
- ARM Channel 11 & 13.....Pegged high
- Local surveys for these areas.(11 & 13)....6 & 5.5 R/hr (slowly rising)
- Low pressure ECCS.....operating normally

The Reactor Building Ventilation System has isolated. What conditions must be met to restart the RB HVAC System, defeating interlocks if necessary?

- a. RB HVAC exhaust rad levels are <16,000 cpm and Fuel Pool Vent Exhaust radiation levels are > 5 mr/hr.
- b. RB HVAC exhaust rad levels are <16,000 cpm and Fuel Pool Vent Exhaust radiation levels are < 5 mr/hr.
- c. RB HVAC exhaust rad levels are <16,000 cpm and Turbine Building access is necessary to mitigate the event.
- d. RB HVAC exhaust rad levels are >16,000 cpm and Fuel Pool Vent Exhaust radiation levels are < 5 mr/hr.

ANSWER

b.

REFERENCE

EOP 29.100.01 SH 5 (SC-OR1)

EOP 29.100.01 SH 5 (RR-OR1)

MEMORY

NEW

RO Question 30 / SRO Question 40

Question # 057
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 295036K201

QUESTION

Which of the following signals which will cause a Group 12 TWMS isolation?

- a. Drywell pressure high
RPV level 1
Drywell floor drain sump level high-high
Reactor Building Torus sump level low
- b. Reactor pressure high
RPV level 2
Drywell floor drain sump level high-high
Reactor Building Torus sump level high-high
- c. Drywell pressure high
RPV level 2
Drywell floor drain sump level high-high
Reactor Building Torus sump level high-high
- d. Drywell pressure high
RPV level 3
Drywell equipment drain sump level high-high
Reactor Building Torus sump level high-high

ANSWER

c.

REFERENCE

ST-OP-315-0069-001

MEMORY

NEW

RO Question 36 / SRO Question 42

Question # 058
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 600000A216

QUESTION

A fire has occurred in 3L Zone 8. The following conditions exist:

- Control Room is evacuated
- The reactor is shutdown
- The fire is out
- RPV pressure 800 psig

Which one of the following is the correct method for cooldown of the plant at this point?

- a. Reactor Core Isolation Cooling in the Test mode.
- b. Feedwater via the Startup Level Control Valve and the turbine bypass valves.
- c. Div II Residual Heat Removal in Shutdown Cooling.
- d. Standby Feedwater from the Condensate Storage Tank and Safety Relief Valve 'G'.

ANSWER

d.

REFERENCE

AOP 20.000.18 Control of the Plant from the Dedicated Shutdown Panel

AOP 20.000.18 Control of the Plant from the Dedicated Shutdown Panel - Bases

HIGHER

NEW

RO Question 32 / SRO Question 43

Question # 059
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 202002A107

QUESTION

The plant was increasing power from 73% at the '100% Rod Line', when the B RRMG set speed began rising without a demand signal from the operator. The power rise was stopped, when the B RRMG set scoop tube was locked by the P603 operator. The B RRMG set speed increase was 8%. Given these conditions, which of the following parameters would be observed at the P603 panel?

- a. Jet Pumps 1-10 flow increased, A and B loop flows and total core flow are higher than before the transient.
- b. Jet Pumps 11-20 flow is increased, A and B loop flows and total core flow are lower than before the transient.
- c. Jet Pumps 11-20 flow is increased, B loop flow and total core flow are higher than before the transient. A loop flow is slightly lower.
- d. Jet Pumps 1-10 flow is increased, B loop flow and total core flow are higher than before the transient. A loop flow is slightly lower.

ANSWER

d.

REFERENCE

LP-OP-0104

23.138.01

HIGHER

NEW

RO Question 39 / SRO Question 44

Question # 060
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 2.2.23 203000

QUESTION

A fault on MCC 72CF has caused 72C position 3C to open, thus blocking the automatic throwover capability for MCC 72CF. What action is required?

- a. Restore MCC 72CF to operable within 7 days or be in Mode 3 within 12 hours.
- b. Restore MCC 72CF to operable within 24 hours or be in Mode 3 within 12 hours.
- c. Start shutdown within 1 hour and be in Mode 2 within 7 hours.
- d. Start shutdown within 1 hour and be in Mode 2 within 24 hours.

ANSWER

c.

REFERENCE

TS 3.0.3, 3.5.1 Action J, 3.5.1 Bases

23.321

HIGHER

NEW

RO Question 41 / SRO Question 45

Question # 061
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 206000K505

QUESTION

During an AUTOMATIC initiation of HPCI, the HPCI Pump flow is 5200 GPM. Five minutes later the E4150-F012, Pump Min Flow Valve, fails open. The HPCI system will respond by:

- a. Raising HPCI Turbine Speed
- b. Lowering HPCI Turbine Speed
- c. Indicated HPCI Flow Increasing above 5200 GPM
- d. Tripping HPCI at a Flow in excess of 5200 GPM

ANSWER

a.

REFERENCE

ST-OP-315-0039-001

6M721-5708-1

HIGHER

BANK

RO Question 42 / SRO Question 46

Question # 062
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 209001K604

QUESTION

All power to the Division 1 DC bus has been lost. Concerning the operation of Division 1 Core Spray System, if a LOCA occurred under these conditions which one of the statements is true?

- a. It will NOT operate automatically, however, the system can be manually initiated from the Main Control Room and inject into the Reactor.
- b. It will automatically start; however, the injection valve must be manually opened due to the loss of the automatic opening feature of the pressure permissive.
- c. It is unable to be initiated manually or automatically from the Main Control Room or from any location within the plant.
- d. It is unable to be initiated manually or automatically, and the Core Spray pump will not operate from the Main Control Room, if the pump is started locally it will operate without minimum flow valve response.

ANSWER

d.

REFERENCE

ST-OP-315-0040-001

1D6

MEMORY

NEW

RO Question 43 / SRO Question 47

Question # 063
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 212000A214

QUESTION

Contacts off the SDV Bypass Switch allow the Scram Discharge Volume scram signal to be bypassed when the SDV Bypass Switch is in Bypass and the Reactor Mode Switch is in:

- a. Startup or Refuel
- b. Refuel or Shutdown
- c. Startup or Shutdown
- d. Shutdown only.

ANSWER

b.

REFERENCE

23.610

ST-OP-315-027-001

MEMORY

MODIFIED

RO Question 45 / SRO Question 49

Question # 064
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 215003A304

QUESTION

A reactor startup is in progress. The reactor has been declared critical and the operator has established a 150 sec period. All IRMs are on range 4. The following indications are observed:

- IRM UPSCALE alarm
- IRM CH A/E/C/G UPSCALE TRIP/INOP alarm
- TRIP ACTUATORS A1/A2 TRIPPED alarm
- CONTROL ROD WITHDRAWAL BLOCK alarm

These indications were caused by:

- a. IRM E being ranged to range 5.
- b. IRM E being ranged to range 3.
- c. IRM E being withdrawn from the core
- d. IRM E power supply failure

ANSWER

b.

REFERENCE

ST-OP-315-0023-001, Technical Specifications

3D113

HIGHER

BANK

RO Question 47 / SRO Question 72

Question # 065
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 215004K201

QUESTION

Which of the following plant electrical systems supplies power to the detector and electronic circuitry of the Source Range Monitoring (SRM) System?

- a. 24 VDC station batteries
- b. 130 VDC station batteries
- c. 120 VAC Instrument and Control Power
- d. 120 VAC UPS

ANSWER

a.

REFERENCE

ST-OP-315-0022

MEMORY

BANK

RO Question 48 / SRO Question 50

Question # 066
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 215005A206

QUESTION

During a plant startup with control rod withdrawal in progress the following occurs:

- 3D115 "APRM Flow Upscale" alarm is received in conjunction with other alarms.
- Reactor Recirculation Pump speeds remained constant.
- Recirc Loop A flow indicator (B31-R613) indicates full scale.
- Recirc Loops A and B Flow Recorder (B31-R614) remains steady at 27,000 gpm for both A and B loops.

The crew determines APRM Upscale flow is not confirmed. What has occurred and what actions are required to continue the plant startup?

- a. Only alarms have occurred, therefore no additional action is required. The plant startup can continue.
- b. A rod block has occurred. A flow transmitter is inoperable requiring the bypass of APRM Channel 4 to continue the startup.
- c. A half scram on Div 1 RPS has occurred. APRM Channel 1 shall be bypassed, the 1/2 scram reset and the startup can continue.
- d. A rod block has occurred. A flow transmitter is inoperable requiring the bypass of APRM Channel 3 to continue the startup.

ANSWER

b.

REFERENCE

LP-OP-315-0124

3D115 APRM Flow Upscale

23.605

HIGHER

NEW

RO Question 49 / SRO Question 51

Question # 067
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 216000A214

QUESTION

The plant was operating at 95% power when the following indications were observed:

- Generator megawatt output - 1095MWe, rising slowly
- Reactor power - 97%, rising slowly
- RPV level - 197 inches, steady
- RPV pressure - 1015 psig, rising slowly
- Total core flow 95 Mlbm/hr and rising slowly
- | | |
|---------------------------------|---------------------------------|
| A Recirc System: | B Recirc System: |
| recirc loop flow - 48000 gpm | recirc loop flow - 51000 gpm |
| jet pump loop flow - 45 Mlbm/hr | jet pump loop flow - 50 Mlbm/hr |

Based on the given conditions, what has occurred and what action should be taken?

- a. A pressure regulator failure has occurred. Enter 20.109.02, Reactor Pressure Controller Failure.
- b. 'A' Recirc pump speed has lowered. Lower 'B' MG set speed to match recirc flows.
- c. A jet pump failure has occurred. Enter 20.138.02, Jet Pump Failure.
- d. 'B' Recirc pump speed has increased. Enter 20.138.03, Uncontrolled Recirc Flow Change.

ANSWER

d.

REFERENCE

20.138.01

HIGHER

BANK

RO Question 51 / SRO Question 52

Question # 068
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 217000A102

QUESTION

The Reactor Core Isolation Cooling (RCIC) system has been started in accordance with 24.206.04, RCIC SYSTEM AUTOMATIC ACTUATION AND FLOW TEST. The following conditions exist:

- RCIC Flow Controller, E51-K615, is in Auto, set at 650 gpm
- RCIC flow - 650 gpm
- RPV pressure - 185 psig

What happens to RCIC final speed and pressure if E41-F011, HPCI Test Line Iso/PCV, is opened an additional 5%?

- a. RCIC speed lower
RCIC discharge pressure lower
- b. RCIC speed higher
RCIC discharge pressure higher
- c. RCIC speed lower
RCIC discharge pressure higher
- d. RCIC speed higher
RCIC discharge pressure lower

ANSWER

a.

REFERENCE

ST-OP-315-0043

24.206.04

BWR Fundamentals

HIGHER

NEW

RO Question 52 / SRO Question 53

Question # 069
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 217000A303

QUESTION

The Reactor Core Isolation Cooling (RCIC) system is operating and supplying the RPV with the following conditions:

- RCIC Turbine supply pressure900 psig
- RCIC Turbine exhaust diaphragm pressure.....12 psig
- RCIC ambient area temperature.....148 deg F
- Discharge flow620 gpm

Describe the required operator actions to be taken for these conditions.

- a. Monitor proper operation of RCIC.
- b. Lower RCIC discharge flow to 600 gpm.
- c. Ensure RCIC lube oil cooler in service.
- d. Ensure RCIC isolation occurs.

ANSWER

d.

REFERENCE

ST-OP-315-0043-001

HIGHER

NEW

RO Question 53 / SRO Question 54

Question # 070
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 218000K501

QUESTION

While the plant was operating in the RUN mode, a LOCA and Loss of Offsite Power occurred and the following conditions exist :

- RPV water level.....+ 76 inches (lowering 4 inches/min)
- DW pressure.....17.5 psig (slowly rising)
- EDGs.....No. 14 ONLY running supplying associated ESF Bus

Given the above parameters and assuming no operator action involving ADS, identify which of the following describe the expected response of the ADS System. If the low pressure ECCS Systems function as designed, ADS will begin depressurizing the plant:

- a. in approximately 13 minutes.
- b. in approximately 20 minutes.
- c. 105 seconds following EDG 11 restart.
- d. 525 seconds following EDG 12 restart.

ANSWER

a.

REFERENCE

23.201

LP-OP-315-0142

HIGHER

BANK

RO Question 54 / SRO Question 55

Question # 071
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 223001K117

QUESTION

Select from the following, those signals which will cause an RBHVAC trip and Secondary Containment Isolation?

All choices in the statements must be true for the selection to be correct.

- a. High Drywell Pressure 1.68 psig
Low RPV Water Level - Level 3
Fuel Pool Vent Exhaust Radiation
High Main Steam Line Radiation
- b. High Drywell Pressure 1.68 psig
Low RPV Water Level- Level 2
Fuel Pool Vent Exhaust Radiation
Reactor Building Exhaust Radiation
- c. High Drywell Pressure 1.68 psig
Low RPV Water Level - Level 1
Fuel Pool Vent Exhaust Radiation
Reactor Building Exhaust Radiation
- d. Low RPV Water Level- Level 2
Fuel Pool Vent Exhaust Radiation
Reactor Building Exhaust Radiation
High Main Steam Line Radiation

ANSWER

b.

REFERENCE

ST-OP-315-0066-001

29.ESP.01 Table 2.2

MEMORY

MODIFIED

RO Question 55 / SRO Question 56

Question # 072
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 223002A201

QUESTION

The plant is operating at 85% power when the following occurs:

- RPS MG set 'A' trips deenergizing RPS/NSSSS power supplies.
- Alarm 1D39 NSSSS Isolation CH A/C trip is illuminated.
- Alarm 2D36 NSSSS Isolation CH B/D trip is clear.
- Various other alarms related to the loss of power are in on the P603 panel.

Select the response that describes (1) the immediate effect of this loss of power and (2) the action required to be taken.

- a. (1) Inboard MSIVs, F022A-D close
(2) Place the mode switch in shutdown
- b. (1) All MSIVs close
(2) Place the mode switch in shutdown
- c. (1) Outboard MSIVs, F028A-D close
(2) Transfer RPS to alternate and reset the half scram
- d. (1) All MSIVs remain open
(2) Transfer RPS to alternate and reset the half scram.

ANSWER

d.

REFERENCE

ST-OP-315-0005-001

23.316

HIGHER

BANK

RO Question 56 / SRO Question 57

Question # 073
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 223002A403

QUESTION

The plant is in Mode 4 with Loop A in Shutdown Cooling. An RHR Shutdown Cooling Isolation has occurred. Select the condition(s)/action(s) that are required to reset the isolation.

- a. Depress Main Steam Line Isolation RESET P/B on H11-P601.
Depress Main Steam Line Isolation RESET P/B on H11-P602.
- b. The initiating condition has been corrected and restored to normal.
Depress Main Steam Line Isolation RESET P/B on H11-P601.
Depress Main Steam Line Isolation RESET P/B on H11-P602.
- c. The initiating condition has been corrected and restored to normal.
Depress the close push button on the affected isolation valves. Depress Main Steam Line Isolation RESET P/B on H11-P601.
- d. The initiating condition has been corrected and restored to normal.

ANSWER

b.

REFERENCE

ST-OP-315-0048-001

23.427

MEMORY

BANK

RO Question 57 / SRO Question 58

Question # 074
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 226001A302

QUESTION

A LOCA has occurred. The following conditions exist:

- RPV pressure 200 psig and stable
- RPV level is 30 inches and stable
- ADS is inhibited.
- Drywell pressure 20 psig and slowly lowering.
- Division 1 and 2 Core Spray in service and supplying the RPV.
- Division 2 RHR is aligned to the vessel through B Loop.
- Division 1 RHR is being used for Containment Cooling and Containment Spray.
- The E1150-F010 RHR Crosstie valve is open.
- The Containment Spray Mode Select switch is in MANUAL.
- Containment Spray 2/3 Core Height Override keylock switch is in Normal.

A subsequent loss of 345 Kv Offsite Power and failure of EDGs 13 and 14 result in RPV water level falling to -50 inches on the Core Level Instruments. What is the expected RHR system response?

- a. Division 1 Containment Spray and Cooling valves will close. Division 1 RHR discharge pressure will increase and Division 1 RHR will inject to the vessel through Division 2.
- b. Division 1 Containment Spray and Cooling valves will close. Division 1 RHR discharge pressure will increase and Division 1 RHR will inject to the vessel through Division 1.
- c. Division 1 Containment Spray and Cooling valves will remain open. Division 1 RHR discharge pressure will decrease and Division 1 RHR will inject to the vessel through Division 2.
- d. Division 1 Containment Spray and Cooling valves will remain open. Division 1 RHR discharge pressure will decrease and Division 1 RHR will inject to the vessel through Division 1.

ANSWER

a.

REFERENCE

ST-LP-315-0041-001

23.205

HIGHER

NEW

RO Question 73 / SRO Question 59

Question # 075
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 239002K604

QUESTION

The plant has experienced a complete loss of Division 1 DC busses. Which SRVs are available to the Operating Crew for manual pressure control?

- a. B21-F013H and F013F.
- b. B21-F013A and F013 J.
- c. B21-F013M and F013F.
- d. B21-F013E and F013J.

ANSWER

c.

REFERENCE

ST-OP-315-0042

MEMORY

BANK

RO Question 58 / SRO Question 60

Question # 076
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 241000K106

QUESTION

Plant conditions are as follows:

- The plant is operating at 20% power.
- The turbine generator is paralleled to the grid.
- The Generator is providing an output of 200MW.
- The TURBINE FLOW LIMIT is set at 25%.
- The REACTOR FLOW LIMIT is set at 115%.
- The PRESSURE REGULATOR is set at 944 psig.
- The Turbine Bypass Valves are CLOSED.
- The TURBINE SPEED/LOAD DEMAND is set at 300MW.

How will the plant respond to an INCREASE to 45% power without any further operator action?

- a. Generator output will remain constant, Bypass Valves will OPEN.
- b. Generator output will remain constant, Bypass Valves will remain CLOSED.
- c. Generator output will increase to approximately 250MW, Bypass Valves will OPEN.
- d. Generator output will increase to approximately 250MW, Bypass Valves will remain CLOSED.

ANSWER

c.

REFERENCE

ST-OP-0045-001

20.000.02 Rev. 55

HIGHER

BANK

RO Question 59 / SRO Question 61

Question # 077
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 259001K607

QUESTION

The plant is operating at 80% power when multiple alarms are received and the following conditions are noted:

- RPV level 190 inches decreasing
- N RFPT speed is decreasing
- S RFPT speed is increasing
- Steam flow greater than feed flow on the Steam Flow/Feed Flow Recorder

Given these conditions, which of the following actions will be taken in accordance with plant procedures?

- a. Manually initiate and inject with HPCI.
- b. Manually initiate and inject with RCIC.
- c. Place the Recirculation System A & B Flow Limiter 2/3 Defeat Switch in NORMAL.
- d. Start and inject with SBFW.

ANSWER

d.

REFERENCE

20.107.01

ST-OP-315-0007-001

HIGHER

BANK

RO Question 61 / SRO Question 76

Question # 078
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 259002K202

QUESTION

Alarm 2D50 "HPCI LOGIC BUS POWER FAILURE" was received. Investigation has determined this was due to a loss of Logic Power Bus B. Which of the following statements describes the HPCI system response if RPV drops 100 inches?

- a. Steamline Inboard Isolation Valve (E41-F002) will not auto isolate.
- b. HPCI will not auto start.
- c. HPCI will auto start.
- d. HPCI will auto trip and isolate.

ANSWER

b.

REFERENCE

ST-OP-315-0039-001

2D50

HIGHER

NEW

RO Question 62 / SRO Question 62

Question # 079
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 261000K304

QUESTION

Both HPCI and SGTS receive an auto start signal on low RPV Level. How would the HPCI system respond to a loss of SGTS?

- a. HPCI cannot operate properly without a discharge path for the Barometric Condenser Vacuum Pump and must be tripped immediately.
- b. HPCI cannot operate properly without a discharge path for the Barometric Condenser Vacuum Pump and will automatically trip.
- c. HPCI continues to operate properly since the Gear Driven Vacuum Pump discharges to the HPCI room when turbine speed reaches 2300 RPM.
- d. HPCI continues to operate properly, since Barometric Condenser Vacuum Pump is not required for operation.

ANSWER

d.

REFERENCE

ST-OP-315-0039-001

ST-OP-315-0020-001

MEMORY

NEW

RO Question 63 / SRO Question 63

Question # 080
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 262001A401

QUESTION

The plant is operating at full power with the following:

EDG-11.....operating paralleled to bus 11EA
EDG-12.....Emergency Signal Bypass Keylock switch in BYPASS
CTG 11 units 3 and 4.....loaded to about 15 MWE each

A loss of off-site power occurs while operating in this condition. Which ONE of the following is a correct statement concerning the Division 1 4160V ESF buses?

- a. CTGs 3 & 4 will automatically pick up all Division 1 loads.
- b. Load shedding will not initiate on bus 11EA while EDG-11 is carrying the bus.
- c. EDG-12 will not start until the Emergency Signal Bypass switch is returned to NORM.
- d. EDG-11 will trip on underfrequency requiring a manual restart before loads on 11EA can be supplied.

ANSWER

b.

REFERENCE

23.300

20.300.OFFSITE

HIGHER

BANK

RO Question 77 / SRO Question 64

Question # 081
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 264000K401

QUESTION

The plant is in a refueling outage. EDG 11 is running in parallel with Offsite power. Breaker B6 opens spuriously with no faults indicated. How will this affect EDG operation?

- a. The EDG will trip on underfrequency and restart
Bus 64B will load shed
Vital loads will sequence back on.
- b. The EDG will continue to run
Bus 64B will load shed
Vital loads will sequence back on
- c. The EDG will continue to run
All EDG trips will remain active
- d. The EDG will continue to run
Only Essential trips will remain active

ANSWER

d.

REFERENCE

23.307, Precautions and limitations
ST-OP-315-0065-001

MEMORY

BANK

RO Question 64 / SRO Question 65

Question # 082
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 290001A204

QUESTION

The plant is in an accident condition in which fuel failure has occurred. The following plant conditions exist:

- Reactor.....All rods in
- RPV pressure.....920 psig
- RPV water level.....+130 inches (dropping slowly)
- Low pressure ECCS.....operating normally
- HPCI System.....Injecting and needed for adequate core cooling

The crew was executing the RPV Control EOP Flowchart when a steam leak occurred on the HPCI steam supply piping. Reactor Building HVAC exhaust radiation level reached 17,000cpm.

Based on these conditions describe (a) the impact on secondary containment, and (b) the action required.

- a. a) Secondary containment isolates and SGTS initiates.
b) Shut the MSIVs.
- b. a) Secondary containment isolates and SGTS initiates.
b) Enter Secondary Containment Control EOP.
- c. a) Secondary containment does not isolate and SGTS does not initiate.
b) Enter Secondary Containment Control EOP.
- d. a) Secondary containment is not isolated.
b) Wait until the RPV water level drops to -28 inches, then emergency depressurize.

ANSWER

b.

REFERENCE

EOP 29.100.01 SH 5 (SC-6 & Table 14)

ST-OP-802-3005

ST-OP-315-0066

HIGHER

NEW

RO Question 80 / SRO Question 66

Question # 083
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 202001A222

QUESTION

The plant was operating at 100% power, when the following occurred:

- All RBCCW pumps tripped and cannot be restarted.
- Div 2 EECW pump is running.
- Div 1 EECW pump tripped and cannot be restarted.

What actions are required?

- a. The Reactor must be scrammed and both Reactor Recirculation Pumps A & B must be stopped within 2 minutes before the bearings are damaged.
- b. The Reactor must be scrammed and Reactor Recirculation Pump A must be stopped within 2 minutes.
- c. The Reactor must be scrammed and Reactor Recirculation Pump B must be taken to its minimum speed immediately until RBCCW can be restored.
- d. The Reactor Recirculation Pump A must be taken to its minimum speed immediately and cooling restored to the CRD pumps to ensure adequate SCRAM capability.

ANSWER

b.

REFERENCE

ST-OP-315-0067-001

20.127.01

ST-OP-315-004-001

HIGHER

BANK

RO Question 67 / SRO Question 68

Question # 084
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 204000K405

QUESTION

Prior to transferring Reactor Protection System (RPS) Motor Generator Set 'A' to its alternate power supply, the Control Room directs you to deenergize G3352-F001, Reactor Water Cleanup Supply (RWCU) Inbd Iso Vlv. What condition must exist prior to deenergizing G3352-F001 and why do you check this?

- a. Both RWCU Pumps must be shutdown so that they will not trip if the G3352-F001 inadvertently goes closed.
- b. G3352-F004, RWCU Outbd Iso Vlv, must be energized to prevent having both valves in a single Primary Containment penetration deenergized at the same time.
- c. Any RWCU Filter/Demineralizers must be placed into HOLD to prevent them from isolating during the RPS 'A' transfer.
- d. G3352-F220, RWCU To Fw Otbd Cntm Iso Vlv, must be deenergized to prevent a RWCU System isolation while RPS 'A' is being transferred.

ANSWER

b.

REFERENCE

23.316, P&L 3.6
ST-OP-315-0008-001

MEMORY

BANK

RO Question 68 / SRO Question 69

Question # 085
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 214000K301

QUESTION

A reactor startup is in progress. The Rod Worth Minimizer (RWM) is in operate. Which of the following statements correctly describes the plant response to a loss of rod position information for a control rod?

- a. A rod block is applied by the RWM. The WHITE "Selected Rod" light on the 4-Rod Display is NOT illuminated.
- b. A rod block is applied by the RWM. The WHITE "Selected Rod" light on the 4-Rod Display is illuminated.
- c. A rod block is NOT applied by the RWM. The Full Core Display Selected Rod Identification Light is NOT illuminated.
- d. A rod block is NOT applied by the RWM. The Full Core Display Selected Rod Identification Light is illuminated.

ANSWER

a.

REFERENCE

ST-OP-315-011

MEMORY

BANK

RO Question 70 / SRO Question 70

Question # 086
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 215002K102

QUESTION

The plant is operating at 50 % power with an interior rod selected for withdrawal when B Recirc Pump controller failed, raising the speed of the Recirc Pump. Operators respond by locking the B Recirc MG set scoop tube, but not before reactor power rises to 75%. No other operator actions are taken. Which of the following describes the impact of this transient on the amplification that was applied to the average LPRM inputs in the Rod Block Monitor (RBM) system during the nulling sequence? The amount of amplification to BOTH RBM A and B average LPRM input signals...

- a. is automatically adjusted to correspond to the reference APRM readings.
- b. remains fixed at the value at the time of rod selection.
- c. is automatically adjusted to correspond to the new core flow.
- d. is bypassed based on the rod selection.

ANSWER

b.

REFERENCE

ST-OP-315-0024-001

23.607

HIGHER

BANK

RO Question 71 / SRO Question 71

Question # 087
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 219000A406

QUESTION

Division 1 of RHR was operating in torus cooling mode with "A" RHR pump in service to support an upcoming HPCI surveillance. A steam leak occurred in the drywell causing drywell pressure to increase to above 5 psig. How would RHR respond, and what minimum operator action is necessary to realign RHR Pump "A" back to torus cooling?

- a. Division 1 RHR will continue to operate in Torus Cooling. No action required.
- b. E11-F024A, Div 1 RHR Torus Clg Iso. and E11-F028A, Div 1 RHR Torus Iso Vlv. will automatically close. Place Containment Spray Mode Select switch in MANUAL, and reopen the E11-F024A and E11-F028A valves.
- c. E11-F024A, Div 1 RHR Torus Clg Iso. and E11-F028A, Div 1 RHR Torus Iso Vlv. will automatically close. Place Containment Spray Mode Select switch in MANUAL and Containment Spray 2/3 Core Height Override keylock switch in MANUAL OVERRIDE and reopen the E11-F024A and E11-F028A valves.
- d. E11-F024A, Div 1 RHR Torus Clg Iso. and E11-F028A, Div 1 RHR Torus Iso Vlv. will automatically close and RHR pump "A" will trip. Place Containment Spray Mode Select switch in MANUAL, restart RHR Pump "A" and reopen the E11-F024A and E11-F028A valves.

ANSWER

b.

REFERENCE

23.205

MEMORY

NEW

RO Question 72 / SRO Question 73

Question # 088
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 2.1.28 234000

QUESTION

Select the response that correctly completes the following statement.

The refueling interlocks ensure that _____ does not occur during fuel handling operations by preventing _____.

- a. inadvertent criticality, control rod withdrawal whenever fuel loading equipment is over the core
- b. inadvertent criticality, control rod withdrawal whenever fuel loading equipment is energized
- c. excessive iodine gas release, refueling hoist movement when fuel pool level is below 22' 8"
- d. excessive iodine gas release, withdrawal of any control rods with the Mode Switch in the REFUEL position

ANSWER

a.

REFERENCE

ST-OP-315-0190-001

HIGHER

BANK

RO Question 85 / SRO Question 74

Question # 089
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 216000K412

QUESTION

During a severe pressure and level transient the control room NSO observes the following:

- The Division I SRV OPEN sealed-in light is on.
- The Division I scram pressure sealed-in light is on.
- Neither light is lit for Division II.

How will the plant respond?

- a. Neither SRV A nor G will open at their Low-Low Set setpoints.
- b. With increasing pressure, both SRV A and G will open at 1017 psig.
- c. With increasing pressure SRV A will open at 1017 psig, SRV G will open at 1047 psig.
- d. With increasing pressure SRV A will open at 1017 psig, SRV G will not open at its Low-Low set setpoint.

ANSWER

d.

REFERENCE

ST-OP-315-0005

23.601 Rev. 26

MEMORY

BANK

RO Question 74 / SRO Question 81

Question # 090
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 245000A408

QUESTION

The Turbine Oil System is in operation with the North AC Main Oil Pump operating. What condition would result from an operator closing N30-F037 Turbine Oil Pressure Control Valve?

- a. South AC Main Oil Pump STARTS, DC Emergency Oil Pump STARTS
- b. DC Emergency Oil Pump STARTS, North AC Main Oil Pump TRIPS
- c. DC Emergency Oil Pump STARTS, Jacking Oil Supply Pump STARTS
- d. South AC Main Oil Pump STARTS, Jacking Oil Supply Pump STARTS

ANSWER

a.

REFERENCE

ST-OP-315-0034-001

MEMORY

BANK

RO Question 75 / SRO Question 75

Question # 091
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 286000K505

QUESTION

Which of the following conditions will cause the Diesel Fire Pump to automatically start?

- a. Loss of power to the electric fire pump
- b. < 110 psig in the fire header
- c. Loss of general service water pumps
- d. Initiation of a dry-pipe sprinkler system

ANSWER

b.

REFERENCE

ST-OP-315-0072-001

MEMORY

BANK

RO Question 79 / SRO Question 77

Question # 092
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 2.1.30 256000

QUESTION

The plant has just completed a refueling outage and system lineups to support plant startup are being performed. The CRNSO is placing the Condensate system in short cycle cleanup in accordance with 23.107 Section 4.2. After the N20-F400, Cond F/D Bypass Valve has been manually opened, which of the following is the preferred method of beginning a fill and vent of the condensate system?

- a. Fully open N2000-F604, (F605, F606), N(C, S) Cndr Pump Discharge Iso Valve, from the Control Room.
 - Start associated Condenser Pump Room Fan Cooling Unit.
 - Start the associated N(C,S) Condenser Pump.

- b. Manually open N2000-F604, (F605, F606), N(C, S) Cndr Pump Discharge Iso Valve, to approximately 10% open
 - Start associated Condenser Pump Room Fan Cooling Unit.
 - Start the associated N(C,S) Condenser Pump.

- c. Locally open N2000-F266, Center Condenser Pump Discharge Isolation 6" Bypass Valve, three turns.
 - Start associated Condenser Pump Room Fan Cooling Unit.
 - Place Keylock Bypass Switch in BYPASS.
 - Start the Center Condenser Pump.

- d. Start associated Condenser Pump Room Fan Cooling Unit.
 - Start the N(C,S) Condenser Pump.
 - Immediately open N2000-F604, (F605, F606), N(C, S) Cndr Pump Discharge Iso Valve fully from the Main Control Room.

ANSWER

c.

REFERENCE

23.107

ST-OP-315-006-001

MEMORY

NEW

RO Question 76 / SRO Question 82

Question # 093
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 300000K104

QUESTION

The plant is operating at 100% power. The Center Station Air Compressor is running, and the East Station Air Compressor is in AUTO. How would the Station Air System respond if all TBCCW flow is lost to the Station Air Compressors?

- a. The Center compressor will continue to run until it trips on high temperature, then the East compressor will auto start and run until it trips on high temperature.
- b. The Center compressor will continue to run until it trips on high temperature, and the East compressor will not start due to low TBCCW flow.
- c. The Center compressor will trip on low TBCCW flow, then the East compressor will auto start and run until it trips on high temperature.
- d. The Center compressor will trip on low TBCCW flow, and the East compressor will not start due to low TBCCW flow.

ANSWER

c.

REFERENCE

ST-OP-315-0071-001

MEMORY

BANK

RO Question 82 / SRO Question 78

Question # 094
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 400000A401

QUESTION

Concerning the RBCCW/EECW System, which ONE of the following describes the sequence of events that will occur when there is a Loss of Off-Site Power (LOP)?

- a. White Emergency Mode Light comes on, EDG Output Breakers close, Supply and Return Header Isolation Valves close, EECW Pumps start.
- b. RBCCW Pumps trip, EDG Output Breakers close, EECW Make-Up Tank Isolation Valves close, EECW Pumps start.
- c. White Emergency Mode Light comes on, EECW Make-Up Tank Isolation Valves open, EDG Output Breakers close, EECW Pumps start.
- d. RBCCW Pumps trip, Supply and Return Header Isolation Valves close, EDG Output Breakers close, EECW Pumps start.

ANSWER

a.

REFERENCE

ST-OP-315-0067-001

HIGHER

BANK

RO Question 83 / SRO Question 79

Question # 095
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 2.4.46 295033

QUESTION

The plant is operating at 100% power. The following alarm is observed:

16D6 REAC/AUX BLDG FIRST FLOOR HIGH RADN

H11-P816 panel indicates an alarm on:

Channel 12 - First floor RB neutron monitoring equipment room

Which one of the following plant conditions would be consistent with these indications?

- a. Transversing incore probes are being operated
- b. A steam leak has developed in the RCIC steam piping
- c. Spent fuel handling operations are in progress
- d. SRMs are being withdrawn for post maintenance testing

ANSWER

a.

REFERENCE

ARP 16D6

ST-OP-315-0051

MEMORY

BANK

RO Question 84 / SRO Question 80

Question # 096
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 288000K403

QUESTION

A Reactor Building HVAC Freeze Stat fails low. Which of the following statements best describes plant response?

- a. The Standby Gas Treatment System automatically starts.
- b. The operating Reactor Building Supply and Exhaust fans trip.
- c. Control Center HVAC automatically shifts to the Recirc Mode.
- d. The operating Reactor Building HVAC Booster Exhaust fan trips

ANSWER

b.

REFERENCE

23.426, 17D67

MEMORY

BANK

RO Question 86 / SRO Question 83

Question # 097
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 2.1.3

QUESTION

In accordance with MOP07, Shift Turnover, who does Short Term Relief apply to?

- a. STA/SM
- b. SM/CRS
- c. CRS/CRNSO
- d. P603/CRNSO

ANSWER

c.

REFERENCE

MOP07

MEMORY

BANK

RO Question 88 / SRO Question 84

Question # 098
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 2.1.29

QUESTION

Performance of a pre-startup valve lineup will involve aligning a valve that is to be locked CLOSED. The valve in question is located in a contaminated work area. In this situation, independent verification of valve position _____.

- a. may be waived by the CRS to conserve man-rem rather than require two individuals to enter the contaminated area
- b. should be performed by hands on checking of the valve position without removing or breaking the locking device
- c. is performed by removing the locking device, checking the valve position, and re-installing the locking device
- d. is accomplished by visual verification that the locking device is properly installed

ANSWER

b.

REFERENCE

MOP02

HIGHER

BANK

RO Question 90 / SRO Question 88

Question # 099
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 2.2.13

QUESTION

Which one of the following is required when a visible break cannot be used to disconnect a piece of equipment from its power supply?

- a. Independent verification of the danger tag.
- b. An approved grounding device installed on the load side.
- c. An approved blocking device and a method for determining that power is removed.
- d. A safety observer is stationed for all work performed on the equipment.

ANSWER

c.

REFERENCE

MOP12

MEMORY

BANK

RO Question 92 / SRO Question 90

Question # 100
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level B
K/A 2.2.30

QUESTION

Which of the following statements is a Technical Specification/Technical Requirement Manual requirement when moving fuel during Core Alterations?

- a. Direct communications shall be maintained between the Refueling Platform and the Control Room.
- b. The Refueling Platform is the only lifting device permitted to transport fuel.
- c. The Fuel Preparation Machines may not be used for storing fuel.
- d. Blade Guides shall not be used in the Reactor Core.

ANSWER

a.

REFERENCE

Technical Specifications

Technical Requirements Manual

82.000.04

HIGHER

BANK

RO Question 93 / SRO Question 92

Question # 101
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 295006K201

QUESTION

The plant is in a refueling outage. The crew is planning to withdraw a control rod on a fueled cell. All prerequisites have been met.

- Core reload.....complete
- Core Independent Verification.....complete
- Strongest rod out subcritical check...not complete
- RPV level.....21 feet above RPV flange
- Shutdown Cooling (SDC)..... in service

RPS Bus 'A' is deenergized due to personnel error. Which of the following describes the effect on the plant?

- a. No effect
- b. Half-scam on RPS Division 1
- c. A half-scam on RPS Division 1 and SDC isolation
- d. A full scam and SDC isolation

ANSWER

d.

REFERENCE

ST-OP-315-0027

82.000.04

23.316

HIGHER

NEW

SRO Question 2

Question # 102
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 295010A206

QUESTION

The plant was operating at 100% when, due to an operator error, the Drywell (DW) Fan Master CMC switch for Division 1 DW Cooling fans was placed in All Stop.

The following conditions exist:

- Alarm 8D41 "Div 1 High Drywell Temperature".....lit
- Alarm 17D41 "Div 2 High Drywell Temperature".....lit
- Confirmed Average Drywell Temperature.....138 deg F
- Drywell Pressure.....0.41 psig

What actions should the CRS direct?

- a. Enter 29.100.01 Sheet 2, Primary Containment Control, and operate all available DW cooling
- b. Enter 29.100.01 Sheet 2, Primary Containment Control, and shutdown Reactor Recirc pumps
- c. Start all available DW fans and monitor DW temperature and pressure
- d. Lower DW pressure per 23.415, Primary Containment Nitrogen Inerting and Purge, and monitor DW temperature and pressure

ANSWER

c.

REFERENCE

EPG Bases, 29.100.01 Sheet 2

ARP 8D41

ARP 17D41

HIGHER

NEW

SRO Question 7

Question # 103
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 295013A102

QUESTION

The Control Room crew is performing 24.202.01, HPCI Pump Time Response and Operability Test At 1025 PSI when Torus Temperature reaches 106 deg F.

What action is required and why?

- a. Suspend 24.202.01 to preserve heat absorption capability of the torus.
- b. Scram the reactor to prevent exceeding the design basis of the torus.
- c. Start RHR torus spray to preserve heat absorption capability of the torus
- d. Enter 29.100.01 Sheet 2 to prevent exceeding the design basis of the torus

ANSWER

a.

REFERENCE

ST-OP-315-0039-001

Tech Spec 3.6.2.1

Tech Spec Basis B.3.6.2.1

HIGHER

MODIFIED

SRO Question 8

Question # 104
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.1.7

QUESTION

A reactor startup is in progress after a forced outage.

The P603 Operator is pulling rods to raise RPV pressure.

An extra operator is in the process of starting the North Reactor Feed Pump (RFP) in accordance with 22.000.02, PLANT STARTUP TO 25% POWER

The following conditions exist:

- RPV Pressure.....450 psig
- Bypass Valves.....closed
- RPV Level.....197 inches
- Reactor Pressure Regulator setpoint.....475 psig

During the warmup, the operator inadvertently opens N2100-F607, N RFP DISCH LINE ISO VALVE.

Based on these conditions, how will the reactor respond, and what action should the CRS direct?

- a. The fuel temperature coefficient will react first to stop the power increase. Stop all rod movement.
- b. The fuel temperature coefficient will react first to cause the power increase. Trip the RFP.
- c. The moderator temperature coefficient will react first to stop the power increase. Place Mode Switch in Shutdown.
- d. The void coefficient will react first to stop the power increase. Isolate the Startup Level Control Valve.

ANSWER

a.

REFERENCE

Generic Fundamentals

MOP19

HIGHER

NEW

SRO Question 9

Question # 105
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 295015K102

QUESTION

Heavy thunderstorms just caused a load-reject from 100% power. The reactor conditions are:

- APRM Power stable at 20%
- No indications of control rod position
- Recirc pumps tripped
- All MSIVs are open
- Reactor Level being maintained by feedwater
- Reactor Pressure being maintained through Turbine Bypass Valves
- Mode switch in SHUTDOWN

What is the first action the CRS should direct and why?

- a. Inhibit ADS to prevent a reactivity addition and possible core damaging power excursion.
- b. Bypass and restore drywell pneumatics to maintain the condenser as a heat sink.
- c. Terminate and prevent to prevent high core inlet subcooling.
- d. Order 29.ESP.11 for MSIVs to prevent possible discharge of radionuclides to the suppression pool.

ANSWER

a.

REFERENCE

29.100.01
ST-OP-802-3003-001
HIGHER
BANK
SRO Question 11

Question # 106
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.4.16 295016

QUESTION

The plant was operating at full power when a fire in the Relay Room occurred. This resulted in the spurious operation of numerous components and smoke in the control room. A loss of offsite power also occurred resulting in an EOP entry condition on low RPV water level. Given these conditions, what procedure will provide the control room staff with the best guidance for coping with this event?

- a. 29.100.01 SH 1 RPV CONTROL
- b. 29.100.01 SH 2 PRIMARY CONTAINMENT CONTROL
- c. 20.000.18 SHUTDOWN FROM THE DEDICATED SHUTDOWN PANEL
- d. 20.000.19 SHUTDOWN FROM OUTSIDE THE CONTROL ROOM

ANSWER

c.

REFERENCE

20.000.18

20.000.19

20.000.18 Bases

HIGHER

NEW

SRO Question 14

Question # 107
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.3.11 295017

QUESTION

Which one (1) of the following is the reason that the preferred Emergency Primary Containment Vent path is through the torus?

- a. To cool the vented gases.
- b. To reduce the hydrogen released.
- c. To minimize release of Nitrogen
- d. To reduce the radiation released.

ANSWER

d.

REFERENCE

EPG Bases
ST-OP-802-3005
29.100.01 SH 5
HIGHER
BANK
SRO Question 15

Question # 108
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 295024A120

QUESTION

The plant has experienced a LOCA. The following conditions exist:

- RPV level.....100 inches
- Reactor Building Pressure.....-0.58 inches wc
- Control Room HVAC.....Recirc
- Reactor Building HVAC Supply fan.....Off
- Reactor Building HVAC Exhaust fan.....Off
- 8D46 DIV 1 REACTOR BLDG PRESSURE HIGH/LOW.....Alarm
- 17D46 DIV 2 REACTOR BLDG PRESSURE HIGH/LOW...Alarm

What is the cause of Alarms 8D46 and 17D46 and what action should be taken?

- a. Standby Gas Treatment is running, shut down one train of Standby Gas Treatment
- b. Standby Gas Treatment failed to start, initiate Standby Gas Treatment
- c. Reactor Building HVAC is isolated, start Reactor Building HVAC supply and return fans
- d. Reactor Building HVAC is not isolated, isolate Reactor Building HVAC

ANSWER

a.

REFERENCE

ST-OP-315-0020
ARP 8D46, 17D46
23.404
HIGHER
NEW
SRO Question 17

Question # 109
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 295019K302

QUESTION

While the plant is operating at full power, annunciator 7D50, Div I/II Control Air Compressor Auto Start, is received. Immediately following receipt of this annunciator, plant conditions were:

RPV Pressure.....1024 psig and stable
RPV Level.....197 in and stable
Reactor Power.....100% and stable
Both RR MG Sets.....77% speed with no limiter in effect
Station Air Header Pressure.....79 psig

Which one of the following identifies the cause of the annunciator 7D50 and the initial response to take?

- a. The Control Air Compressor started on Station Air pressure less than 80 psig. Dispatch an operator to cross-connect IAS to Div 2 NIAS.
- b. The Control Air Compressor started on Control Air header pressure less than 80 psig. Dispatch an operator to cross-connect IAS to Div 2 NIAS.
- c. The Control Air Compressor has started on Control Air pressure less than 85 psig. Enter 20.129.01, Loss of Station and/or Control Air.
- d. The Control Air Compressor started on Station Air header pressure less than 90 psig. Enter 20.129.01, Loss of Station and/or Control Air.

ANSWER

c.

REFERENCE

ST-OP-315-071-001

ARP 7D50

AOP 20.129.01 Bases

HIGHER

BANK

SRO Question 33

Question # 110
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.1.11 295035

QUESTION

The Plant is in Mode 5 with movement of recently irradiated fuel in progress on the Refueling Floor. Secondary Containment is declared inoperable due to Reactor Building (RB) vacuum out of spec. What action must be taken?

- a. Verify at least one door in each RB access is closed within 1 hour.
- b. Restore Secondary Containment pressure within 1 hour.
- c. Start both divisions of Standby Gas Treatment System immediately.
- d. Suspend the fuel movement immediately.

ANSWER

d.

REFERENCE

Technical Specifications 3.6.4.1

LP-OP-315-0120

HIGHER

NEW

SRO Question 41

Question # 111
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 211000K408

QUESTION

The plant has experienced an ATWS event, and the CRS has ordered the P603 Operator to inject Standby Liquid Control (SLC).

Plant conditions are as follows:

- Reactor pressure.....950 psig
- Reactor power.....18%
- Torus temperature.....122oF
- SLC pump A discharge pressure.....560 psig
- SLC pump B.....tagged, disassembled
- SLC Tank level70 in, slowly lowering

What is the cause of these conditions, and what action should the CRS direct?

- a. SLC is not injecting due to a system leak, perform Alternate Boron Injection.
- b. SLC is not injecting due SLC Pump A relief valve lifting, gag the relief valve to inject.
- c. SLC is injecting, inject Cold Shutdown Boron Weight into RPV.
- d. SLC is injecting, verify RWCU isolated.

ANSWER

a.

REFERENCE

29.100.01 Sheet 1A

ST-OP-0315-0014

23.139

MEMORY

BANK

SRO Question 48

Question # 112
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 201006A401

QUESTION

A plant startup has just started. During withdrawal of the fifth control rod on Sheet 1 of the Rod Pull Sheets, the RWM became inoperable. The RWM was inoperable during a startup 2 months ago, and the startup continued with control rod movement compliance verified by a second licensed operator. What action is required by Technical Specifications for this condition?

- a. Immediately insert all insertable control rods
- b. Suspend control rod movement except by scram
- c. Continue reactor startup with rod movement verified by a qualified member of the technical staff
- d. Continue reactor startup with permission of Reactor Engineer and Shift Manager

ANSWER

b.

REFERENCE

ST-OP-315-0013-001

Technical Specification 3.3.2.1

MEMORY

BANK

SRO Question 67

Question # 113
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.1.7

QUESTION

Two minutes after a small steam leak develops inside the drywell, the following conditions exist:

- Drywell pressure.....3.0 psig.
- Reactor pressure.....750 psig and lowering.
- RPV level.....170 inches and rising.
- HX A Bypass Cont E11-F048A.....white Sealed In light
- E11-F015A, E11-F017A.....white Close light
- HX B Bypass Cont E11-F048B.....white Sealed In light

Based on these conditions, which loop is selected for injection, and which Division of RHR should be used for Primary Containment (PC) control?

- a. A loop selected for injection, Division 1 RHR for PC control.
- b. B loop selected for injection, Division 1 RHR for PC control.
- c. A loop selected for injection, Division 2 RHR for PC control.
- d. B loop selected for injection, Division 2 RHR for PC control.

ANSWER

b.

REFERENCE

ST-OP-315-041-001

23.205

23.601

MEMORY

BANK

SRO Question 85

Question # 114
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.1.10

QUESTION

Which one of the following is a correct Safety Limit statement per the Technical Specifications?

- a. The Reactor Vessel Water Level shall be greater than the top of the active irradiated fuel in all modes.
- b. The Minimum Critical Power Ratio shall not be less than the Safety Limit MCPR of 1.08 for two recirculation loop operation.
- c. The reactor coolant system pressure shall not exceed 1375 psig as measured in the the reactor vessel steam dome.
- d. Thermal Power shall not exceed 25% of the Rated Thermal Power with the reactor vessel steam dome pressure less the 785 psig or core flow less than 15% of the rated flow.

ANSWER

a.

REFERENCE

Tech Specs 2.1 Safety Limits
ST-OP-315-003-001

MEMORY

BANK

SRO Question 86

Question # 115
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.1.22

QUESTION

Is it possible for the plant to be in Cold Shutdown without meeting all of the Cold Shutdown conditions?

- a. No, Technical Specifications clearly state conditions required for the Cold Shutdown mode of operation.
- b. Yes, although Technical Specifications state conditions required for the Cold Shutdown mode of operation, the SM is permitted to take reasonable exception to the requirements.
- c. Yes, with only one head bolt less than fully tensioned, Cold Shutdown is still maintained.
- d. Yes, average coolant may be > 200oF during the performance of Inservice Leak and Hydrostatic Testing.

ANSWER

d.

REFERENCE

Technical Specifications Table 1.1-1

Technical Specification 3.10.1

MEMORY

BANK

SRO Question 87

Question # 116
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.2.22

QUESTION

The plant is operating at 95% power raising to 100% rated power. A failure on the air supply to the 'A' Heater Drain Recirc line results in a loss of feedwater heating and entry into AOP 20.107.02. The Reactor Engineer is contacted and runs a Thermal Limits Calculation and determines that the MCPR safety limit is exceeded. Which of the following describes the correct actions to be taken for this condition?

- a. No action is required.
- b. Restore MCPR to within the limits within one (1) hour and notify the plant manager within 24 hours.
- c. Restore MCPR to within the limits and insert all insertable control rods within two (2) hours.
- d. Restore MCPR to within the limits within two (2) hours and continue the plant startup, otherwise be in Hot Shutdown within six (6) hours.

ANSWER

c.

REFERENCE

Tech Specs 2.1.1.2

Tech Specs 2.2

MEMORY

MODIFIED

SRO Question 89

Question # 117
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.2.29

QUESTION

During refueling operations a Refuel Floor Log is maintained. Who has the shared responsibility for maintaining this log in accordance with procedure MOP13, Conduct of Refueling and Core Alterations?

- a. Refuel Floor Supervisor and Supervisor Reactor Engineering
- b. Refuel Floor Supervisor and Station Nuclear Engineer
- c. Refuel Floor Coordinator and Fuel Movement Verifier
- d. Refuel Floor Coordinator and Refuel Floor Supervisor

ANSWER

d.

REFERENCE

MOP13 Conduct of Refueling and Core Alterations

MEMORY

BANK

SRO Question 91

Question # 118
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.3.1

QUESTION

A Nuclear Operator has received 975 mrem TEDE for the current year. The NO is needed to perform work in a 20 mrem/hr field. The work is expected to last 1.5 hours. In accordance with MRP12 of the Radiation Protection Manual, the worker requires which ONE (1) of the following?

- a. No special authorization since the annual administrative limit should not be exceeded.
- b. Authorization from the Shift Manager, the Section Head and the Radiation Protection Manager since the annual administrative dose limit will be exceeded.
- c. Authorization from the Section Head, the Radiation Protection Manager and Plant Manager since the annual administrative dose limit will be exceeded.
- d. Authorization from the Radiation Protection Manager, the Plant Manager and the Vice President Nuclear Generation since the annual administrative dose limit will be exceeded.

ANSWER

c.

REFERENCE

ST-GN-508

MRP12

HIGHER

NEW

SRO Question 93

Question # 119
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.3.2

QUESTION

A safety related component in the Reactor Building has been manipulated to return a system to operable status after maintenance. The component is in an area where there is an airborne radioactivity hazard. The person who would independently verify the lineup would receive exposure of .1 DAC. The SM may:

- a. NOT waive the independent verification, as it is always required.
- b. waive the independent verification due to the excessive airborne exposure hazard.
- c. NOT waive the independent verification since the exposure is not considered excessive.
- d. waive the independent verification provided concurrence is obtained from another SRO.

ANSWER

c.

REFERENCE

MOP 02, Independent Verification

HIGHER

BANK

SRO Question 94

Question # 120
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.3.4

QUESTION

During a declared emergency, a leak develops in an area that is accessible, but now radiologically contaminated. The SM has directed that an investigation be performed immediately. What are the RWP requirements for entry into the area for investigation?

- a. A revision to the General RWP for that area must be issued.
- b. A written Specific RWP must be issued.
- c. A verbally issued RWP may be used for timely plant response.
- d. A General RWP already exists for this type of event.

ANSWER

c.

REFERENCE

MRP05, ALARA/RWPS

HIGHER

MODIFIED

SRO Question 95

Question # 121
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.3.7

QUESTION

In accordance with MRP05 ALARA/RWPS, if an RWP request is for a task that is Preventative Maintenance, surveillance, work request, or a scaffold request, the package should be sent to Radiation Protection for review at least: _____, before starting work.

- a. 12 hours
- b. 24 hours
- c. 48 hours
- d. 72 hours

ANSWER

c.

REFERENCE

NOC

MRP05, ALARA/RWPS

Memory

NEW

SRO Question 96

Question # 122
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 209001A301

QUESTION

The plant was operating at full power when it experienced a steam leak in the 'A' Main Steam line, causing an increase in Primary Containment pressure. Assuming the plant experiences a Scram on High Drywell Pressure, what will be the response of the Low Pressure Coolant Injection (LPCI) system?

- a. When RPV pressure decreases to 461 psig, LPCI lines up for injection to Loop A.
- b. When RPV pressure decreases to 461 psig, LPCI lines up for injection to Loop B.
- c. When RPV pressure decreases to 905 psig, Recirc Pump A is tripped.
- d. When RPV pressure decreases to 905 psig, LPCI Loop B injection valves close.

ANSWER

b.

REFERENCE

23.205

ST-OP-315-041-001

23.601

HIGHER

NEW

SRO Question 97

Question # 123
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 272000A201

QUESTION

The plant is operating at 100% power. The following conditions exist:

- Main Steamline Radiation Monitors A, B, C, and D all indicate 19,000 mr/hr
- Off Gas Radiation Monitor indicates 800 mr/hr increasing
- RBHVAC Radiation Monitor indicates 10,000 cpm

(1)What caused these conditions, (2)what is the expected plant response and (3)what actions should the CRS take?

- a. (1) A fuel clad failure has occurred
(2) 1/2 Scram and 1/2 Group 1 Isolation.
(3) Enter 20.000.07, Fuel Clad Failure
- b. (1) A fuel clad failure has occurred
(2) Reactor Scram and a Group 1 Isolation.
(3) Enter 20.000.07 Fuel Clad Failure, 20.000.21 Reactor Scram , and RPV Control EOP.
- c. (1) A Steam line break in the TB Tunnel
(2) RBHVAC System Isolation and SGTS Initiation.
(3) Enter 20.000.02, Abnormal Release of Radioactive Material and Secondary Containment Control EOP
- d. (1) Both a fuel clad failure and a Steam line break in the TB steam leak have occurred.
(2) MSIV Isolation, Reactor Scram, Off Gas Isolation, RBHVAC System Isolation and SGTS Initiation.
(3) Enter 20.000.07, Fuel Clad Failure, 20.000.02, Abnormal Release of Radioactive Material, RPV Control & Secondary Containment Control EOPs.

ANSWER

b.

REFERENCE

ARPs : 3D12, 3D32, 3D82

20.000.07

ST-OP-315-0050-001

MEMORY

BANK

SRO Question 98

Question # 124
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.4.16

QUESTION

During full power operation, a Station Blackout has occurred. The following conditions exist:

- Drywell temperature.....300 deg F
- RPV pressure.....273 psig
- Reactor power.....all rods fully inserted
- RCIC.....tagged out and disassembled
- HPCI.....tripped on overspeed and will not restart

Given these plant conditions, the EOPs direct entry into the SAG when :

- a. Only 3 SRVs can be opened.
- b. RPV water level cannot be restored and kept above TAF.
- c. Injection flow cannot increase RPV pressure above 215 psig.
- d. RPV water level cannot be restored and kept above -28 inches.

ANSWER

d.

REFERENCE

EOP 29.100.01 SH 1, Rev. 8 (Step L-22)

EOP 29.100.01 SH 6, Rev. 7 (RPV Sat Temp)

HIGHER

BANK

SRO Question 99

Question # 125
Exam Date 2003/03/17
*FAC 341
Reactor Fermi U2/BWR-GE4
Exam Level S
K/A 2.4.46 212000

QUESTION

The plant is operating at 100% power steady state conditions. There is no equipment out of service, when several alarms, including the following are received:

- 3D73 TRIP ACTUATORS A1/A2 TRIPPED
- 3D75 REACTOR VESSEL HIGH PRESS CHANNEL TRIP
- 3D79 REAC VESSEL WATER LEVEL L3 CHANNEL TRIP
- 3D85 PRIMARY CONTAINMENT HIGH PRESS CHANNEL TRIP
- 3D86 MN STM LINE ISO VALVE CLOSURE CHANNEL TRIP

Power, pressure and level remain stable. (1)What caused these alarms, and (2)what action should the CRS direct for this condition?

- a. (1) A small break LOCA has occurred.
(2) Inform the control room staff, "Entering the RPV Control and Primary Containment Control EOP's based on High Primary Containment Pressure".
- b. (1) An MSIV isolation has occurred.
(2) Inform the control room staff, "Entering the RPV Control EOP based on High Reactor Pressure."
- c. (1) The "A" RPS MG set has tripped.
(2) Direct placing Division 1 of RPS on its alternate transformer.
- d. (1) The "B" RPS MG set has tripped.
(2) Direct placing Division 2 of RPS on its alternate transformer.

ANSWER

c.

REFERENCE

ST-OP-315-0027-001

23.316

9D70

HIGHER

NEW

SRO Question 100