

NRC Proposed Written Examination with Facility Comments FOR THE QUAD CITIES EXAM - AUG 2001

Clean copy

*QNUM 001
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR S
*QVAL 1.00
*SEC
*SUBSORT
*KA 295028 2.4.20
*QUESTION

Provide cure
write new RO.

Which one of the following is (are) the consequence(s) of initiating DRYWELL SPRAY at a drywell temperature of 325 deg F and pressure of 30 psig?

- a. Convection cooling resulting in a nearly instantaneous pressure drop to about 2 psig.
- b. Convection Cooling creating an 8.4 psid across the downcomer, but is buffered by the mass of Nitrogen in the drywell.
- c. Evaporative cooling resulting in drywell pressure reducing to less than 2 psig and possible collapse of the downcomer legs in the torus.
- d. Evaporative Cooling resulting in drywell pressure reducing to less than 2 psig and possible implosion of the Torus due to negative pressure.

*ANSWER

c.

*REFERENCE

LP QGA Details and Calculations, Section III.C.3, Rev Jan 2000

295028 2.4.20

Modified (Dresden Bank)

Higher

QGA basis knowledge required for RO?
Is it required to memorize curve?

Specific consequences from this is not clear
in reference material - wasn't apparent
in QGA lesson plans or EPG bases.

agreed - new RO question generated, changed B to S

13290, 76

OK

*QNUM 002
 *HNUM
 *ANUM
 *QCHANGED FALSE
 *ACHANGED FALSE
 *QDATE 2001/08/06
 *FAC 254
 *RTYP BWR-GE3
 *EXLEVEL R
 *EXMNR
 *QVAL 1.00
 *SEC
 *SUBSORT
 *KA 295007A201
 *QUESTION

The reactor was operating at 25% power when all Inboard MSIVs inadvertently shut. The MSIV closure scram signal was NOT generated. Which of the following scram signals would be generated next if there were no operator actions taken?

- a. Turbine Control Valve Fast Closure
- b. Reactor Vessel Steam Dome Pressure - High
- c. Intermediate Range Monitors Neutron Flux - High
- d. Average Power Range Monitor Neutron Flux - Upscale Setdown

*ANSWER
 b.

*REFERENCE
 T.S. Table 3.3.1.1-1
 Modified
 Higher

*word same as TS for
 distractor d.*

agreed. replaced upscale setdown with High

*QNUM 003
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295014 2.1.12
*QUESTION

The plant has been operating at 100% power for 156 days. Which of the following actions is required when a review of operating logs ~~during shift turnover~~ shows that MCPR was 1.09 for two hours during the previous shift? It is currently 1.13 and increasing.

- a. Have the NSO scram the reactor immediately.
- b. ~~Begin placing the reactor in HOT SHUTDOWN.~~
- c. Continue operations, notify the NRC within 4 hours.
- d. Continue operations, no limits have been exceeded.

*ANSWER
b.
*REFERENCE
TS sect 2.0
295014 2.1.12
Modified
Higher

by QIVE

Insert all insertable control rods in 2 hours

Word same as Tech Specs

agreed. Made requested change

*QNUM 004
 *HNUM
 *ANUM
 *QCHANGED FALSE
 *ACHANGED FALSE
 *QDATE 2001/08/06
 *FAC 254
 *RTYP BWR-GE3
 *EXLEVEL R
 *EXMNR
 *QVAL 1.00
 *SEC
 *SUBSORT
 *KA 295010A202
 *QUESTION

An unisolable reactor coolant leak on Unit 2 has resulted in a reactor scram and a rapid increase in drywell pressure. The ~~Shift~~ Supervisor has just entered the QGAs to take action to mitigate the leak. Plant conditions are as follows: *→ Unit*

- All rods are inserted
- Torus pressure = 4 psig
- Torus level is above normal, but less than 20 feet
- All automatic plant functions have performed properly
- HPCI is maintaining reactor level at 0 inches

Select the correct action that the ~~Shift~~ Supervisor should direct in order to control ~~drywell~~ *Unit* pressure in accordance with the QGAs. *primary Containment*

- a. Initiate torus sprays only.
- b. Initiate drywell sprays only.
- c. Initiate torus and drywell sprays.
- d. No action is required until torus pressure exceeds 5 psig

*ANSWER

a.

*REFERENCE

QGA-200 Primary Containment Leg

Modified

Higher

Is RO expected to know steps in QGA? or should reference be provided?

Made requested word changes. No reference provided. Basic system knowledge was being tested.

*QNUM 005
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295006 2.2.22
*QUESTION

While operating at 60% rated thermal power, an EHC failure caused all of the Turbine Bypass Valves to open. The MSIVs did not close until reactor pressure reached 745 psig, causing a reactor scram. RPV level decreased to -8 inches, but was restored and is being maintained at the normal post-scram water level (no operator action). Pressure is being controlled by SRVs. Which of the following describes this condition?

- a. No safety limit has been exceeded.
- b. The Reactor Core Safety Limit has been exceeded.
- c. The Reactor Vessel Water Level Safety Limit has been exceeded.
- d. The Reactor Coolant System Pressure Safety Limit has been exceeded.

*ANSWER

b.

*REFERENCE

Technical specification 2.0

295006 2.2.25

modified

higher

No comments

*QNUM 006
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295025K302
*QUESTION

The reactor was operating at full power when an MSIV isolation occurred. No control rods inserted due to blockage of the scram discharge volumes. Reactor pressure was observed to have reached 1425 psig. Which one of the following will automatically trip and **CANNOT** be restarted during this transient?

- a. Reactor recirc pumps
- b. Reactor feedwater pumps
- c. Reactor core isolation cooling (RCIC)
- d. Residual heat removal (RHR) pumps (suppression pool cooling mode)

*ANSWER

a.

*REFERENCE

LP IF-0202 Appendix A

bank

memory

→ Why emphasized?

Policy is to highlight any NOT

*QNUM 007
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 201001A212
*QUESTION

Given the following:

- Unit 2 is at 75% power
- At 0600 Control rod movements per QNE were completed
- Control rod J-08 in-sequence position is "36"
- At 0715 Control rod J-08 is discovered at position "30"
- Control rod drive cooling water flow was noted to be high

latched

The operator should . . .

- a. reduce recirc flow 50 MWe, then contact a QNE.
- b. withdraw control rod J-08 to its in-sequence position, then notify a QNE.
- c. take action to reduce cooling water flow, insert control rod J-08 to position "00", then contact a QNE.
- d. take action to reduce cooling water flow, stop all control rod movements and recirc flow changes, and contact the Unit Supervisor.

*ANSWER

d.

*REFERENCE

QCOA 0300-4 Steps D1 & 2

201001A212

bank

higher

made change

*QNUM 008
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 201001 2.1.32
*QUESTION

Which one of the following describes why the charging water header to the Hydraulic Control Unit (HCU) should not exceed a MAXIMUM of 1510 psig?

- a. ensures control rod insertion speeds are not excessive on a scram, *thus preventing damage to the drive tubes or Belleville washers.*
- b. ensures control rod insertion speeds are not excessive during normal operations, *thus preventing damage - - -*
- c. prevents damage to the accumulator during a scram due to high differential pressures.
- d. avoids the possibility of exceeding the design pressure of the accumulator diaphragm/seals.

*ANSWER

a.

*REFERENCE

~~QCOP 1000-05, Step B.2~~

qc bank 11869

memory

add reason to "a" & "b"

References
QCOP 0300-23
LP LF 0302

made change to ensure all distractors looked the same.

*QNUM 009
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 216000A301
*QUESTION

The plant is operating at 100% power. While reviewing instrumentation on F-003, the NSO found the narrow range YARWAYS were reading approximately ~~twenty (20)~~ *thirty (30)* inches less than the wide range YARWAYS. Which one of the following statements correctly describes the reason for the level instrument discrepancy?

- a. The wide range level instrument is calibrated ~~without recirc pumps in service.~~ *reactor water level* *for no jet pump flow.*
- b. Level discrepancy is due to the physical difference in height of the reference legs.
- c. The wide range level instrument is calibrated to a lower reactor pressure and drywell temperature.
- d. The wide range level instrument is calibrated to a lower setting to provide conservative initiation of ECCS equipment.

*ANSWER

a.

*REFERENCE

TRNOPSLP\LIC-0263.R03

qc bank

memory

made requested changes.

*QNUM 010
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 239002A307
*QUESTION

The reactor was at 100% power with recirc control in master manual, feedwater control in single element, and EHC set at 920 psig. Select the plant parameter which would NOT change if a safety relief valve opened and stuck open (steady state to steady state):

- a. MWe
- b. Reactor power
- c. Reactor water level
- d. Turbine 1st stage pressure

*ANSWER

c.

*REFERENCE

LP LIC-0250 pp20

qc bank

higher

No comments

*QNUM 011
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 259001K301
*QUESTION

The standby reactor feed pump is out of service with the unit at 85% reactor power. If a running reactor feed pump trips, how will the plant and feedwater system respond. (Assume no operator action.)

a. The plant will remain critical; RPV level will initially decrease and then recover to normal value without a SCRAM.

b. The plant will remain critical; recirc flow will run back; RPV level will be maintained within the normal operating band.

c. The unit will SCRAM on low level. Following the SCRAM feed flow will be adequate to recover level.

d. The unit will SCRAM on low level. Following the SCRAM level will continue to decrease to the low level ECCS initiation setpoint.

*ANSWER

c.

*REFERENCE

LIC 2300, Feedwater & Condensate, Section I.1.a, pp 11

ILT.04364

modified

higher

No comments

*QNUM 012
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 259002A410
*QUESTION

The following conditions exist:

- The reactor has scrammed from 100% reactor power.
- ~~Setpoint Setdown logic has initiated.~~ +25
- Reactor water level has stabilized at ~~+18~~ inches.
- No operator actions have been taken.

What are the MINIMUM actions required to return reactor water level to the Master Level Controller setpoint?

- a. Successfully reset the scram.
- b. Restore RPV water level above the scram setpoint.
- c. ~~Depress the "SETPOINT SETDOWN" reset button at any time...~~
→ "Runout Flow Control" →
- d. Match the Master Level Controller to the current level then depress automatic on the Master Level Controller.

*ANSWER

a.

*REFERENCE

QCGP 2-3, Reactor Scram, Revision 35, Step F.3.a
modified
higher

+25" where low flow controller
need new distractor

replaced c. distractor as requested

*QNUM 013
 *HNUM
 *ANUM
 *QCHANGED FALSE
 *ACHANGED FALSE
 *QDATE 2001/08/06
 *FAC 254
 *RTYP BWR-GE3
 *EXLEVEL R
 *EXMNR
 *QVAL 1.00
 *SEC
 *SUBSORT
 *KA 264000 2.1.8
 *QUESTION

An auto start signal is present on the Unit One Diesel Generator. The diesel has failed to start from the control room. Power for Bus 14-1 is AVAILABLE. The diesel generator may be *auto* started by directing an E.O. to . . .

- a. manually open the feed breaker to Bus 14-1.
- b. place an HGA relay block in the auto start relay.
- c. manually close the tie breaker from 24-1 to 14-1.
- d. ~~press the diesel generator local start button for 15 seconds.~~

*ANSWER

b. *place the transfer switch to LOCAL.*

Find another distractor

*REFERENCE

QCOA 6600-01, Rev 11, Step D.3

264000 2.1.8

qc bank

higher

replaced distractor d. with an incorrect distractor.

this came from open reference question bank. subsequent action of QCOA

B and D both are correct choices

*QNUM 014
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 206000 2.1.32
*QUESTION

Auxiliary operators are required to make weekly HPCI pump discharge temperature checks to identify possible back-leakage into the HPCI system. What are the indications and consequences of back-leakage in to the HPCI system via the HPCI 7 (discharge check) valve?

a. A high HPCI pump suction pressure; HPCI would be INOPERABLE due to a high suction pressure isolation. This would be indicated by a HPCI GRP 4 PCI VLVS not open annunciator, 90X-3 C-10.

b. A high HPCI pump discharge pressure; the HPCI discharge relief valve would open, raising torus water level. This would be indicated by a high torus level alarm.

c. A high HPCI pump suction temperature; the HPCI pump could be full of hot water which could lead to cavitation if the system were to initiate. This may be indicated by high pump suction pressure or alarm.

d. A high HPCI pump discharge temperature; hot water in the discharge piping may result in elevated room temperatures requiring the U1 DGCWP to be started in order to maintain room temperatures less than the alarm setpoint.

*ANSWER

c.

*REFERENCE

LP LIC-2300, pp 59

206000 2.1.32

qc bank

higher

N. C.

*QNUM 015
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 264000A101
*QUESTION

Replace

While manipulating Unit EDG Heat Exchanger valves, a valving error occurred causing Panel 2251-10 alarm A3, Diesel Oil Temp Low, to alarm. The correct valve lineup has been established and engine oil temperature is rising. The operator pushed the reset button on the engine mounted control panel (2251-113) when lube oil temperature reached 87 deg F, but the alarm did not clear. When and how will this alarm clear?

The alarm will clear when oil temperature . .

- a. increases above 95 deg F, the alarm will reset automatically.
- b. increases above 90 deg F, and the NSO resets the control room alarm.
- c. increases above 90 deg F, and the engine mounted control panel is again reset.
- d. increases above 95 deg F, the LOTS sensor is reset, and the engine mounted control panel is again reset.

*ANSWER
d.
*REFERENCE
QCAN 2251(2)-10A3
modified
memory

*Relevancy of reset knowledge?
Requires memorization of in-plant
annunciator*

agreed w/ facility. Replaced question.

*QNUM 016
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.2.13
*QUESTION

A Shift Supervisor has authorized placement of a caution card on a sparge air compressor due to an oil leak. Who may ~~initiate corrective actions to remove~~ the caution card?

- authorize removal of*
- a. A ~~Shift Manager~~ *Unit Supervisor*
 - b. A System Engineer
 - c. A Nuclear Station Operator (NSO)
 - d. A Mechanical Maintenance Supervisor

*ANSWER

a.

*REFERENCE

~~find qc reference~~ *OP-AA-101-202*

2.2.13

bank

memory

*did not change stem. after discussion it was accepted by facility
changed distractor a. & reference*

*QNUM 017
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.1.29
*QUESTION

Which of the following Control Room Ventilation flowpaths is NOT ^{an} ~~a normal~~ operational flowpath? The B-train running . . .

- a. on outside air supply.
- b. in the recirculation mode.
- c. in the Smoke/Purge mode.
- d. in recirc with the Air Filtration Unit on.

*ANSWER

c.

*REFERENCE

LP LN-5752, p5

2.1.29

ILT.06091

bank

higher

delete word "normal"

made change. clarified question.

*QNUM 018
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295013A201
*QUESTION

Unit 2 was operating at 60% power with a HPCI surveillance in progress when the following annunciator was received:

- 3A TARGET ROCK RELIEF VLV OPEN

Assuming reactor pressure is normal, when would the crew be REQUIRED to initiate a manual reactor scram?

- a. When Torus Bulk Water Temperature reaches 95 deg F.
- b. When Torus Bulk Water Temperature reaches 105 deg F.
- c. Immediately AFTER verifying the safety relief valve (SRV) is actually open.
- d. Immediately, IF the SRV is actually open and it CANNOT be closed with the keylock switch.

*ANSWER

d.

*REFERENCE
QCAN 901(2)-3 D-13
ILT.10032
bank
memory

NC

*QNUM 019
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 201002K406
*QUESTION

The EMERGENCY IN position of the rod out notch override switch bypasses all interlocks that prevent rod insertion, EXCEPT those from the (1) and the select block. Functionally, it directly energizes the directional control valves by (2) .

- a. (1) rod worth minimizer insert block, (2) bypassing the timer.
- b. (1) rod position indication system inop, (2) bypassing the timer.
- c. (1) rod worth minimizer insert block, (2) stopping the timer at the drive in cycle.
- d. (1) rod position indication system inop, (2) stopping the timer at the drive in cycle.

*ANSWER

a.

*REFERENCE

LP LIC-0280 pp14

ILT.09735

bank

higher

NC

*QNUM 020
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 300000 2.1.28
*QUESTION

The ½ Instrument Air Compressor supplies air to . . .

- a. the ½ receiver.
- b. the unit 1 air system ONLY, downstream of the receivers.
- c. the unit 2 air system ONLY, downstream of the receivers.
- d. both units' air systems downstream of the receivers.

*ANSWER

d.

*REFERENCE

Overview Drawing 4701-01

300000 2.1.27

ILT.05108

bank

memory

NC

*QNUM 021
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 201003A201
*QUESTION

A normal reactor startup was in progress at 5% reactor power with normal operating pressure and temperature. Rod H-5 did not move when given a withdraw signal from notch position 12. Drive pressure is 450 psig. The operator attempted a second time to move H-5, but the rod failed to move. The operator should . . .

- a. scram H-5 individually; disarm H-5 electrically and hydraulically.
- b. attempt to move the rod by performing "Double Clutching."
- c. declare H-5 INOPERABLE; have H-5 disarmed electrically and hydraulically.
- d. increase drive pressure 50 psig and re-attempt to withdraw H-5.

*ANSWER

d.

*REFERENCE

QCOA 0300-02 pp1

ILT.11949

bank

memory

NC

*QNUM 022
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 256000K107
*QUESTION

Which of the following components does condensate go through FIRST after leaving the condensate pumps?

- a. Drain Coolers
- b. Condensate Demineralizers
- c. Condensate Booster Pumps
- d. Steam Jet Air Ejector Condensers

*ANSWER

d.

*REFERENCE

LIC-3200 pp2

bank

memory

NC

*QNUM 023
 *HNUM
 *ANUM
 *QCHANGED FALSE
 *ACHANGED FALSE
 *QDATE 2001/08/06
 *FAC 254
 *RTYP BWR-GE3
 *EXLEVEL R
 *EXMNR
 *QVAL 1.00
 *SEC
 *SUBSORT
 *KA 202001K604
 *QUESTION

Unit 1 was operating at 100% power on the 101% FCL. A single alarm appeared on the 901-3, 4, 5,6,7,8 912-1 and 5 panels, 'DC ANNUN PWR FAILURE'. Steam flow from the reactor dropped and stabilized about 20% below it's previous value. Level stabilized at +30 inches after initially rising to about +38 inches. When you called for assistance from Unit 2 you noticed they have numerous alarms and appear to be in a casualty of their own. Which one of the following describes Unit 1's condition?

- a. A complete loss of 125 VDC has occurred resulting in a loss of scoop tube coupling, resulting in a coast-down of ~~the~~ recirculation pumps. *both*
- b. A complete loss of 125 VDC has occurred resulting in a trip of ~~both~~ recirculation pumps. *match*
- c. A ~~partial~~ *Unit 1* loss of ~~125~~ VDC has occurred resulting in a ~~spring~~ feed flow/steam flow mismatch that is finally corrected by the dominant level signal.
- d. A ~~partial~~ *Unit 1* loss of ~~125~~ VDC has occurred resulting in some instrumentation providing inaccurate control room readings until power supplies switch to alternate sources.

*ANSWER

c.

*REFERENCE
 LP LN-6900 pp36
 ILT.11996
 bank
 higher

made changes to clarify distractors

*QNUM 024
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 205000K502
*QUESTION

Unit 1 is shutting down and reactor water temperature is 200 deg F, with 'A' loop RHR operating in the SDC mode. Which of the following would be an expected response to throttling closed MO-1-1001-28A, Outbd LPCI Inj. Vlv under these conditions?

RHR Flow recorder 1-1040-7 indicates that 'A' loop flow . . .

- a. decreased and RHR 'B' loop flow has increased.
- b. decreased to <1500 gpm; no valves open to provide minimum flow protection.
- c. decreased; Flow Indicator 1-1040-11A 'Containment Spray Flow' indicates 'A' loop flow has increased.
- d. decreased to < 1500 gpm; MO-1-1001-47, SDC HDR DOWNSTREAM SV, closes if it's breaker is closed.

*ANSWER

b.

*REFERENCE

Overview Drawing 1000-01

QCOP1000-05 p11

ILT.10060

bank

higher

NC

*QNUM 025
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 219000K202
*QUESTION

Maximum torus cooling was in service on Unit 2 when an electrical fault caused Bus 23-1 to de-energize. All other buses ~~remained~~ energized. Which one of the following describes how the torus cooling lineup will be affected by the loss of this bus?

- a. The 2A and 2B RHR Pumps will be de-energized; ALL RHRSW Pumps will be operable.
- b. The 2A and 2B RHR Pumps and the 2A and 2B RHRSW Pumps will be de-energized.
- c. The 2C and 2D RHR Pumps and the 2C and 2D RHRSW Pumps will be de-energized.
- d. ALL RHR Pumps will be operable; the 2A and 2B RHRSW Pumps will be de-energized.

*ANSWER

a.

*REFERENCE

LP LF-1000 pp62

Overview Drawing 6500-01

ILT.10027

bank

higher

made requested change. Buses are still energized.

*QNUM 026
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 239001K506
*QUESTION

Which one of the following describes the operation of the MSIV pilot solenoids and MSIV actuators during a Main Steam isolation?

- a. The pilot solenoids energize to port air to the over-piston air chamber, the MSIV closes by over-piston air pressure only.
- b. The pilot solenoids de-energize to port air to the over-piston air chamber, the MSIV closes by over-piston air pressure only.
- c. The pilot solenoids energize to vent air from under the valve actuating piston, the MSIV closes by spring pressure and over-piston air pressure.
- d. The pilot solenoids de-energize to vent air from under the valve actuating piston, the MSIV closes by spring pressure and over-piston air pressure.

*ANSWER

d.

*REFERENCE

LP LIC-0250 pp 7 & 8

bank

memory

NC

*QNUM 027
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 271000K101
*QUESTION

The Mechanical Vacuum pump discharges to the . . .

- a. main chimney.
- b. on-line Recombiner.
- c. turbine building vents.
- d. 30-minute holdup volume.

*ANSWER

a.

*REFERENCE

LP LN-5400 pp20

ILT.04016

bank

memory

NC

*QNUM 028
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295021A201
*QUESTION

A reactor cooldown is in progress with RHR in the shutdown cooling mode of operation. Reactor pressure is 50 psig. Fifteen minutes ago, reactor pressure was 90 psig. Which of the following best describes the overall cooldown rate (deg F/hr) using the past fifteen minutes data?

- a. 99 deg F/hr
- b. 132 deg F/hr
- c. 156 deg F/hr
- d. 192 deg F/hr

*ANSWER

b.

*REFERENCE

steam tables

ILT.10111

295021A201

Modified

Memory

Need Steam tables

provided

*QNUM 029
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295021K201
*QUESTION

For a loss of Shutdown Cooling during refueling operations, the first discernable reactivity addition to the core will be from the __(1)__ coefficient and it will be __(2)__.

- a. (1) Moderator (2) Positive
- b. (1) Doppler (2) Negative
- c. (1) Moderator (2) Negative
- d. (1) Doppler (2) Positive

*ANSWER

c.

*REFERENCE

General Electric BWR Academic Series, Reactor Theory, Page 4-8

Bank - 05000410

Memory

AC

*QNUM 030
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.4.6
*QUESTION

Unit 1 reactor has tripped. The following plant conditions exist:

- All control rods are fully inserted.
- Drywell pressure is at 2 psig.
- RPV pressure is at 500 psig.
- RPV level is at -150 inches.
- No injection source is available to the RPV and none is expected in the near future.

Based on the above plant conditions, what is the strategy required by QGA 100, RPV Control?

- a. Enter QGA 500-4, RPV Flooding while continuing with QGA 100.
- b. Exit all QGAs and enter the SAMGs.
- c. Enter QGA 500-1 RPV Blowdown while continuing with QGA 100.
- d. Exit QGA 100 and enter QGA 500-2, Steam Cooling.

*ANSWER

d.

*REFERENCE

Lesson Plan Module L-QGA100, "QGA 100, RPV Control"

~~Objective # S-0001-EK018, Section I, "Steam Cooling"~~

2.4.6

New

higher

Is RO required to know QGA steps?

After discussion facility agreed this Q was acceptable at the RO knowledge level.

*QNUM 031
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.2.33
*QUESTION

Which of the following supplies control rod withdrawal and insertion blocks to the Reactor Manual Control System?

- a. Rod Block Monitor.
- b. Rod Worth Minimizer.
- c. Reactor Mode switch in the REFUEL position.
- d. Reactor Mode switch in the SHUTDOWN position.

*ANSWER

b.

*REFERENCE

LP LIC-0207, "Rod Worth Minimizer"

LP LIC-0280 pp 8 & 9

Technical Specifications Bases, Section B 3.3.2.1

2.2.33

New

Memory

NC

*QNUM 032
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.3.9
*QUESTION

The following conditions exist on Unit 1:

- Unit 1 is in Mode 3.
- It is desired to de-inert the Unit 1 Primary Containment (both the drywell and torus) as soon as possible to permit containment access for maintenance.
- Based on drywell and torus air samples, Chemistry recommends that the vent path be to an elevated release point.

th. Reactor Building Vents

Based on the above, what flowpath and sequence would permit the most expeditious de-inerting of the Unit 1 Primary Containment?

- a. With the Standby Gas Treatment System with the drywell and torus de-inerted simultaneously.
- b. Through the Reactor Building Ventilation System with the drywell and torus de-inerted simultaneously.
- c. With the Standby Gas Treatment System with the drywell de-inerted first and then the torus de-inerted.
- d. Through the Reactor Building Ventilation System with the drywell de-inerted first and then the torus de-inerted.

*ANSWER

d.

*REFERENCE

Technical Specification 3.6.1.3 and SR 3.6.1.3.1.

QCOP 1600-07, DE-INERTING OF PRIMARY CONTAINMENT WITH SBGTS.

QCOP 1600-08, DE-INERTING OF PRIMARY CONTAINMENT THROUGH THE REACTOR BUILDING VENTILATION SYSTEM.

2.3.9

New
higher

*Chemistry gives us a sheet that says
RB Vents or SBGTS*

change made.

*QNUM 033
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL R
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.2.1
*QUESTION

The following conditions exist on Unit 1:

- Unit 1 is in the STARTUP mode with control rods being withdrawn in an approach to criticality.
- The Rod Worth Minimizer (RWM) has just failed with ~~25%~~^{75%} rod density.

Per QCGP 1-1, NORMAL UNIT STARTUP, what is the action that is required?

- a. Suspend withdrawal of the control rods, place the reactor mode switch in the SHUTDOWN position within 1 hour, and verify operability of the RWM before commencing a reactor startup.
- b. Bypass the RWM, verify control rod movements are in compliance using a qualified person, and continue the reactor startup.
- c. Suspend withdrawal of the control rods, verify operability of the Rod Block Monitor, and continue the reactor startup.
- d. Bypass the RWM, fully insert all control rods, and verify operability of the RWM before commencing a reactor startup.

*ANSWER

b.

*REFERENCE

QCGP 1-1, NORMAL UNIT STARTUP.

Lesson Plan Module LIC-0207, "Rod Worth Minimizer"

Technical Specification 3.3.2.1

2.2.1

New

higher

changed to: "with 25% of the control rods withdrawn."

*QNUM 034
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.4.20
*QUESTION

QGA Detail 'A' tells you that an RPV water level instrumentation may be unreliable if drywell temperature is at or above RPV saturation temperature.

The water level instrumentation may be unreliable because . . .

- a. the reference leg is assumed to have flashed, causing level to read falsely high.
- b. the variable leg is assumed to have flashed, causing level to read falsely high.
- c. the reference leg is assumed to have flashed, causing level to read falsely low.
- d. the variable leg is assumed to have flashed, causing level to read falsely low.

*ANSWER

a.

*REFERENCE

Lesson Plan L-QGA100, overview drawing 0263-01

2.4.20

Bank

higher

NC

*QNUM 035
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 245000A206
*QUESTION

The plant conditions were:

- Reactor power 85%
- the Flow Control Line is 100%
- Recirc Flow Control is in MASTER MANUAL

Subsequently, one string of low pressure feedwater heaters isolated and the heater string bypass opened, resulting in a 100 deg F feedwater temperature reduction.

How will the plant respond and what Operator Action should be taken? The plant response will be . . .

a. a drop in recirc speed to hold power constant. The plant operators should insert control rods to maintain a 100% Flow Control Line.

b. an increase in main generator output at a constant recirc speed. The plant operators should reduce recirc flow and insert control rods.

c. an increase in main generator output at a constant recirc speed. The plant operators should hold recirc speed constant and insert control rods.

d. a drop in recirc speed to hold power constant. The plant operators should place switch the Recirc Flow Control in INDIVIDUAL MANUAL and insert control rods.

*ANSWER

b.

*REFERENCE
QCOA 3500-02

New
higher

NC

*QNUM 036
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295001A204
*QUESTION

As a result of a concern with the operation of the jet pumps on unit 2, a special test has been approved. The test will entail tripping the B recirculation pump from 100% speed and 80% reactor power to observe the response of all jet pumps during the pump coast down.

You have been stationed at panel 902-38 in the Aux. Electric Room to observe the response of the 20 individual single tap jet pump flows. If all the jet pumps are intact and operating properly what response do you expect to see?

When the B recirculation pump is tripped, the flow indication for all the B loop jet pumps should decrease to zero as the pump coasts to a stop, then the flow indication for all the B loop jet pumps should . . .

a. drop below zero as the flow reverses in the B loop jet pumps. The flow indication for all the A loop jet pumps should increase during the transient.

b. increase to a positive value as the flow reverses in the B loop jet pumps. The flow indication for all the A loop jet pumps should increase during the transient.

c. drop below zero as the flow reverses in the B loop jet pumps. The flow indication for all the A loop jet pumps should not change during the transient.

d. increase to a positive value as the flow reverses in the B loop jet pumps. The flow indication for all the A loop jet pumps should not change during the transient.

*ANSWER

b.

*REFERENCE

Lesson Plan If-0202 p 36 & 58

New

higher

NC

*QNUM 037
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.1.22
*QUESTION

The following plant conditions exist on Unit 1:

- Reactor is subcritical.
- All control rods are fully inserted.
- Average reactor coolant temperature is 160 deg F.
- All reactor vessel head closure bolts are fully tensioned.
- Reactor Mode Switch is in the Refuel position.
- *No special operations in progress*

Unit 1's Operational Mode is . . .

- a. Refueling
- b. Cold Shutdown
- c. Hot Standby
- d. Startup

*ANSWER

d.

*REFERENCE

Technical Specifications: Section 1.1, definition of MODE Table 1.1-1, *3.10.3*
2.1.22

New

Tier/Group: 3

Level of Difficulty (1 - 5): 2

Memory

*Special Ops 3.10.3 would be made 4
Add to stem*

Change made

*QNUM 038
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295024K308
*QUESTION

PRIMARY CONTAINMENT CONTROL, QGA 200, has an override that states:

IF	THEN
Torus sprays running	<u>Before</u> torus pressure drops to 0 psig Stop torus sprays.

IF	THEN
Drywell sprays running	<u>Before</u> drywell pressure drops to 0 psig Stop torus sprays.

Which of the following statements describes the reason for this requirement?

- a. It prevents drawing a negative pressure in the containment, which would open the vacuum breakers and draw air into the containment.
- b. 0 psig drywell pressure ensures a drywell temperature below 180 deg F, therefore there is no need to continue drywell sprays.
- c. It makes one more RHR loop available as soon as possible for injection into the reactor pressure. *vessel.*
- d. This action ensures that the drywell structure will not endure excessive thermal stresses due to rapid cooldown.

*ANSWER

a.

*REFERENCE

OVERVIEW DRAWING QGA 200-P1

Bank

Memory

Change made

*QNUM 039
 *HNUM
 *ANUM
 *QCHANGED FALSE
 *ACHANGED FALSE
 *QDATE 2001/08/06
 *FAC 254
 *RTYP BWR-GE3
 *EXLEVEL B
 *EXMNR
 *QVAL 1.00
 *SEC
 *SUBSORT
 *KA 215004A104
 *QUESTION

A reactor startup is in progress. Given the following conditions:

- The mode switch is STARTUP/HOT STANDBY.
- The reactor is super-critical on a 75 second period.
- Three SRMs read between $10E3$ and $10E4$, and are fully inserted.
- One SRM partially withdrawn and reading $5x10E5$.
- No SRMs are bypassed.
- Five IRMs are fully inserted and reading mid-scale on range 2.
- Two IRMs are fully inserted and reading mid-scale on range 3.
- One IRM has a failed high detector, is fully withdrawn and bypassed.
- All six APRMs are down scale

Why is a rod block present, and how could the rod block be cleared?

- a. The rod block is being caused by the short reactor period. Since only a rod withdrawal block is present, inserting a control rod to lengthen the period will clear the rod block.
- b. The rod block is being caused by the high reading on the partially withdrawn SRM. Since no other SRM is bypassed, bypassing this SRM will clear the rod block.
- c. The rod block is being caused by the IRM that is not fully inserted. Since it is bypassed, the rod block can be cleared by fully inserting the IRM.
- d. The rod block is being caused by the combination of IRMs on range 2 and an SRM not full-in. Since the reactor is on a positive period, the rod block will clear when the IRMs are up-ranged.

*ANSWER

b.

*REFERENCE

UFSAR section 7.6.1.3.2

New
higher

NC

*QNUM 040
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 290002K402
*QUESTION

What keeps the Steam Separator from lifting off the core shroud at high core flows?

- a. The Steam Separator is bolted to the top of the core shroud.
- b. The weight of the Steam Separator is sufficient to hold it in place.
- c. Pads on the inside of the vessel head hold the Dryer and Separator in place.
- d. The combined weight of the Steam Dryer and Steam Separator hold it in place.

*ANSWER

a.

*REFERENCE

UFSAR section 3.9.5.1

New
memory

NC

*QNUM 041
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 226001A105
*QUESTION

The plant is operating at 75% power with all plant systems in their normal, operable mode. What would happen if the switches for both "A" RHR loop Drywell spray valves (MO-1001-23 and 26) were placed in the open position if drywell pressure was 1.3 psig?

- a. Both spray valves would remain closed, because there is no LPCI initiation signal present.
- b. Only one spray valve would open, because interlocks allow one spray valve to be open at a time unless a LPCI initiation signal is present.
- c. Both spray valves would open, because interlocks that prevent valve opening would not be in effect for the stated plant condition.
- d. Both spray valves would remain closed, because interlocks prevent valve opening unless the Containment Cooling Permissive switch is in the "ON" position.

*ANSWER

c.

*REFERENCE

RHR lesson plan pp 12 & 13

New

Higher

NC

*QNUM 042
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 203000K303
*QUESTION

The plant conditions are:

- A Loss of Coolant Accident (LOCA) is in progress
- Offsite power has been lost
- HPCI and RCIC have failed
- ADS has auto initiated
- The 5 ADS safety/relief valves are open
- Reactor pressure is 800 psig
- All other plant systems are operating as designed.

Which of the following describes the ADS logic system response if all RHR and Core Spray pumps trip off under these conditions?

- a. Depressurization will cease and both inhibit switches must be taken to "INHIBIT" and back to "NORMAL" to re-establish depressurization.
- b. Depressurization will cease and will automatically re-establish immediately after an RHR or a Core Spray pump is restored.
- c. Depressurization will continue without RHR and Core Spray pumps running due to the seal-in of the ADS initiation logic.
- d. Depressurization will cease and will automatically re-establish 110 seconds after an RHR or a Core Spray pump is restored.

*ANSWER

b.

*REFERENCE

ADS Lesson Plan, Overvie Drawing 0203-02

New

Higher

NC

*QNUM 043
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 206000K414
*QUESTION

You were assigned to perform QCOS 2300-01 PERIODIC HPCI PUMP OPERABILITY TEST in the control room. HPCI appeared to be running normally when you were taking the pressure and flow readings to verify Tech Spec compliance. As you finished taking the readings, a Group IV isolation was received. As called for in QCOS 2300-01 the HPCI Auxiliary Oil Pump control switch was in the "AUTO" position and the Emergency Oil Pump control switch was in the "STOP" position. How will the Auxiliary and Emergency Oil Pumps respond as the HPCI turbine speed coasts down?

- "AUTO AFTER STOP"*
- a. The Auxiliary Oil Pump will continue to run and the Emergency Oil Pump will remain off.
 - b. The Auxiliary Oil Pump will start as oil header pressure decreases below 51 psig, and the Emergency Oil Pump will remain off.
 - c. The Auxiliary Oil Pump will remain off and the Emergency Oil Pump will start as oil header pressure decreases below 36 psig.
 - d. Neither the Auxiliary or Emergency Oil Pumps will start without operator intervention.

*ANSWER
d.
*REFERENCE
HPCI Lesson Plan
New
Higher

Answer is C

*Switch spring returns, so stem
needs changed*

*D would only be right
if holding in stop*

Changes made

*QNUM 044
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 212000K601
*QUESTION

The following initial conditions exist:

- Unit 1 reactor power is 75%.
- "A" RPS is being supplied by the "A" RPS MG Set
- "B" RPS MG Set is tagged out-of-service for maintenance.
- "B" RPS Bus is being supplied by the reserve feed (dirty power).

The 4KV feed breaker to T-19 trips causing a loss of Bus 19. Which of the following will happen to the Reaction Protection System?

- Reactor*
- a. A half SCRAM will occur on "A" RPS.
 - b. RPS will be unaffected.
 - c. A half SCRAM will occur on "B" RPS.
 - d. A full SCRAM will occur.

*ANSWER

b.

*REFERENCE

Lesson Plan LN-6500 4KV/480 volt distribution pp 284, 286, 2298, 300 & 302

New

Higher

Made change

*QNUM 045
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 215005K101
*QUESTION

With the Unit at 50% power, annunciator 901-5-D-6, APRM FLOW REF OFF NORM, annunciates. Besides the annunciator what other automatic actions, if any, are expected?

- a. A rod block will occur.
- b. A half SCRAM will occur.
- c. A full SCRAM will occur.
- d. No other automatic actions will occur.

*ANSWER

a.

*REFERENCE

Lesson plan lic-0703

Bank

Memory

NC

*QNUM 046
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 215005K202

*QUESTION

An APRM Downscale and INOP would result from the loss of which of the following power sources?

- a. The Reactor Protection System Bus.
- b. The Instrument Bus.
- c. The Essential Service Bus.
- d. The 125 VDC Main Bus.

*ANSWER

a.

*REFERENCE

Lesson Plan LIC-0703 LPRM/APRM pp58

New

Memory

NC

*QNUM 047
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 209001K202
*QUESTION

A LOCA with loss of offsite power has occurred on unit 2. Which of the following would cause power to be lost to the Unit 2 Core Spray B Inboard Pump Discharge Valve MO2-1402-25B?

- a. A fault on BUS 28.
- b. A fault on BUS 29.
- c. A trip of the ½ Diesel Generator.
- d. A trip of the supply breaker to BUS 25.

*ANSWER

b.

*REFERENCE

Lesson Plan LIC-1400 pp25

New

Memory

NC

*QNUM 048
 *HNUM
 *ANUM
 *QCHANGED FALSE
 *ACHANGED FALSE
 *QDATE 2001/08/06
 *FAC 254
 *RTYP BWR-GE3
 *EXLEVEL B
 *EXMNR
 *QVAL 1.00
 *SEC
 *SUBSORT
 *KA 209001A404
 *QUESTION

Unit 1 is operating at 100% power when the following sequence of events occur:

At t0	Drywell pressure increases to 2.5 psig; reactor pressure = 1002 psig.
At t30 seconds	Reactor pressure drops below 325 psig.
At t5 minutes	An NSO throttles MO1-1402-25A to achieve 900 GPM Core Spray flow.
At t10 minutes	The NSO places the 1A Core Spray pump in PULL TO LOCK.

Assume that all plant equipment operates as designed. Which of the following correctly describes the operation of MO 1-1402-38A the CS PMP MIN FLOW VLV during the above event?

- At t0 The 1A Core Spray pump starts and MO-38A opens. THEN . . .
- | | | |
|----|---------------------------------|--|
| a. | At t30 seconds
At t5 minutes | An interlock causes MO-38 to close when MO-25 opens.
When Core Spray flow drops below 1000gpm MO-38 opens. |
| | At t10 minutes | When the Core Spray pump is placed in PULL TO LOCK MO-38 closes. |
| b. | At t30 seconds
At t5 minutes | When Core Spray flow exceeds 700gpm MO-38 closes.
When Core Spray flow drops to 900gpm MO-38 remains closed. |
| | At t10 minutes | When the Core Spray pump is placed in PULL TO LOCK MO-38 opens. |
| c. | At t30 seconds
At t5 minutes | An interlock causes MO-38 to close when MO-25 opens.
When Core Spray flow drops to 900gpm MO-38 remains closed. |
| | At t10 minutes | When the Core Spray pump is placed in PULL TO LOCK MO-38 remains closed. |
| d. | At t30 seconds | When Core Spray flow exceeds 700gpm MO-38 closes. |

closed. At t5 minutes When Core Spray flow drops to 900gpm MO-38 remains
At t10 minutes When the Core Spray pump is placed in PULL TO LOCK
MO-38 remains closed.
*ANSWER
d.
*REFERENCE
Lesson Plan LIC-1400.doc pp4 & 5
New
Higher

NC

*QNUM 049
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 202002K105
*QUESTION

Unit 1 is at 80% power with the Recirculation Flow Control System being operated in Individual Manual. In this mode of operation what signals are being compared in the control system to control reactor recirculation flow?

- a. The output of the Manual/Auto Transfer Station manual control potentiometer is compared to the recirc MG set generator speed.
- b. The output of the Manual/Auto Transfer Station manual control potentiometer is compared to jet pump flow.
- c. The output of the Manual/Auto Transfer Station manual control potentiometer is compared to the recirculation loop flow.
- d. The output of the Manual/Auto Transfer Station manual control potentiometer is compared to the recirc scoop tube position.

*ANSWER

a.

*REFERENCE

Lesson Plan IF-0202.doc pp21

New
Higher

NC

*QNUM 050
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295003K103
*QUESTION

Both units were aligned for normal full power operation when the following events occurred.

At time = 0 Alarm 901-8 ~~E-3~~ ^{E-5} "4KV BUS 13-1 VOLTAGE DEGRADED" is received.

At time = 3 minutes A LOCA signal is received on Unit 2.

Assuming there is NO loss of offsite power and NO operator action, which of the following describes the expected response of the 1/2 EDG?

- The 1/2 EDG will start at time = 3 minutes and connect to BUS 23-1 at ~ 10 seconds later.
- The 1/2 EDG will start at time = 0 and connect to BUS 13-1 at ~ 5 minutes later.
- The 1/2 EDG will start at time = 3 minutes and not connect to BUS 13-1 or 23-1.
- The 1/2 EDG will start at time = 0 and connect to BUS 13-1 at ~ 10 seconds later.

*ANSWER

c.

*REFERENCE

Lesson Plan LN-6600 pp 41 & 49

Lesson Plan LN-6500 pp 106

New

Higher

QOA 900-8 E-5

Change made.

*QNUM 051
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295023K103
*QUESTION

Unit 1 was in REFUEL, loading fuel when a sustained (approximately 30 second) upward trend was observed on the source range instrument nearest to the fuel assembly that was being loaded. Which of the following actions (if necessary) are required to be IMMEDIATELY taken by the control room operator monitoring fuel loading?

- a. Announce that the reactor is critical and inject Standby Liquid Control.
- b. Announce that the reactor is critical and evacuate the reactor building.
- c. None, this is a normal response to loading a fuel assembly near a SRM.
- d. Immediately direct the fuel handling staff to remove the assembly being loaded

from the core.

*ANSWER

b.

*REFERENCE

QCFRP 0110-02

Bank

Higher

Change made

*QNUM 052
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295016A108
*QUESTION

In an emergency with the control room inaccessible how are the steam line relief valves opened locally? At the Main Steam Relief Valve controller valve boxes . . .

- a. remove fuses.
- b. install jumpers.
- c. install finger blocks.
- d. manually close relay contacts.

*ANSWER

d.

*REFERENCE

Lesson Plan LIC-0203 pp27

Bank

Memory

NC

*QNUM 053
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295009A104
*QUESTION

In responding to a plant emergency QGA 100 was entered. During the course of the emergency, use of RWCU in the recirculation mode (QCOP 1200-11) was ordered. To fulfill a prerequisite of QCOP 1200-11 you are told to perform QCOP 1200-02 BYPASSING ALL RWCU ISOLATION SIGNALS.

Which of the following is a reason the performance of QCOP 1200-02, BYPASSING ALL RWCU ISOLATION SIGNALS, would be necessary?

- a. Drywell pressure has increased to 3.5 psig.
- b. Standby Gas Treatment System has initiated.
- c. Reactor water level has dropped to -5 inches.
- d. Main Steam Tunnel temperature has reached 145 deg F.

*ANSWER

c.

*REFERENCE

Lesson Plan LF-1200 pp3-5

New

Memory

NC

*QNUM 054
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295029K209
*QUESTION

Following an automatic initiation of RCIC, annunciator 901-3 B-12, TORUS HI LVL HPCI/RCIC SUCTION XFR alarmed.

Which of the following describes the expected RCIC system response?

- a. Torus suction valves MO-25 & 26 open, CCST suction valve MO-22 closes as soon as MO-25 & 26 begin to open.
- b. Torus suction valves MO-25 & 26 open, CCST suction valve MO-22 remains open.
- c. Torus suction valves MO-25 & 26 open, CCST suction valve MO-22 closes when MO-25 & 26 are full open.
- d. Torus suction valves MO-25 & 26 close, CCST suction valve MO-22 opens when MO-25 & 26 leave the open position.

*ANSWER

c.

*REFERENCE
RCIC Lesson Plan
Bank
Memory

NC

*QNUM 055
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 201006A102
*QUESTION

The Following Sequence was loaded into the Rod Worth Minimizer. The RWM is in operation, and the reactor is sub-critical with all rods full in.

Step 1 Position 00 to 24
Rods H-2, B-8, H-14, P-8

Step 2 Position 00 to 12
Rods H-6, F-8, H-10, K-8

Step 3 Position 24 to 48
Rods H-2, B-8, H-14, P-8

Step 4 Position 12 to 24
Rods H-6, F-8, H-10, K-8

The NSO was instructed to withdraw rods through Step 3. After completing Step 1 and while withdrawing the last rod in Step 2 he was distracted by a recirc system alarm and stopped withdrawing the rod at position 10. When he resumed rod withdrawal, rather than withdrawing rod K-8 from position 10 to 12, he selected rod H-2. How will the RWM respond?

- a. No rod blocks will be applied.
- b. Only an insert rod block will be applied.
- c. Only a withdrawal rod block will be applied.
- d. Withdrawal and insert rod blocks will be applied.

NC

*ANSWER

d.

*REFERENCE

Lesson Plan LIC-0207 pp 10, 15, 17

New

Higher

*QNUM 056
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 211000K404
*QUESTION

Unit-1 was operating at full power when an instrument air line break caused the outboard MSIVs to go closed. The following then occurred:

- The reactor failed to scram and attempts to drive rods were unsuccessful.
- The Unit Supervisor ordered SBLC injection.
- The SBLC control switch was operated in the SYS 1&2 position.
- The pump running lights on the 901-5 panel lit.
- The squib valve continuity lights ~~lit.~~ *are*
- The flow indicating light on the 901-5 panel is ~~NOT did not lite~~ *lit.*
- Pump discharge pressure is 1460 psig.
- Reactor Pressure is currently 1025 psig.

Based on these indications the NSO would reach which of the following conclusions?

- a. SBLC is injecting to the reactor vessel.
- b. The SQUIB valves are closed, therefore, SLC is NOT injecting.
- c. The SLC pumps are not running, therefore SLC is NOT injecting.
- d. Reactor pressure is too high for SLC to inject into the vessel.

*ANSWER

b.

*REFERENCE

QCOP 1100-02

Bank

Higher

Made changes

*QNUM 057
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 204000K601
*QUESTION

Unit 1 was operating at 100% power with all systems operable when the following alarm was received:

- 912-1 C-1 RXBLDG CLOSED CLG WATER PUMP TRIP

Upon investigation you find that both RBCCW pumps have tripped.

If no operator action is taken, which of the following would be the first automatic action to occur?

- a. Trip of both operating feed pumps.
- b. Closure of the RWCU isolation valves.
- c. Trip of the operating control rod drive pump.
- d. Closure of the RBCCW drywell isolation valve.

*ANSWER

b.

*REFERENCE

Lesson Plan LR-3700 pp5
Lesson Plan LF-1200 pp 3-5
New
Higher

NC

*QNUM 058
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 217000A404
*QUESTION

A spurious automatic initiation of RCIC has occurred on unit 2. In accordance with the QCOA immediate actions you tripped the RCIC turbine. While you were obtaining a copy of QCOP 1300-05, a valid RCIC initiation signal was received. With these conditions, which of the following actions would result in restart of the RCIC system?

- a. Depressing the TURB RESET pushbutton on panel 902-4.
- b. Depressing the INITIATION SIGNAL SEAL-IN AND RESET pushbutton.
- c. Depressing and holding the RCIC MAN INITIATION pushbutton for 30 seconds.
- d. Manually resetting the Turbine Trip Throttle Valve, then depressing and holding the RCIC MAN INITIATION pushbutton for 30 seconds.

*ANSWER

a.

*REFERENCE

QCOP 1300-05

Lesson Plan LIC 1300 pp40 & 41

New

Higher

Made change

*QNUM 059
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 233000K302
*QUESTION

Following a refueling the Unit 1 Reactor Head Cavity and Dryer/Separator Storage Pit was being drained using QCOP 1900-12, DRAINING THE REACTOR CAVITY AND THE DRYER/SEPARATOR STORAGE PIT. The level in the Reactor Head Cavity and Dryer/Separator Storage Pit had decreased by 20 feet when the supervisor in charge of the drain down ordered the FPC Reject Flow Control Valve AO-1901-58 closed to terminate the drain down. After the AO-1901-58 valve was closed, but before any other valves were repositioned, both Unit 1 fuel pool cooling water pumps tripped. (Assume all closed valves and check valves are leak tight.)

If no operator action is taken which of the following describes the response of fuel pool level?

- a. Water level in the fuel pool will drop until ~~it~~ it reaches the level of the overflow to the Skimmer Surge Tanks. 
- b. Water level in the fuel pool will drop until the anti-siphon holes in the fuel pool return line uncover.
- c. Water level in the fuel pool will drop until the Skimmer Surge Tanks fill to the level of the fuel pool.
- d. Water level in the fuel pool will not change following the closure of the AO-1901-58 valve.

*ANSWER

a.

*REFERENCE

QCOP 1900-12

Lesson Plan LNF-1900 pp 40 & 41

New

Higher

Made change

*QNUM 060
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295031K206
*QUESTION

The Unit 2 HPCI turbine automatically tripped on high reactor level following an automatic initiation on high drywell pressure.

The following conditions are now present:

- Drywell pressure at 8 psig.
- Reactor level at 44 inches and slowly lowering.
- Reactor pressure at 950 psig.
- 'HPCI Turbine Tripped' on the 90X-3 is alarmed.
- 'HPCI Low flow' on the 90X-3 is alarmed.

Which of the following describes operator actions necessary to re-establish HPCI flow when RPV water level reaches low low water level?

- a. The NSO must depress the RESET button on the 90X-3 panel and manually open the HPCI Pump discharge valve (2301-8) to reestablish injection.
- b. The turbine will reset automatically, the NSO must manually open the HPCI Pump Discharge Valve (2301-8) to reestablish injection.
- c. The NSO must reset the isolation from the keylock switches on the 902-3 panel, and manually open the isolation valves to reestablish injection.
- d. No operator actions are required, the turbine will reset automatically, and the HPCI Pump Discharge Valve (2301-8) will open automatically to reestablish injection.

*ANSWER

d.

*REFERENCE
QCOP 2300-06
Modified
Higher

NC

*QNUM 061
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295002K103
*QUESTION

Unit 1 was at 100% power when all 3 circulating water pumps tripped. The NSO should IMMEDIATELY . . .

- a. Attempt to restart the circulating water pumps.
- b. Scram the reactor and enter the Reactor Scram procedure.
- c. Reduce the recirc pumps to minimum and Scram the reactor.
- d. Reduce the recirc pumps to minimum and insert the CRAM rods.

*ANSWER

b.

*REFERENCE

QCOA 4400-01

New

Memory

NC

*QNUM 062
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295004A102
*QUESTION

Units 1 and 2 were operating at 100% power when alarm 902-8 D-10, 250V TURB BLD BUS MAIN BRKR TRIP, annunciated. Which of the following equipment will be inoperable?

- a. Unit 1 RCIC & Unit 1 HPCI.
- b. Unit 1 RCIC & Unit 2 HPCI.
- c. Unit 2 RCIC & Unit 1 HPCI.
- d. Unit 2 RCIC & Unit 2 HPCI.

*ANSWER

b.

*REFERENCE

Lesson Plan LN-6900

QOA 6900-01

New

Memory

NC

*QNUM 063
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295005K101
*QUESTION

Unit 1 is being returned to operation following a refueling outage using QCGP 1-1, NORMAL UNIT STARTUP. The plant conditions are:

Reactor Power 20%
Mode Switch in RUN
Main Generator connected to the grid

Then the main turbine tripped due to low condenser vacuum, and the turbine bypass valves failed to open. Which of the following describes the effect of this transient on reactor neutron flux?

Closure of the turbine stop valves will result in . . .

- a. an automatic reactor scram signal with accompanying decrease in neutron flux.
- b. a reactor pressure increase causing a reactor core void collapse, which in turn increases positive core reactivity and the neutron flux.
- c. a reactor pressure increase, causing an increase in reactor core voiding, which in turn decreases positive core reactivity and the neutron flux.
- d. a reactor pressure increase, causing relief valves to open, which in turn causes a level swell and a resulting increase in positive core reactivity and the neutron flux.

*ANSWER

b.

*REFERENCE

LIC-5600

New

Higher

Made change

*QNUM 064
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295008 2.1.28
*QUESTION

The bases for the reactor vessel instrumentation High Reactor Water Level Trip Setpoint is to . . .

- a. prevent water from filling the steam lines during a transient, thereby protecting the piping from excessive stress.
- b. prevent the steam separators from being flooded, thereby protecting equipment from high moisture carryover.
- c. prevent the reactor vessel from going solid, thereby protecting the reactor from a loss of reactor pressure control.
- d. prevent filling the level control instrumentation variable legs with water, thereby protecting from a loss of level control.

*ANSWER

b.

*REFERENCE

Lesson Plan LIC-0263

295008 2.1.28

New

Memory

NC

*QNUM 065
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295038K302
*QUESTION

Which of the following describes the bases for the 100 Rem/hr primary containment isolation signal?

- a. High radiation in the drywell is an abnormal condition, this isolation is provided to prevent the release of radioactive material from the drywell or torus.
- b. This isolation is provided to guard against the release of fission products from the fuel to the reactor coolant and subsequently to the turbine.
- c. High radiation in the drywell is indicative of a line break, therefore a signal is provided to isolate ~~lines~~ ^(X) which penetrate the reactor vessel, ~~and containment.~~
- d. This signal is provided to initiate a Group II isolation if high radiation, indicating leakage, is detected in the area around the reactor water cleanup pump room.

*ANSWER

a.

*REFERENCE

Lesson Plan LN-1603 pp 5

New

Memory

*"C" might be true if considering
SDC valves.
as changed C is incorrect*

Made requested change.

*QNUM 066
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295012K202
*QUESTION

The unit 1 was operating at 100% power when alarm 912-1 E-1, RX BUILDING COOLING WATER HIGH TEMP annunciated. Upon investigation the operator determined that the cause of the alarm was an increasing water temperature, caused by a malfunctioning temperature control valve on the 1A RBCCW heat exchanger.

Which of the following symptoms would be consistent with the above condition?

- a. An increasing temperature in the unit 1 drywell.
- b. An increasing temperature in the outboard MSIV room.
- c. A high temperature trip of the 1A Instrument Air Compressor.
- d. A high temperature alarm on the running ½ Diesel Generator.

*ANSWER

a.

*REFERENCE

Lesson Plan LF-3700 pp 5

New

Memory

NC

*QNUM 067
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 600000A206
*QUESTION

The A train control room Air Handling Unit is in operation. A fire starts on the service building roof which results in smoke entering the control room ventilation air intake. Which of the following describes the expected automatic response of the control room ventilation system?

The A train Air Handling Unit will . . .

- a. trip and the B train will auto start.
- b. switch to the smoke purge mode.
- c. switch to the isolation/recirculation mode.
- d. trip and the Air Filtering Unit will auto start.

*ANSWER

c.

*REFERENCE

Lesson Plan LF-5752 pp 5

New

Memory

NC

*QNUM 068
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295018A201
*QUESTION

The following annunciators have come in:

- 912-1 C-2, TURBINE BUILDING COOLING WATER PUMP TRIP
- 912-1 D-2, TURBINE BUILDING COOLING WATER LOW PRESSURE

Which of the following describes an expected response?

- a. EDG ½ room temperature increases.
- b. CRD Pump Bearing temperature increases.
- c. Outboard MSIV room temperature increases.
- d. Recirc MG set lube oil temperature increases.

*ANSWER

b

*REFERENCE

Lesson plan LIC 3800 pp4

Bank

Higher

NC

*QNUM 069
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295020K104
*QUESTION

Unit 1 is in shutdown with both reactor recirculation pumps off. A spurious Group 2 isolation occurred. Which of the following would be an indication of reactor vessel water stratification?

- a. An unexpected increase in Reactor pressure.
- b. A constant Reactor Recirc Loop temperature.
- c. An unexpected decrease in Reactor pressure.
- d. An unexpected decrease in Reactor vessel metal temperature.

*ANSWER

a.

*REFERENCE
QCOA 1000-02
Bank
Memory

NC

*QNUM 070
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295032A103
*QUESTION

add comment

Unit 1 is shutdown for refueling, Unit 2 is operating at 100% power. When the steam dryer was being removed from the Unit 1 reactor vessel, high airborne contamination was detected on the refuel floor. The airborne contamination caused High High Channel A and B Reactor Building Vent Radiation Monitor trips. Assume all equipment operates as designed.

Which of the following areas must be monitored for an expected increasing temperature that could require entry into QGA 300, SECONDARY CONTAINMENT CONTROL?

- a. SBTG Floor.
- b. Refueling Floor.
- c. Unit 1 MSIV Room.
- d. Unit 2 MSIV Room.

*ANSWER
d.
*REFERENCE
QOA 5750-7
QCOP 5750-02
QGA 300
New
Higher

Made change

*QNUM 071
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295022K301
*QUESTION

Unit 1 is at 100% power with all systems operable.

A normal shutdown was in progress on Unit 2; the plant conditions are:

- Mode Switch in "Startup/Hot Standby"
- IRMs are on range 6
- Reactor pressure 650 psig.
- Control rod pattern is "black and white" (50% of the rods are full out in a checker

board pattern)

The Unit 2 running CRD pump tripped. When the NSO attempted to start the standby pump it also tripped. Approximately 5 minutes later, while the cause of the pump trips was being investigated two CRD accumulator trouble alarms were received. The NSO immediately placed the Mode Switch in "Shutdown" and entered the scram procedure. Was the action taken by the NSO correct and why?

on withdrawn control rods

a. Yes, because under these plant conditions CRD scram speeds would be degraded without fully charged accumulators.

b. No, because under these plant conditions it would be preferable to take as much as 20 minutes to attempt pump restoration.

c. Yes, because an automatic scram should have occurred under these plant conditions.

d. No, because under these plant conditions the CRD cross-tie should have been used to restore drive pressure.

*ANSWER

a.

*REFERENCE

QCOA 0300-01; QCAN 901(2)-5 B-2, TS 3.1.5

New

Higher

Change made.

*QNUM 072
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295019K301
*QUESTION

What is the automatic response, if any, when instrument air pressure drops low enough to energize Annunciator 912-1 A-11, U1A INST AIR-LOW PRESSURE?

a. The Drywell Pneumatic Compressor will automatically start to maintain control air for the MSIVs and the Target Rock Valve.

b. The 1 / 2 Instrument Air Compressor will automatically start in an attempt to restore instrument air pressure.

c. The Service air back-up valve will automatically open in an attempt to restore instrument air pressure.

d. The air supply to non-critical systems will automatically isolate to conserve instrument air pressure.

*ANSWER

c.

*REFERENCE
QCOA 4700-01
QOA 912-1 A-11
New
Higher

NC

*QNUM 073
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 216000A210
*QUESTION

A loss of Off Site power occurred.

- The reactor has scrammed and all control rods are full in.
- All high pressure ECCS is out of service or failed.
- Reactor water level is -140 inches.
- Torus temperature is 105 deg F.
- Drywell temperature is 200 deg F.

An emergency reactor vessel depressurization followed by level restoration with low pressure systems was ordered. Which of the following statements describes the response of the RPV Wide and Narrow range level indication and the proper operator action to be taken during this event?

- a. Wide range level remains accurate, but Narrow range level is unreliable. Following the depressurization use low pressure systems to restore water level to between 8 and 48 inches.
- b. Wide and Narrow range level remain reliable. Following the depressurization use low pressure systems to restore water level to between 8 and 48 inches.
- c. Wide and Narrow range level will be unreliable due to flashing of the reference leg. Enter QGA 500-4, RPV Flooding, to assure core cooling.
- d. Wide and Narrow range level will be unreliable due to gasses coming out of solution. Enter QGA 500-4, RPV Flooding, to assure core cooling.

*ANSWER

b.

*REFERENCE

QUAD CITIES 1, Lesson plan LIC 063 p 10.

Modified

Higher

Change made

*QNUM 074
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 268000A401
*QUESTION

Which of the following correctly describes how the Drywell is monitored to verify that unidentified leakage is within Technical specification limits?

a. Once a week a stop watch is used to time the pump down of the Drywell floor drain and equipment drain sumps, these times are then compared to previous pump down times to verify Tech Spec compliance with the limit on unidentified leakage.

b. The Drywell floor drain and equipment drain sumps are pumped down approximately once every four hours, the change in the sum of the gallons shown on the two control room integrators is then used ^{to} determine Tech Spec compliance with the limit on unidentified leakage.

c. Once a week a stop watch is used to time the pump down of the Drywell floor drain sump, this time is then compared to previous pump down times to verify Tech Spec compliance with the limit on unidentified leakage.

d. The Drywell floor drain sump is pumped down approximately once every four hours, the change in the number of gallons shown on the control room floor drain sump integrator is then used ^{to} determine Tech Spec compliance with the limit on unidentified leakage.

*ANSWER

d.

*REFERENCE

Lesson plan LN-2001

QCOS 1600-07

New

Higher

Changes made

*QNUM 075
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295030A102
*QUESTION

QGA 200, PRIMARY CONTAINMENT CONTROL, requires that if torus level cannot be maintained above 11 feet, HPCI operation must be prevented. Why is there no similar requirement for RCIC operation with torus level below 11 feet?

- a. The RCIC steam exhaust will still be submerged at a torus level below 11 feet.
- b. The RCIC steam exhaust flow is low enough that it can be vented without causing containment failure.
- c. Maintaining a small amount of injection for core cooling irrespective of containment pressure concerns takes precedence.
- d. The RCIC turbine will already have tripped on low pump suction pressure by the time torus level reaches 11 feet.

*ANSWER

b.

*REFERENCE

Lesson Plan L-QGA 200 p67

New

Memory

NC

*QNUM 076
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 500000K207
*QUESTION

Following a major plant casualty which threatens the Primary Containment, drywell venting to control hydrogen via the reactor building vents was ordered. When the NSO attempted to open AO1699-7, ~~'vent to the reactor building ventilation'~~, it would not open. Which of the following is a reason AO1699-7 may be interlocked closed? *↓ "VENT TO RX BLDG"*

- a. The 18" drywell vent valve 1601-23 is open.
- b. SBTG has an auto start signal.
- c. The 18" torus vent valve 1601-60 is open.
- d. The master vent mode switch is in the APCV position.

*ANSWER

d.

*REFERENCE

Lesson plan LIC-1602 p. ~~86~~ *87*

Bank

Memory

Change mode.

*QNUM 077
 *HNUM
 *ANUM
 *QCHANGED FALSE
 *ACHANGED FALSE
 *QDATE 2001/08/06
 *FAC 254
 *RTYP BWR-GE3
 *EXLEVEL B
 *EXMNR
 *QVAL 1.00
 *SEC
 *SUBSORT
 *KA 295037A111
 *QUESTION

There has been a failure to Scram and QGA 101, RPV CONTROL, has been entered. The plant conditions are:

- APRMs read 10% and are holding steady
- RPV water level is -24 inches and dropping
- RPV pressure is 970 psig and dropping
- Containment pressure is 1.7 psig and holding steady
- Reactor Mode Switch is in Shutdown

The SRO directing the QGAs ordered that ~~QCOP 0250-02~~, ^{QCOP} BYPASSING MSIV GROUP I ISOLATION SIGNALS: LOW-LOW REACTOR WATER LEVEL OR MSL HIGH RADIATION, be performed. Before any ~~QGA 0250-02~~ jumpers were placed, a GROUP 1 isolation occurred due to low low level. The NSO assigned to perform ~~QGA 0250-02~~ continued with the procedure and completed placing the jumpers. He is ready to reset the GROUP I isolation, and the following plant condition have changed. RPV water level is now -72 inches and RPV pressure is now 1080 psig. Assume there is no GROUP I high radiation or high temperature signal present. Which of the following describes the steam line response when the NSO takes the action of placing the MN STM ISOL RESET switch in the INBD then OUTBD position?

- a. The GROUP I isolation will not reset, and the MSIVs and the steam line drain valves remain closed.
- b. The GROUP I isolation resets, and the MSIVs and the steam line drain valves automatically open.
- c. The GROUP I isolation resets, and the MSIVs and the steam line drain valves remain closed.
- d. The GROUP I isolation resets, and the MSIVs remain closed but the steam line drain valves open.

*ANSWER

c.

*REFERENCE

~~QCOP~~ 0250-02

Lesson plan LIC-0250

Change made.

New
Higher

*QNUM 078
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295010K201
*QUESTION

In QGA 500-1, RPV BLOWDOWN, there is a decision point at which it is questioned if torus water level is above or below 5 feet. What is the significance of the 5 foot or greater water level decision point?

With torus water level at 5 feet or greater, . . .

- a. the ADS discharge will still be submerged; therefore, the steam release will be condensed.
- b. the drywell downcomers will still be submerged; therefore, the torus will still be isolated from the drywell.
- c. the ECCS suction vortex limit will not be violated; therefore, water will be available to reflood the reactor.
- d. there will still be sufficient NPSH for the ECCS pumps; therefore, water will be available to reflood the reactor.

*ANSWER

a.

*REFERENCE

Lesson Plan 500-1

New

Memory

NC

*QNUM 079
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.4.12
*QUESTION

Units 1 and 2 were operating at 100% power, when a problem with the Unit 2 feed water level control system resulted in a low reactor water level Scram. Assume Unit 1 continues to operate uneventfully at 100% power. In the management of the event response who would have the responsibility for directing plant actions in accordance with the QGAs?

- a. The Unit 1 Supervisor
- b. The Unit 2 Supervisor
- c. The Shift Technical Adviser
- d. The Shift Manager

*ANSWER

b.

*REFERENCE

Lesson Plan L-QGAINT

2.4.12

New

Memory

NC

*QNUM 080
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295015K102
*QUESTION

An ATWS has occurred. Core spray injection was prevented as one of the first actions taken in accordance with QGA 101, RPV CONTROL (ATWS). Why is the action to prevent core spray injection taken?

Core spray injection is prevented because, . . .

- a. core spray takes suction from the torus. Preventing core spray from operating protects the pumps from damage caused by loss of NPSH or vortexing.
- b. core spray injects directly above the reactor core. The injection of relatively cold water could result in a core damaging power excursion.
- c. reactor pressure will be held at approximately 920 psig. This would result in the core spray pumps running for an extended period at minimum flow possibly causing pump damage.
- d. because feedwater, HPCI, and RCIC will be used to control water level.

Therefore the use of core spray will not be required ~~to~~ during an ATWS.

*ANSWER

b.

*REFERENCE

Lesson plan QGA101 p17
QGA-101A, RPV CONTROL (ATWS)

New

Memory

Change made.

*QNUM 081
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295026K305
*QUESTION

Unit 1 was operating at 25% power with relief valve testing in progress, when a relief valve failed in the open position. Procedure QCOA 0203-01, FAILURE OF A RELIEF VALVE TO CLOSE OR RESEAT PROPERLY was entered. The IMMEDIATE operator actions of QCOA 0203-01 did not result in closing the stuck open relief valve. In accordance with the SUBSEQUENT OPERATOR ACTIONS the Reactor Operator scrambled the reactor. Why does the SUBSEQUENT OPERATOR ACTIONS of QCOA 0203-01 direct a reactor scram?

A scram is directed because,...

- a. the relief valve tailpipes are not designed for continuous blowdown with the reactor at power, and structural damage could result.
- b. with a stuck open relief valve, reaching the low pressure scram setpoint with the mode switch in RUN is unavoidable.
- c. the relief valve tailpipe vacuum breakers will not function under these conditions which could result in structural damage.
- d. with a stuck open relief valve, heat capacity temperature limit will be exceeded.

*ANSWER

d.

*REFERENCE

Lesson Plan LIC-0203

QCOA 0203-01

New

Memory

NC

*QNUM 082
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295017K212
*QUESTION

Both unit are operating at 100% power, when alarm 901-3 G-3, RX BLDG VENT CHANNEL A HI HI RADIATION annunciates. Alarm 901-3 H-3, RX BLDG VENT CHANNEL B HI HI RADIATION does NOT annunciate. The SBGTS TRAIN MODE SELECTOR SWITCH A is in STBY and the SBGTS TRAIN MODE SELECTOR SWITCH B is in PRIM.

Which of the following is the expected response of the Standby Gas Treatment System?

- a. Both trains of Standby Gas Treatment auto start.
- b. The A train of Standby Gas Treatment auto starts.
- c. The B train of Standby Gas Treatment auto starts.
- d. Neither train of Standby Gas Treatment auto starts.

*ANSWER

c.

*REFERENCE

Lesson Plan LF-7500 pp 19 & 20

Lesson Plan LF-1701 p 34

Modified

Higher

NC

*QNUM 083
 *HNUM
 *ANUM
 *QCHANGED FALSE
 *ACHANGED FALSE
 *QDATE 2001/08/06
 *FAC 254
 *RTYP BWR-GE3
 *EXLEVEL B
 *EXMNR
 *QVAL 1.00
 *SEC
 *SUBSORT
 *KA 214000K401
 *QUESTION

With regard to the Rod Position Reed Switches, what is the function of the top 4 and bottom 4 switches?

- a. The function of the top 4 switches is:
 2 switches to indicate the rod is past full in; 2 switches to indicate rod is full in.
 The function of the bottom 4 switches is:
 1 switch to indicate the rod is withdrawn 141 inches; 1 switch to indicate the rod is full out; 2 switches to indicate the drive is below position 48.

- b. The function of the top 4 switches is:
 1 switch to indicate the rod is past full in; 2 switches to indicate the rod is full in; 1 switch to indicate the rod is withdrawn 3 inches.
 The function of the bottom 4 switches is:
 1 switch to indicate the rod is withdrawn 141 inches; 2 switches to indicate the rod is full out; 1 switch to indicate the drive is below position 48.

- c. The function of the top 4 switches is:
 2 switches to indicate the rod is past full in; 1 switches to indicate the rod is full in; 1 switch to indicate the rod is withdrawn 3 inches.
 The function of the bottom 4 switches is:
 1 switch to indicate the rod is withdrawn 141 inches; 1 switch to indicate rod is full out; 2 switches to indicate the drive is below position 48.

- d. The function of the top 4 switches is:
 1 switch to indicate the rod is past full in; 2 switches to indicate rod is full in; 1 switch to indicate the rod is withdrawn 3 inches.
 The function of the bottom 4 switches is:
 2 switches to indicate rod is full out; 2 switches to indicate the drive is below position 48.

*ANSWER

b.

*REFERENCE

Lesson Plan LIC-0280 pp 6 & 7

New

Memory

NC

*QNUM 084
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 215003K107
*QUESTION

The Intermediate Range Monitors "DRIVE IN" and "DRIVE OUT" push buttons can be used to vertically position the IRM detectors anywhere from _____ (maximum insertion), to _____ (maximum withdrawal).

- a. the top of active fuel, just outside the reactor vessel
- b. 3/4 core height, bottom of active fuel
- c. 2/3 core height, a few feet below active fuel.
- d. 1/2 core height, just below the bottom of active fuel.

*ANSWER

c.

*REFERENCE

Lesson Plan LIC-0701 pp 6 & 7

New

Memory

NC

*QNUM 085
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 234000 2.2.30
*QUESTION

The reactor core is being reloaded during a refueling outage. Prior to the start of the reload all SRMs were verified operable, and all Tech Spec required SRM surveillances are current, showing 4 operable SRMs. During the subsequent fuel loading, who has the responsibility for verifying that the Tech Spec SRM operability requirements for CORE ALTERATIONS continue to be met between surveillances?

- a. The Reactor Operator.
- b. The SRO supervising the fuel handling.
- c. The Unit Supervisor.
- d. The Fuel Handling Verifier.

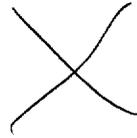
*ANSWER

a.

*REFERENCE
QCFHP 0100-01
234000 2.2.30
New
Memory

NC

*QNUM 086
 *HNUM
 *ANUM
 *QCHANGED FALSE
 *ACHANGED FALSE
 *QDATE 2001/08/06
 *FAC 254
 *RTYP BWR-GE3
 *EXLEVEL B
 *EXMNR
 *QVAL 1.00
 *SEC
 *SUBSORT
 *KA 2.3.2
 *QUESTION



Unit 1 is in a forced outage. You have been assign to a team that will be performing an inspection of the outboard MSIVs. The inspection will require the team members to sign in on a job specific RWP. The team will consist of you, 2 mechanics, and a vendor rep. The radiation field in the MSIV room is 40 mrem/hr, and is NOT or expected to become an Airborne Radioactive Area. All four team members are expected to be in the MSIV room for a total of 5 hours each. Is an ALARA plan required for this inspection? Why or why not?

- a. Yes, because the inspection will result in a total estimated exposure > 0.5 Person-REM.
- b. No, because the inspection will result in a total estimated exposure < 0.5 Person-REM.
- c. Yes, because the inspection will result in a total estimated exposure > 1.0 Person-REM.
- d. No, because the inspection will result in a total estimated exposure < 1.0 Person-REM.

*ANSWER
 d.
 *REFERENCE
 RP-AA-401
 2.3.2
 New
 Higher

Do we need to know from memory?

Not required. Health Physics normally does this. Question replaced.

*QNUM 087
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 218000K501
*QUESTION

Given the following conditions:

- A SCRAM occurred 2 minutes ago from 100% reactor power due to a loss of offsite power.
- Reactor water level is slowly decreasing and has just reached the low low set point.
- Drywell pressure is 2.0 psig and is holding steady .
- Reactor pressure is 1080 psig and slowly increasing.
- HPCI has failed.
- All other systems are operating normally.

Assume that plant parameters continue to trend as stated above, and that there is no operator intervention. What is the expected response of the Automatic Depressurization System?

ADS will . . .

- a. initiate as soon as any low pressure ECCS pump is running.
- b. initiate in 110 seconds.
- c. NOT initiate with plant parameters trending as indicated above.
- d. initiate in 8.5 minutes.

*ANSWER

d.

*REFERENCE

Lesson Plan LIC-0203 pp3 & 4

New

Higher

*QNUM 088
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 223001A306
*QUESTION

Following a LOCA on Unit 1, drywell spray is initiated. Which of the following alarms would be indicative of drywell pressure dropping below suppression chamber pressure?

- a. 901-5 F-3 TORUS ISOLATION OVERRIDE
- b. 901-3 C-13 TORUS VACUUM BKR OPEN DIV I
- c. 901-3 A-15 DRYWELL/TORUS ISOL VALVES AUTO BYPASS
- d. 901-3 B-14 TORUS TO RX BUILDING ~~NEGATION DP~~

*ANSWER

b.

*REFERENCE

Lesson Plans LFN-1601 pp 32 & 45; LN-1603 pp21, LIC-1602 pp 83

New

Higher

NEGATIVE

Made Change

*QNUM 089
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 241000K504
*QUESTION

The plant was operating at 60% power when a failure in the EHC control system caused the turbine control valves to fail full open. Which of the following describes the expected plant response?

a. When the pressure at the turbine inlet reaches the low pressure set point, a Group I isolation occurs.

b. When the pressure in the reactor steam dome reaches the low pressure set point, a Group I isolation occurs.

c. When the turbine first stage pressure reaches the low pressure set point, a Group I isolation occurs.

d. When the pressure at the steam line flow restrictors reaches the low pressure set point, a Group I isolation occurs.

*ANSWER

a.

*REFERENCE

Lesson Plan IN-1603 p4

New

Memory

Made changes

*QNUM 090
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 263000A401
*QUESTION

With a normal electrical plant lineup, annunciator 901-8-A-9, 125 V BATTERY CHARGER 1 TRIP, alarmed. Which of the following conditions could have caused this alarm and what is the current status of the Unit One 125 VDC system?

- a. The Fuse downstream of the disconnect switch (Fusible Switch) has blown, and the Unit One 125 VDC loads are currently being carried by the batteries.
- b. The feed breaker from MCC 19-2 opened, and the Unit One 125 VDC loads are currently being carried by the batteries.
- c. The Fuse downstream of the disconnect switch (Fusible Switch) has blown, and the Unit One 125 VDC loads are currently de-energized.
- d. The feed breaker from MCC 19-2 opened, and the Unit One 125 VDC loads are currently de-energized.

*ANSWER

b.

*REFERENCE

Lesson Plan LN-6900 p 7 & 25
Bank
Higher

NC

*QNUM 091
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.1.1
*QUESTION

When motor operated throttle valves are driven closed, which of the following is the proper Operator Action?

- a. Throttle valve control switches should be held in the close position an additional 25 seconds or more after the closed indication is received.
- b. Throttle valve control switches should be returned to the neutral position as soon as the closed indication is received.
- c. Throttle valve control switches should be held in the close position for less than 25 seconds after the closed indication is received.
- d. Valves with yellow control switches should be driven closed for less than 25 seconds after the closed indication is received, and valves with red control switches should be left to close on their seal-in circuit.

*ANSWER

a.

*REFERENCE

QAP 0300-02 step D. 19

2.1.1

New

Memory

NC

*QNUM 092
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 286000A303
*QUESTION

If the Protectowire in Unit One HPCI room actuated, which of the following describes the effect on the Fire Protection System?

a. At Panel 912-1 the red FIRE PROT SYSTEM ALARM will light, a bell will sound, and in the HPCI room the pre-action headers will fill with water.

b. At Panel 912-1 the yellow FIRE PROT SYSTEM ALARM will light, a horn will sound, and in the HPCI room water will spray the area.

c. At Panel 912-1 the red FIRE PROT SYSTEM ALARM will light, a ~~horn~~^{bell} will sound, and in the HPCI room water will spray the area.

d. At Panel 912-1 the yellow FIRE PROT SYSTEM TROUBLE will light, a ~~bell~~^{horn} will sound, and in the HPCI room the pre-action headers will fill with water.

*ANSWER

c.

*REFERENCE

QCOA 4100-11

Lesson Plan LN 4100 pp 15, 34, 35, 37

Modified

Higher

Made changes to reflect actual plant.

*QNUM 093
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 290003K304
*QUESTION

The 'A' train of Control Room Ventilation was operating normally when instrument air was lost. Which of the following describe the resulting control room ventilation operating mode and control room pressure?

- a. The 'A' train of Control Room Ventilation will be operating in 100% recirculation mode, control room pressure will be less than 1/8 inch of water above atmospheric.
- b. The 'B' train of Control Room Ventilation will be operating in 100% recirculation mode, control room pressure will be less than 1/8 inch of water above atmospheric.
- c. The 'A' train of Control Room Ventilation will be operating in 100% recirculation mode, control room pressure will be 1/8 inch of water or more above atmospheric.
- d. The 'B' train of Control Room Ventilation will be operating in 100% recirculation mode, control room pressure will be 1/8 inch of water or more above atmospheric.

*ANSWER

b.

*REFERENCE

Lesson Plan LN 5752 pp 4, 5, & 56

Modified

Higher

NC

*QNUM 094
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 400000K202
*QUESTION

Units 1 and 2 are operating at 100% power when a loss of offsite power occurs to both units with a simultaneous loss-of-coolant accident on Unit 2. Assume that all plant equipment operates as designed.

Which of the following U-1 RBCCW system valves, if any, will be powered from the emergency diesel generators prior to any operator action to restore power?

MO-3701, the non-Drywell RBCCW header isolation valve
MO-3702, the RBCCW Drywell supply valve
MO-3703, the outboard RBCCW Drywell return isolation valve
MO-3706, the inboard RBCCW Drywell return isolation valve

- a. ~~all of these valves~~ *MO-3701, 3702, 3703*
- b. no U-1 RBCCW valves are powered from the EDGs.
- c. only valves MO-3701 and MO-3703.
- d. only valves MO-3702, and MO-3706.

*ANSWER

a.

*REFERENCE

Lesson Plan 3700 p20

Lesson Plan LN-6600, Appendix A, p1

New

Higher

3706 is from different power supply

Made correction

*QNUM 095
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 223002K605
*QUESTION

It is discovered that a mis-calibrated instrument was used to set the Drywell High Pressure setpoint. Which of the following type of isolation valves could be inoperable due to the error?

Isolation valves on lines . . .

- a. associated with the HPCI or RCIC systems.
- b. which penetrate the containment, ~~but not the reactor vessel.~~
- c. which penetrate the containment and the reactor vessel and are open to systems other than HPCI or RCIC.
- d. which penetrate the containment and reactor vessel and connect to systems outside containment not required during isolation conditions.

*ANSWER

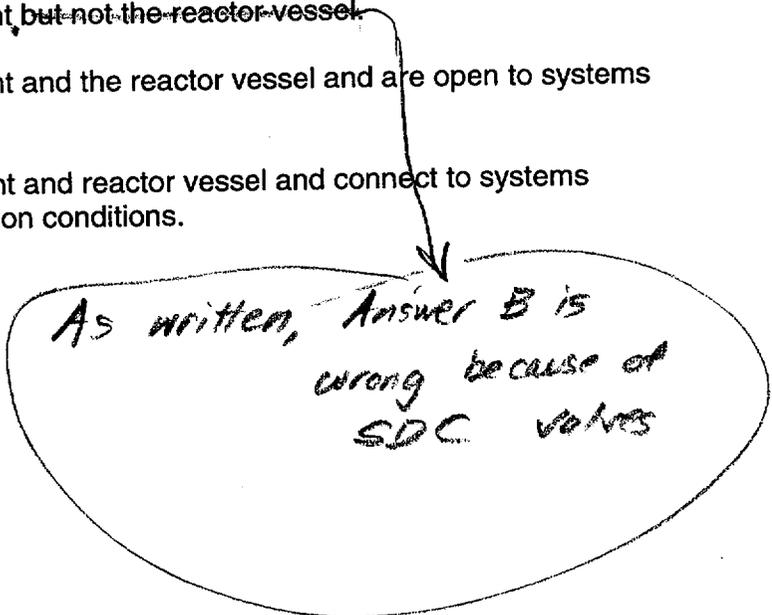
b.

*REFERENCE

Lesson Plan IN-1603 pp2

New

Higher



As written, Answer B is wrong because of SDC valves

Made correction

*QNUM 096
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 261000A408
*QUESTION

X
261000A408

You are checking the operation of the SBGTS following a reactor accident with suction from the reactor building. While taking readings on the components, you notice that the temperature downstream of the charcoal adsorber is 300 deg F. What is the impact of this temperature on the system?

- a. At this temperature adsorption will stop.
- b. At this temperature recombination will begin taking place.
- c. There is no impact, the heat is being generated by decay heat.
- d. At this temperature the iodine may be released from the charcoal bed.

*ANSWER
d.
*REFERENCE
LR-7500
New
Memory

*Doesn't match K/A
Ability to monitor
in CR?*

Replaced question

*QNUM 097
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 262001K602
*QUESTION

The Station Blackout (SBO) diesel is running for a surveillance. The SBO mode switch is in NORMAL. Which of the following signal(s) will trip open the safety related tie breakers at the safety related bus?

- a. A LOCA signal only.
- b. A LOOP signal only.
- c. A LOCA or a LOOP signal.
- d. A LOOP signal concurrent with a loss of normal 13.8 KV feed.

*ANSWER

c.

*REFERENCE

Lesson Plan IN-6620 p64

Bank

Memory

NC

*QNUM 098
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 290001A301
*QUESTION

Unit 1 was operating at 50% reactor power, when drywell pressure suddenly increased to 5 psig. Which of the following automatic plant responses would you expect to observe?

- a. Closure of the main steam isolation valves.
- b. Isolation of the reactor water cleanup system.
- c. Startup of both trains of Standby Gas Treatment.
- d. A closure of the reactor building isolation dampers.

*ANSWER

d.

*REFERENCE

Lesson Plan LNF-5750 p20

New

Memory

NC

*QNUM 099
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.4.1
*QUESTION

Which one of the following conditions requires entry into QGA 300, SECONDARY CONTAINMENT CONTROL?

- a. Drywell pressure above 2.5 psig.
- b. 6 inches of water on the floor below the torus.
- c. Reactor Building ventilation exhaust radiation level of 2 mrem/hr.
- d. Reactor Building Differential Pressure below 0 inches of water.

*ANSWER

b.

*REFERENCE

QGA 300

2.4.1

Modified

Memory

NC

*QNUM 100
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL B
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.1.20
*QUESTION

Which of the following describes the station's expectations when working to a procedure designated as REFERENCE USE?

- a. an operator is required to have the procedure at the work site, read each step of the procedure prior to execution, and execute the steps in the sequence specified.
- b. the operator is required to review the procedure prior to commencing work but is not required to have the procedure at the work site.
- c. an operator is required to have the procedure at the work site and to periodically review the procedure during the performance of the activity to confirm that steps are being performed correctly and in the sequence specified.
- d. the operator can perform the procedure from memory because they are trained and qualified as User Capability.

*ANSWER

c.

*REFERENCE
AD-AA-104-101
2.1.20
New
Memory

NC

*QNUM 101
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 215001K501
*QUESTION

LPRMs are calibrated using the Traversing In-Core Probe system. Technical Specifications require that this calibration be done every 2000 effective full power hours of reactor operation. Why is this?

The LPRMs are calibrated periodically . . .

- a. because it is necessary to correct for LPRM system electronics drift.
- b. because as the U235 in the LPRMs burn out, the detectors' output changes, ~~independent of local neutron flux.~~
- c. because as the fuel is burned up the core axial power distribution changes.
- d. because the APRM gains would need to be changed if the LPRM gains were not adjusted for U235 burnout.

*ANSWER

b.

*REFERENCE

UFSAR section 7.6.1.5.1.2; LP LIC-0703 pp3

New

Memory

Made change

*QNUM 102
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295003K302
*QUESTION

Inherent with the operation of all undervoltage relays is an approximate 1.2 second time delay.
What is the purpose of this time delay?

- a. It allows time for fast BUS transfer to take place.
- b. It allows time for overcurrent protective relaying to act.
- c. It is necessary to override normal voltage dip when starting large loads.
- d. It is necessary to ensure minimum voltage requirements are maintained.

*ANSWER

b.

*REFERENCE

Lesson Plan 6500 pp ~~6 & 86~~

New

Memory

47

Made change

*QNUM 103
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295030K102
*QUESTION

QGA 200 has a number of reminders that changing containment conditions has an effect on margin to NPSH. Containment conditions that reduce the margin to NPSH limits include:

- (1) torus water temperature;
- (2) torus water level;
- (3) torus pressure, ~~and~~

- a. (1)Increasing, (2)decreasing, (3)decreasing
- b. (1)decreasing, (2)increasing, (3)increasing
- c. (1)Increasing, (2)decreasing, (3)increasing
- d. (1)decreasing, (2)increasing, (3)decreasing

*ANSWER

a.

*REFERENCE

QCAP 0200-10

New

Higher

Made correction

*QNUM 104
 *HNUM
 *ANUM
 *QCHANGED FALSE
 *ACHANGED FALSE
 *QDATE 2001/08/06
 *FAC 254
 *RTYP BWR-GE3
 *EXLEVEL S
 *EXMNR
 *QVAL 1.00
 *SEC
 *SUBSORT
 *KA 295037K605
 *QUESTION

A valid reactor scram signal was received on Unit 1, however many of the control rods did not insert. QGA 101, RPV CONTROL (ATWS), was entered, but placing the Mode switch in Shutdown and initiating ARI did not result in any additional rod motion. The NSO noted that many of the 'blue' scram lights are NOT lit. Reactor power is now 20% and reactor pressure is 945 psig. Which of the following statements describes the initial actions that must be taken to attempt control rod insertion?

Manually insert control rods and concurrently . . .

- a. Bypass the reactor scram signals, reset RPS, and when the scram discharge volume is drained depress the manual scram buttons.
- b. De-energized the scram solenoids by pulling fuses in the 901-15 panel, and vent the scram air header locally in the reactor building. and -17
- c. Pull the fuses in the ATWS panel, open 1-301-25, CRD CHARGING WTR SV, and when the CRD HCUs are charged depress the manual scram buttons.
- d. Reset RPS, reset ARI by pull fuses in the ATWS panel located in the Aux electric room, and depress the manual scram buttons. pulling

*ANSWER

b.

*REFERENCE
 QCOP 0300-28
 Modified
 Higher

Made changes

*QNUM 105
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295006K102
*QUESTION

Unit 2 had been operating continuously for five months following refueling when it scrammed from full power. Assume the Tech Spec required shutdown margin is available. Which of the following is the most reactive condition in which you can be sure the reactor will remain subcritical?

- a. Reactor water temperature 120 deg F, 8 days after the scram, one control rod stuck full out, all other control rods full in.
- b. Reactor water temperature 350 deg F, 4 hours after the scram, one control rod stuck full out, all other control rods full in.
- c. Reactor water temperature 68 deg F, 10 days after the scram, one control rod stuck full out, all other control rods at position 04.
- d. Reactor water temperature 150 deg F, 2 days after the scram, all rods full in.

*ANSWER

a.

*REFERENCE
Tech Spec 3.1.1
Modified
Higher

NC

*QNUM 106
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295017A103
*QUESTION

A high reactor building ventilation exhaust radiation condition exists. The radiation level is 3 mrem/hr. Which of the following Standby Gas Treatment System alignments would you expect to see?

a. The train inlet damper (MO-7505) OPEN, the reactor building suction damper (MO-7503) open, and the air heater OFF.

b. The fan discharge damper (MO-7507) OPEN, the turbine building cooldown suction damper (MO-7504) OPEN, and SBGTS fan is ON.

c. The train inlet damper (MO-7505) CLOSED, the fan discharge damper (MO-~~7505~~) CLOSED, and SBGTS fan is OFF.

d. The reactor building suction damper (MO-7503) OPEN, the turbine building cooldown suction damper (MO-7504) CLOSED, and the air heater is ON.

*ANSWER

d.

*REFERENCE

Lesson Plan LF-7500 pp 11

Bank

Memory

Made change (typo)

*QNUM 107
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 201001K110
*QUESTION

Given the following control rod Directional Control Valve sequence:

time=0.4 seconds valves 0305-121 and 123 open
time=9.0 seconds valve 0305-120 opens
time=11.0 seconds valves 0305-121 and 123 closes
time=14.8 seconds valve 0305-120 closes

Which of the following describes the rod motion that results?

- a. A single notch insertion.
- b. A single notch withdrawal.
- c. A multiple notch insertion.
- d. A multiple notch withdrawal.

*ANSWER

c.

*REFERENCE

Lesson Plan LIC-0280 pp 20 & 21

New

Higher

NC

*QNUM 108
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 215002A306
*QUESTION

The plant conditions are:

- Reactor power 1650 MWt.
- Control rod G-5 is at position 08 and selected on the selection matrix
- All plant systems are operable.

Which of the following describes the operation of the Rod Block Monitor if APRM 3 is bypassed? Rod Block Monitor Channel 7 . . .

- a. will become INOP, and a Rod Block will be applied.
- b. will receive a reference signal from APRM 2, and no Rod Block will be applied.
- c. will receive a reference signal from APRM 4, and no Rod Block will be applied.
- d. is automatically bypassed at this power level, no Rod Block will be applied.

*ANSWER

b.

*REFERENCE

Lesson Plan LIC-0703 p59

New

Higher

NC

*QNUM 109
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295023 2.3.10
*QUESTION

A spent fuel bundle was being moved between two spent fuel pool storage rack locations that were approximately 25 feet apart. While traveling over an empty spent fuel storage rack several feet away from the intended new location, a Fuel Pool Storage HI/LO Level Alarm was received and Pool Level was confirmed to be decreasing.

Which of the following is the expected immediate operator action?

- a. Place the bundle in the predesignated emergency set-down location.
- b. Place the bundle in the empty spent fuel storage rack presently beneath the bundle.
- c. Place the bundle in the closer of the intended new location or the original location.
- d. Place the bundle in the fuel prep machine and lower the prep machine to full down.

*ANSWER

b.

*REFERENCE

QCFHP 0110-05

295023 2.3.10

Modified

Memory

NC

*QNUM 110
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295013K201
*QUESTION

A large LOCA with loss of Off Site power has occurred leaving the following conditions:

- A reactor scram has occurred and all control rods are full in.
- All low pressure ECCS started and are injecting as expected.
- Reactor water level is -150 inches and rising steadily.
- Torus temperature is 105 deg F and increasing.

Which of the following statements best describes the actions you should take to place torus cooling in service?

- a. Begin diverting RHR pumps to torus cooling when reactor water level is higher than -172 inches.
- b. Begin diverting RHR pumps to torus cooling when torus water temperature reaches 110 deg F.
- c. Begin diverting RHR pumps to torus cooling when reactor water level is higher than -142 inches.
- d. Begin diverting RHR pumps to torus cooling when torus temperature reaches the Heat Capacity Limit.

*ANSWER

c.

*REFERENCE

QGA 100 & 200, Lesson plan QGA Introduction.

Bank

Higher

NC

*QNUM 111
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.4.25
*QUESTION

Within how many minutes of scrambling the reactor, due to an Appendix R Fire, do the QCARPs require that Reactor Vessel injection be established?

- a. 15
- b. 35
- c. 55
- d. 75

*ANSWER

b.

*REFERENCE
QCARP 0030-01
2.4.25
Bank
Memory

*QNUM 112
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 239002A202
*QUESTION

After completion of QCOS 0203-03 MAIN STEAM RELIEF VALVE OPERABILITY TEST it was noted that the discharge pipe temperature on the Target Rock Relief Valve 1-0203-3A slowly decreased to 270 deg F and then held steady at that temperature. Based on these indications which of the following is an issue that would be of concern to the Unit Supervisor?

- a. With only four remaining operable relief valves, ADS would not have the ability to depressurize the vessel in the event of a small break LOCA with HPCI failure.
- b. A subsequent actuation of the relief valve could cause it to stick open, the resulting depressurization could cause the reactor fuel to exceeding the limit on MCPR.
- c. With only four remaining operable relief valves, Tech Specs require action to be initiated within 1 hour to place the unit in MODE 3 in 13 hours and MODE 4 in 37 hours.
- d. A subsequent actuation of the relief valve could cause it to stick open, requiring a reactor scram because Torus water temperature would then increase above 110 deg F.

*ANSWER

d.

*REFERENCE

QCOA 0203-01 and Bases of referenced TS

New

Higher

NC

*QNUM 113
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295038 2.1.7
*QUESTION

Given the following conditions:

- The core is damaged.
- The primary containment pressure is 44 psig with torus water level at 14.5'.
- The primary containment (Torus) is vented via the APCV to reduce primary containment pressure.
- Off site releases were reported at the GSEP 'Alert' level and the proper procedures were entered and executed.
- The Dose Assessment Team reported to the Control Room that the release to the environment is approaching the GSEP Site Emergency Level.

At this point which of the following is appropriate direction for the SRO to give?

- a. Enter QGA 500-3, 'Drywell Flooding'.
- b. Continue venting the Torus via the APCV.
- c. Secure Torus venting and vent the Drywell.
- d. Switch Primary Containment Venting lineup to SBGTS.

*ANSWER
b.
*REFERENCE
QGA 200
295038 2.1.7
Bank
Higher

NC

*QNUM 114
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 202001A210
*QUESTION

QCOA 0202-06, RECIRCULATION PUMP SEAL FAILURE, requires that IF the rate of increase of Drywell parameters will allow it, rods "be inserted to get below the 70% Flow Control line PRIOR to tripping and isolating the Recirc Pump".

What is the bases for this requirement?

- a. By tripping the pump from a lower flow control line, it is less likely that the reactor will scram from the subsequent flux spike.
- b. The lower power level following the pump trip makes it more probable that the subsequent pump isolation will be successful in stopping the leak.
- c. By tripping the pump from a lower power level, the thermal stress on the recirculation loop piping will be minimized.
- d. The lower flow control line will prevent the reactor from entering the instability region of the power versus flow map, following the pump trip.

*ANSWER

d.

*REFERENCE

QCOA 0202-06

GL 94-02

New

Memory

NC

*QNUM 115
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295021 2.1.32
*QUESTION

Technical Specifications require that during refueling operations, two RHR shutdown cooling subsystems be operable if water level is <23 feet above the top of the RPV flange, and only one RHR shutdown cooling subsystems needs to be operable if water level is >23 feet above the top of the RPV flange. What is the Technical Specification bases for the requirement?

With water level >23 feet above the top of the RPV flange,...

- a. the volume of water above the RPV flange provides backup decay heat removal capability.
- b. the probability of loss of a RHR shutdown cooling subsystems is low.
- c. it will be possible to establish alternate decay heat removal using RBCCW within 1 hour.
- d. the fuel pool cooling system is available for decay heat removal.

*ANSWER

a.

*REFERENCE

Tech Spec Bases 3.9.8 & 9

295021 2.1.32

New

Memory

NC

*QNUM 116
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295021 2.1.32

*QUESTION

QGA-200, Primary Containment Control requires spraying the Drywell be considered before Drywell temperature reaches 280 deg F. Which of the following is the bases for the choice of 280 deg F?

280 deg F is . . .

- a. below the Drywell Spray Initiation Limit, therefore below the temperature at which spray initiation could damage the containment.
- b. the temperature where the energy content of the containment is beyond the heat removal capability of seven drywell coolers.
- c. the temperature at which evaporative cooling would be ineffective in reducing Drywell temperature.
- d. the Drywell design temperature and the qualification temperature of safety-related equipment located in the Drywell.

*ANSWER

d.

*REFERENCE

Lesson Plan L-QGA200

295021 2.1.32

New

Memory

NC

*QNUM 117
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295033A203
*QUESTION

Access to the TIP rooms is controlled by its own administrative procedure, QAP 1150-5, ACCESS TO TIP ROOM. What is it about the TIP rooms that requires this special treatment?

- a. The TIP detectors, being fission chambers that are radiated in the reactor core, have the potential to produce a VERY HIGH RADIATION AREA.
- b. The TIP rooms contain the TIP isolation ball valves. In the event of a LOCA and a failure of a TIP isolation valve the room would fill with steam.
- c. The TIP nitrogen purge system has the potential to inert the TIP room, therefore precautions similar to those used for containment entries are necessary.
- d. The TIP rooms tend to be susceptible to becoming an AIRBORNE RADIOACTIVITY AREA due to the lubricant used on the TIP cables.

*ANSWER

a.

*REFERENCE

Lesson plan LIC 0704B

Lesson plan LF-1800

QAP 1150-5

New

Higher

NC

*QNUM 118
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295025 2.4.18
*QUESTION

In the PRESSURE leg of QGA 101, RPV CONTROL (ATWS), the plant operators are instructed that if any ADS valves are cycling, to open ADS valves to lower RPV pressure to 940 psig. Why was an RPV pressure of 940 psig chosen?

940 psig was chosen because...

- a. at this pressure water level can be easily controlled using HPCI and/or RCIC, and it is below the high pressure Scram setpoint which permits the Scram to be reset.
- b. lowering pressure causes increased core voiding which lowers core reactivity and the amount of steam sent to the torus through the ADS valves.
- c. it is high enough to keep the turbine bypass valves full open if available, and low enough to prevent ADS valve from cycling if the MSIV are closed.
- d. it is high enough to prevent Core Spray and LPCI injection, but low enough to maximize Standby Liquid Control injection flow.

*ANSWER

c.

*REFERENCE

Overview Drawing QGA 101 Pr1

295025 2.4.18

New

Memory

NC

*QNUM 119
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295014A203
*QUESTION

Unit 2 was at 8% power with a shutdown in progress, when the Rod Worth Minimizer failed. You assigned a second licensed operator to verify rod movement. What safety concern is being addressed by the use of a verifier?

If the approved control rod sequence is not followed, . . .

- a. and a control rod drop occurred, significant fuel damage could result.
- b. the shutdown margin following a reactor scram could be inadequate.
- c. a rod withdrawal error could result in violation of the MCPR Safety Limit.
- d. the LHGR limit could be violated causing the fuel cladding to exceed 1% plastic

strain.

*ANSWER

a.

*REFERENCE

Tech Spec Bases B.3.1.6

New

Higher

*QNUM 120
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295026A203
*QUESTION

A loss of coolant accident has occurred and the torus water temperature is at 110 deg F and increasing. The QGA 200 steps for torus temperature are being performed. In order to ensure a blowdown does not raise torus temperature above torus design temperature, operators must hold RPV pressure below the limits of . . .

- a. RPV Saturation Curve
- b. Heat Capacity Limit Curve
- c. Primary Coolant Pressure Limit
- d. Pressure Suppression Pressure Curve

*ANSWER

b.

*REFERENCE

Lesson Plan L-QGA200

New

Memory

NC

*QNUM 121
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295007A202
*QUESTION

The proper operation of which of the following systems is assumed, in the analyses done to assure compliance with the Reactor Coolant System Pressure Safety Limit in the event of a plant transient?

- a. The Electro Hydraulic Control System
- b. Emergency Core Cooling System
- c. The Control Rod Drive Hydraulic System
- d. The Automatic Depressurization System

*ANSWER

c.

*REFERENCE

Tech Spec Bases 3.4.3

New

Memory

NC

*QNUM 122
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.2.11
*QUESTION

When a temporary modification is installed , at what point in the plant design change process is it required that the Critical Control Room Drawings be updated?

The Critical Control Room Drawings must be in place ...

- a. before the MOD TEST is conducted.
- b. before the system is ~~declared operable.~~ *operations authorized*
- c. within 7 days of PORC declaring the design change operable.
- d. within 7 days of the ~~EWGS updated that shows the DCP declared operable.~~

*ANSWER

b.

*REFERENCE

~~QCAP-0400-1~~

~~QCAP-0400-5~~

2.2.11

New

Memory

DCP operable data in PASSPORT

CC-AA-112

Made changes

*QNUM 123
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.4.7
*QUESTION

QGA 500-1, RPV Blowdown is broken up into what two MAJOR sections?

- a. RPV Blowdown with normal means, and RPV blowdown with alternate means.
- b. RPV Blowdown when the reactor is shutdown under all conditions without boron, and RPV Blowdown when torus level is below 5 feet.
- c. RPV Blowdown when there are 5 ADS valves open, and RPV Blowdown when there are NOT 5 ADS valves open.
- d. RPV Blowdown when the reactor is shutdown under all conditions without boron, and RPV Blowdown when the reactor is NOT shutdown under all conditions without boron.

*ANSWER

d.

*REFERENCE

QGA 500-1

2.4.7

Bank

Memory

NC

*QNUM 124
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 259002K605
*QUESTION

Given the following:

- Rx Power is 100%
- 'A' GEMAC level indicator is selected on the 901-5 panel
- The reference side drain valve for the 'A' GEMAC level instrument was inadvertently opened.

What effect will this have?

- a. The RPV Low Level scram will be INOP.
- b. The High RPV Level Turb Trip will be INOP.
- c. A reactor scram on low RPV level will occur.
- d. A reactor scram on high RPV level will occur.

*ANSWER

c.

*REFERENCE

Lesson Plan

ILT.11534

bank

Higher

NC

*QNUM 125
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 264000 2.1.28
*QUESTION

Unit 1 is at 100% power; Unit 2 is in Mode 4; there is no fuel movement in progress.

Technical Specification requirements for available AC Sources for Unit 1 include an OPERABLE Unit 2 Emergency Diesel Generator. One reason a Unit 2 Emergency Diesel Generator is a required AC Source for Unit 1 is . . .

- a. to satisfy the operability requirements of the Standby Gas system.
- b. to assure fuel pool cooling to Unit 2 in the event of a loss of offsite power.
- c. to assure shutdown cooling to Unit 2 in the event of a loss of offsite power.
- d. to assure the availability of independent and redundant power to the Emergency

Core Cooling System.

*ANSWER

a.

*REFERENCE

T. S. Bases 3.8.1

264000 2.1.28

New

Memory

NC

*QNUM 126
 *HNUM
 *ANUM
 *QCHANGED FALSE
 *ACHANGED FALSE
 *QDATE 2001/08/06
 *FAC 254
 *RTYP BWR-GE3
 *EXLEVEL S
 *EXMNR
 *QVAL 1.00
 *SEC
 *SUBSORT
 *KA 2.4.43
 *QUESTION

A GSEP UNUSUAL EVENT was declared at 14:25. At 14:45 the event was upgraded to an ALERT. The TSC and EOF have not been activated. Which of the following describes the required notifications? The Shift Manager has assumed Command and Control.

↳ for the Alert?

a. The Shift Manager has the responsibility to immediately notify the NRC and then to notify the states of Illinois and Iowa by 1500.

b. The Unit Supervisor has the responsibility to immediately notify the NRC and then to notify the states of Illinois and Iowa by 1500.

c. The Shift Manager has the responsibility to notify the states of Illinois and Iowa by 15:00 and then to notify the NRC by ~~1600~~.

1545

d. The Unit Supervisor has the responsibility to notify the states of Illinois and Iowa by 15:00 and then to notify the NRC by 1600.

*ANSWER

c.

*REFERENCE

~~GEP 0100-01~~

~~GEP 0300-01~~

EP-AA-114

2.4.43

New

Higher

Made changes

*QNUM 127
 *HNUM
 *ANUM
 *QCHANGED FALSE
 *ACHANGED FALSE
 *QDATE 2001/08/06
 *FAC 254
 *RTYP BWR-GE3
 *EXLEVEL S
 *EXMNR
 *QVAL 1.00
 *SEC
 *SUBSORT
 *KA 2.3.8
 *QUESTION

QGA 200, Primary Containment Control, primary containment pressure control path, directs the primary containment to be vented. Why does the procedure direct the operator to vent via the torus as the preferred method ~~versus~~ via the drywell?

versus

Venting the primary containment ~~via~~ the torus will . . .

- a. allow a more rapid reduction in primary containment pressure than venting from the drywell.
- b. reduce the levels of radioactivity of the release since the gases will have passed through the water in the torus.
- c. allow better control of the release rate due to the sizing of the path's piping and valves.
- d. minimize chugging due to a loss of non-condensable gasses from the drywell atmosphere resulting in more efficient condensation.

*ANSWER
 b.
 *REFERENCE
 QGA 200-P2
 2.3.8
 Modified
 Memory

Fixed typo

*QNUM 128
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.2.5
*QUESTION

Which of the following conditions would require approval by the NRC prior to a plant change being made?

The proposed plant change results in a minimal increase in the . . .

- a. frequency of occurrence of an accident previously evaluated in the final safety analysis report (as updated).
- b. design basis limit for a fission product barrier described in the final safety analysis report (as updated).
- c. consequences of an accident previously evaluated in the final safety analysis report (as updated).
- d. likelihood of occurrence of a malfunction of a structure, system, or component important to safety previously evaluated in the final safety analysis report (as updated).

*ANSWER.

b.

*REFERENCE
10 CFR 50.59
2.2.5
New
Memory

NC

*QNUM 129
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.2.25

*QUESTION
Technical Specifications requires that a minimum spent fuel pool level be maintained during movement of irradiated fuel in the spent fuel pool. The BASES for this minimum required fuel pool level is to provide . . .

- a. adequate cooling and shielding of fuel assemblies in the fuel pool.
- b. adequate iodine decontamination in the event of a fuel handling accident.
- c. an adequate heat sink to delay boiling in the pool for 8 hours in the event of a plant blackout immediately after a full core offload.
- d. an adequate volume of water to delay uncovering the fuel for 10 minutes in the event of an unisolable rupture of a fuel pool cooling line.

*ANSWER

b.

*REFERENCE

Technical Specification Bases B 3.7.8
2.2.25
Modified
Memory

*QNUM 130
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.1.33
*QUESTION

Unit 1 is in Mode 5 at the start of a refueling outage and refueling operations have just commenced. Which one of the following conditions REQUIRES that ALL fuel movement be IMMEDIATELY halted?

- a. One SRM channel is declared inoperable.
- b. Fuel pool water temperature reaches 100 deg F.
- c. The running RHR pump trips with the other RHR pump out-of-service.
- d. Water level drops to less than 23 feet above the top of the RPV flange.

*ANSWER

d.

*REFERENCE

Technical Specification 3.9.6

2.1.33

Modified

Memory

NC

*QNUM 131
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 2.1.11
*QUESTION

The following conditions exist on Unit 1:

- Unit 1 is in Mode 1.
- Reactor steam dome pressure is 860 psig.
- ALL control rod scram times were within Technical Specification limits during the last scram time surveillance.
- ALL control rods are partially or fully withdrawn in accordance with the analyzed rod position sequence.

The CRD system was just checked and the following was found:

- CRD charging header pressure is at 920 psig.
- The CRD scram accumulator pressures for all but 2 of the control rods is at 960 psig. For the other 2 control rods, the scram accumulator pressures are as follows;

- 1) 850 psig
- 2) 930 psig

Based on the above plant conditions, what is the Technical Specification required action?

- a. IMMEDIATELY place the reactor mode switch in the SHUTDOWN position
- b. IMMEDIATELY fully insert the 2 control rods and declare associated control rods inoperable within 1 hour.
- c. Within one hour declare the 2 control rods inoperable and fully insert the inoperable control rods within 3 hours.
- d. Within 20 minutes restore charging header pressure and declare scram times for the 2 control rods as "slow" within 1 hour.

*ANSWER

b.

*REFERENCE

Technical Specification 3.1.5
2.1.11

New
Higher

*QNUM 132
 *HNUM
 *ANUM
 *QCHANGED FALSE
 *ACHANGED FALSE
 *QDATE 2001/08/06
 *FAC 254
 *RTYP BWR-GE3
 *EXLEVEL S
 *EXMNR
 *QVAL 1.00
 *SEC
 *SUBSORT
 *KA 2.2.17
 *QUESTION

A post maintenance test of a component has just been performed by the Operations Department. The component has failed the testing. The Shift Manager should . . .

- a. determine whether the test failure is based on a new problem or failure to adequately correct a previous problem, and close out the work request noting the test failure.
- b. generate a new task for the existing work request to correct the problem causing the test failure and notify the Work Group Scheduler of the test failure.
- c. notify the responsible department of the work request test failure and close out the existing work request.
- d. ensure that a ~~Problem Identification Form (PIF)~~ *Condition Report (CR)* is initiated and notify the responsible department of the test failure.

*ANSWER

d.

*REFERENCE

~~QCAP 2200-06 CONDUCT OF POST MAINTENANCE TESTING~~

~~QCAP 2200-10, BUNDLING WORK REQUESTS FOR POST MAINTENANCE TESTING~~

2.2.17

New

Memory

WC-AA-105

Made change

*QNUM 133
*HNUM
*ANUM
*QCHANGED FALSE
*ACHANGED FALSE
*QDATE 2001/08/06
*FAC 254
*RTYP BWR-GE3
*EXLEVEL S
*EXMNR
*QVAL 1.00
*SEC
*SUBSORT
*KA 295035A102
*QUESTION

Plant conditions are as follows:

- Both units at 100% power
- 2A & 2C reactor building exhaust fans in operation
- 2B reactor building exhaust fan in PTL for OOS
- Reactor building D/P -.3 inches of water

While performing an OOS on the 2B reactor building exhaust fan, the operator performed the OOS sequence out of order and removed the control power fuses prior to placing the maintenance switch into the maintenance position. Which of the following describes how the reactor building ventilation system will respond and the course of action that will correct the condition?

Reactor building D/P will become . . .

- a. positive and the supply fans will trip. Standby Gas Treatment System will auto start and will need to be secured. The maintenance switch must be operated and reactor building exhaust and supply fans restarted to restore D/P.
- b. more negative and the exhaust fans will trip. Control power fuses need to be re-installed and reactor building exhaust fans need to be restarted to restore a normal D/P.
- c. positive and the supply fans will trip; then negative and the exhaust fans will trip. The maintenance switch must be operated and reactor building exhaust and supply fans restarted to restore D/P.
- d. more negative and the exhaust fans will trip. The SGBT system will auto start and will need to be secured after re-installing control power fuses and restarting reactor building exhaust fans.

*ANSWER

c.

*REFERENCE

Lesson plan LF-7500; Lnf-5750
Bank

NC

Higher