QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Emergency Procedures / Plan Knowledge of annunciators alarms and indications, and use of the response instructions. LOOP K/A justification: applies since the applicant is required to discriminate between a loss of off-site power to the CSST-Start Buss-Unit board actuating the common alarm (1-AR-M1-B, B-3) vs. lock-out actuation from a Unit Board fault (87-1C relay actuation of the 86-1C lock-out relay).

Question No. 49

Tier 1 Group 1

Importance Rating: RO 3.3

Technical Reference: AR-M1B, B-3

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271AOP-P.01, B.7

Question Source: New

Question History:

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.7

Comments: editorial change to stem on location of 86 relay

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: A D A B D B A B C A Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

51. 057 AK3.01 001

Given the following plant conditions:

- Unit 1 is at 100% RTP.
- A loss of 120V AC Vital Instrument Power Board 1-IV occurs.
- A reactor trip does NOT occur.

Which ONE (1) of the following describes the actions required and the reason for the actions in accordance with AOP-P.03, Loss of Unit 1 Vital Instrument Power Board?

A. ✓ Place rod control in MANUAL due to loss of Auctioneered Tavg input; Control #4 Feedwater Reg Valve manually due to loss of AUTO control.

B. Place rod control in MANUAL due to loss of Auctioneered Tavg input; Control #2 Feedwater Reg Valve manually due to loss of AUTO control.

C. Place rod control in MANUAL due to loss of Tref input; Control #4 Feedwater Reg Valve manually due to loss of AUTO control.

D. Place rod control in MANUAL due to loss of Tref input; Control #2 Feedwater Reg Valve manually due to loss of AUTO control.

A. Correct. Loss of Auctioneeered Tavg would cause rod motion, so rods are placed in Manual. #4 FRV is also operated manually due to loss of control
B. Incorrect. Wrong FRV
C. Incorrect. Tref comes from board 1-I. Would be cause to place rods in manual, but Tref input is not lost. Correct FRV
D. Incorrect. Tref and #2 FRV are both incorrect for loss of board 1-IV

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the reasons for the following responses as they apply to the Loss of Vital AC Instrument Bus: Actions contained in EOP for loss of vital ac electrical instrument bus

Question No. 50

Tier 1 Group 1

Importance Rating: RO 4.1

Technical Reference: AOP P.03

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271AOP-P.03 & 04, B.3

Question Source: New

Question History:

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.7

Comments: corrected typo in stem.

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: A D D C B A B B B D Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

52. 058 AA1.01 001

Given the following plant conditions:

- Unit 1 is steady-state at 100% power.
- Unit 2 is in Mode 6 with vessel upper internals removal in progress.
- 125V DC Vital Battery IV Output Breaker tripped and can't be reclosed.

Which ONE (1) of the following describes the required action(s) in accordance with AOP-P.02, Loss of 125V DC Vital Battery Board?

A. Align 125V DC Vital Battery Bank V and Charger 1-S (spare) to Vital Battery Board IV.

B. Align 125V DC Vital Battery Bank V and Charger 2-S (spare) to Vital Battery Board IV.

C. Suspend core alterations on Unit 2 until 125V DC Channel IV is returned to OPERABLE status.

D. Restore 125V DC Channel IV to OPERABLE status within 1 hour or initiate a shutdown of Unit 1.

A. Incorrect. Not capable of being aligned.

B. Correct. per 0-SO-250-1

C. Incorrect. No TS requirement.

D. Incorrect. Wrong time requirement per TS.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Ability to operate and / or monitor the following as they apply to the Loss of DC Power: Cross-tie of the affected dc bus with the alternate supply

Question No. 51

Tier 1 Group 1

Importance Rating: RO 3.4

Technical Reference: AOP-P.02

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271AOP-P.02, B.8.b

Question Source: Bank

Question History:

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.10

Comments: editorial change to D (one hour) based on NRC comment.

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B A C A B D D D A A Scramble Range: A - D

Source:	BANK	Source If Bank:	SQN BANK
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	

53. 058 AA2.02 001

Given the following plant conditions:

- Unit 1 is in Mode 3.
- The following alarms are received in the control room:
  - AR-M-01-C, B4, 125V DC VITAL CHGR II FAILURE OR VITAL BAT II DISCHARGE.
  - AR-M-01-C, B5, 125V DC VITAL BAT BD II ABNORMAL.
- Battery Board II Voltage indicates 119 VDC and lowering slowly.
- Battery Charger II DC Output Breaker is tripped open.
- Reports from the AUO are that Battery Board II appears normal with the exception of the Charger Output Breaker trip

Which ONE (1) of the following describes the operability of the Battery Board, and the action required?

A. Declare Battery Board II INOPERABLE. Align the Spare Charger in accordance with 0-SO-250-1, 125 Volt dc Vital Battery Boards.

B. Declare Battery Board II INOPERABLE. Reduce Battery loading as necessary in accordance with 0-SO-250-1, 125 Volt dc Vital Battery Boards.

C. Battery Board II remains OPERABLE. Align the Spare Charger in accordance with 0-SO-250-1, 125 Volt dc Vital Battery Boards.

D. Battery Board II remains OPERABLE. Reduce Battery loading as necessary in accordance with 0-SO-250-1, 125 Volt dc Vital Battery Boards.

A is correct. Less than 125 VDC, Annunciator B4 and TS requires LCO entry

B is incorrect because it is not inop due to charger disconnect.

C and D are incorrect because the battery is not operable. C contains correct action, and D remains credible because the plant status and action taken do not eliminate operability of the battery by themselves. If the battery is connected to the board, it may be functioning, but it may not be operable (Low Volts)

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Ability to determine and interpret the following as they apply to the Loss of DC Power: 125V dc bus voltage, low/critical low, alarm

Question No. 81

Tier 1 Group 1

Importance Rating: SRO 3.6

Technical Reference: AR-M-01C,

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271AOP-P.02, B.8.b & 9

Question Source: New

Question History:

Question Cognitive Level: Higher

10 CFR Part 55 Content: 43.5, 43.2

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: A D B C D A A C B B Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	SRO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

54. 059 A1.07 001

Given the following plant conditions:

- Unit 1 is at 100% power
- All controls in automatic
- All four main feedwater flows start increasing
- All four steam generator levels trending upwards.

For information:
- PT-1-33 is a Main steam header pressure transmitter
- PT-3-1 is a Main feedwater header pressure transmitter

Which ONE (1) of the following identifies the two instrument failures that would cause this transient? (consider each failure separately)

	PT-1-33	**PT-3-1**
A.	failed LOW	failed LOW.
B✓	failed HIGH	failed LOW.
C.	failed LOW	failed HIGH.
D.	failed HIGH	failed HIGH.

A. *PT-1-33 failing low would cause a high delta-P and the MFPT control system would reduce MFPT speed causing low feed flow and decreasing SG levels. The results of PT-3-1 failing low are described in "B" below.*

B. *Correct. Feedwater header pressure is normally higher than steam header pressure by a programmed value of 80 psid at 0% totalized steam flow and 195 psid at 100% totalized steam flow. PT-1-33 failing high OR PT-3-1 failing low would indicate a lower than normal delta-P between steam header pressure and FW header pressure. This would cause the MFPT control system to increase speed in an attempt to restore programmed delta-P. This increased delta-P would increase FW flow and cause SG level to trend upward. The FW regulating valves would be closing in an attempt to reduce SG level back to programmed value.*

C. *The results of PT-1-33 failing high are described in "B" above. PT-3-1 failing high would cause a high delta-P and the MFPT control system would reduce MFPT speed causing low feed flow and decreasing SG levels.*

D. *PT-1-33 failing low would cause a high delta-P and the MFPT control system would reduce MFPT speed causing low feed flow and decreasing SG levels. PT-3-1 failing high would cause a high delta-P and the MFPT control system would reduce MFPT speed causing low feed flow and decreasing SG levels.*

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the MFW controls including: Feed Pump speed, including normal control speed for ICS.

Question No. 18

Tier 2 Group 1

Importance Rating: RO 2.5

Technical Reference: 47W611-3-2

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.MFW, B.5

Question Source: Bank

Question History: SQN FW-B.5-1

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.7, 41.4

Comments: editorial change to answers to put in two column format. combined second two bullets into one statement.

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B D A B B C C D C C Scramble Range: A - D

Source:	BANK	Source If Bank:	SEQUOYAH BANK
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

55. 059 AK1.02 001

Given the following plant conditions:

- An accidental spill of the Monitor Tank has occurred in the Aux Building.
- Radiation levels in the area of the spill are 40 mRem per hour at 30 cm.
- Contamination levels on the floor around the tank are $1.2E^4$ DPM/100 cm^2.

Which ONE (1) of the following describes how the area will be posted?

A. Radiation Area AND Contamination Area

B. High Radiation Area AND Contamination Area

C. Radiation Area AND High Contamination Area

D. High Radiation Area AND High Contamination Area

A. Correct. This area should be posted as a radiation area >5 mrem and <100 mrem/hr) and a contamination area (>1000 dpm/100 cm2). RCI-15 Sects 6.7 & 6.12.

B. Incorrect. Greater than 100 mrem/ hr is a high radiation area. RCI-15 Sect 6.8 & 6.12.

C. Incorrect. Greater than 50,000 dpm/100 cm2 is a high contamination area. RCI-15 Sects 6.7 & 6.13.

D. Incorrect. Greater than 100 mrem/ hr is a high radiation area. Greater than 50,000 dpm/100 cm2 is a high contamination area. RCI-15 Sects 6.8 & 6.13.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the operational implications of the following concepts as they apply to Accidental Liquid Radwaste Release: Biological effects on humans of various types of radiation, exposure levels that are acceptable for nuclear power plant personnel, and the units used for radiation-intensity measurements and for radiation exposure levels

Question No. 60

Tier 1 Group 2

Importance Rating: RO 2.6

Technical Reference: SPP-5.1; RCI-15, Sects 6,7, 6.8, 6.12 & 6.13

Proposed references to be provided to applicants during examination: None

Learning Objective: RWT-010,

Question Source: New

Question History:

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.12

Comments: removed second part of each answer based on NRC comment

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: A B D C D A D C B C Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

56. 060 AK1.01 001

Which ONE (1) of the following describes a potential monitored location for airborne effluents of gaseous waste and the correct unit of measurement for the effluent?

	Monitored Location	Unit of Measurement
A.	Turbine Building Vent	counts per minute
B. ✓	Service Building Vent	counts per minute
C.	Turbine Building Vent	mRem per hour
D.	Service Building Vent	mRem per hour

A. Incorrect. Turbine building ventilation exhaust path is a vent path but is not monitored since there is little/no potential of rad release occcuring via this path.

B. Correct. Service Bldg el. 718 in mechanical equipment room. Scintillation type detector with an 8 point sampling probe. While the detector is primarily monitoring for Beta, Gamma would also be detected. Possible sources of contaminants in the vent system are exhaust from the radiochemical lab, titration room, counting room, and decontamination rooms. Read-out is in 'CPM'.

C. Incorrect. Not a monitored vent path

D. Incorrect. Measured in CPM, but is a monitored vent path.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the operational implications of the following concepts as they apply to Accidental Gaseous Radwaste Release: Types of radiation, their units of intensity, and the location of sources of radiation in a nuclear power plant

Question No. 61

Tier 1 Group 2

Importance Rating: RO 2.5

Technical Reference: 0-AR-M12-B, A-5/A-6; ODCM, Section 1.1.2 requirements; U1 PEDs- REP RM-Effluents pg; 1,2-47610-90-1A

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.RM, Obj 4

Question Source: Modified

Question History: SQN ODCM B.2-2

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.13

Comments: modified question based on NRC comment.

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B A A A D B C D A B Scramble Range: A - D

Source:	MODIFIED	Source If Bank:	
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

57. 061 K6.02 001

Given the following plant conditions:

- Unit 2 is in Mode 1.
- The TDAFW Pump is tagged out of service.
- A Loss of Feedwater causes a reactor trip.
- Coincident with the trip, 2B-B Shutdown Board Bd Differential trip actuates.

Which ONE (1) of the following describes the Auxiliary Feedwater alignment and approximate flow rates?

A. 1 and 2 SGs being fed at 220 GPM each

B. 1 and 2 SGs being fed at 440 GPM each

C. ALL SGs being fed at 110 GPM each

D. ALL SGs being fed at 220 GPM each

A. Correct. Loss of 2B-B SD Board, Only A MDAFW Pump is available. Capacity is 440 GPM, and it is aligned to automatically feed 1 and 2 SGs. Distractors are for TDAFW capacity and flow alignments
B. Incorrect. Capacity of TDAFW aligned to 2 SGs
C. Incorrect. MDAFW would be aligned to 2 SGs, not all 4 SGs
D. Incorrect. This would be the alignemnt if the TDAFW Pump was the only operating pump

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the effect of a loss or malfunction of the following will have on the AFW components: Pumps

Question No. 19

Tier 2 Group 1

Importance Rating: RO 2.6

Technical Reference: AFW SD

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.AFW, B.5.d

Question Source: Bank

Question History: WTSI Bank

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.7, 41.8

Comments: Modified question to add approximately to each answer.

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: A B B D C D C B C C Scramble Range: A - D

Source:	BANK	Source If Bank:	WTSI
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	

58. 062 AK3.01 001

Given the following plant conditions:

- Unit 1 is tripped.
- The crew is performing actions of AOP-M.01, Loss of Essential Raw Cooling Water.
- ERCW Supply Header 2B to the Aux Building and 0-FCV-67-152, CCS OB1/OB2 Discharge Valve to header B, have been isolated to stop the leak.
- A Safety Injection signal is subsequently received.

Which ONE (1) of the following describes the position of 0-FCV-67-152 for these conditions, and status of flow through the OB1/OB2 CCS Heat Exchanger?

A. The valve will open to its 35% open position. ERCW flow will be provided from Header 1B.

B. ✓ The valve will open to its 35% open position. NO ERCW flow will be provided.

C. The valve will open to its 50% open position. NO ERCW flow will be provided.

D. The valve will open to its 50% open position. ERCW flow will be provided from Header 1B.

A. Incorrect. Since ERCW was manually isolated, no flow will be available
B. Correct. Valves open to Position A (35%)
C. Incorrect. The valves will not open to 50% position. Applicant may confuse with actions in EA-67-1, ERCW operation, which will manually align valve to 50%.
D. Incorrect. The valves will not open to 50% position. No flow will be provided under given conditions.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the reasons for the following responses as they apply to the Loss of Nuclear Service Water The conditions that will initiate the automatic opening and closing of the SWS isolation valves to the nuclear service water coolers

Question No. 52

Tier 1 Group 1

Importance Rating: RO 3.2

Technical Reference: AOP-M.01, section 2.4 step 8

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271AOP-M.01, B.8.c

Question Source: New

Question History:

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.8

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B D A C B A C A B D Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

59. 062 G2.1.10 001

Which ONE (1) of the following describes the MINIMUM Mode 5 requirements for operability of the AC Distribution system for Unit 1?

A. Vital Instrument Power Boards 1-I, 1-III operable.

B. Vital Instrument Power Boards 1-I, 2-I,1-III, 2-III operable.

C. Vital Instrument Power Boards 1-I, 1-IV operable.

D. Vital Instrument Power Boards 1-I, 1-II, 2-I, 2-II operable.

A. Correct

B. Incorrect. would be correct for both units

C. Incorrect. Minimum but wrong train.

D. Incorrect. question asks for minimum

Conduct of Operations: Knowledge of conditions and limitations in the facility license.

Question Number: 20

Tier 2 Group 1

Importance Rating: 2.7

Technical Reference: TS Basis 3.8.2.2

Proposed references to be provided to applicants during examination: None
Learning Objective:

10 CFR Part 55 Content: 43.2

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: A C D B A D B D C B Scramble Range: A - D

Source:	BANK	Source If Bank:	
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

60. 063 G2.2.22 001

Given the following plant conditions:

- Unit 2 is operating steady-state at 100% power
- All systems are normally aligned

Which ONE (1) of the following would result in the unit being in the action of Tech Spec LCO 3.8.2.3, DC Distribution, at the conclusion of the alignment?

A. Battery Bank V is aligned to replace Vital Battery II supply to Vital Battery Board II.

B. Battery Charger V is aligned to replace Charger III supply to Vital Battery Board III.

C. The Spare Vital Battery Charger 1-S is aligned to 480V Shutdown Board 1B1-B while supplying Vital Battery Board II.

D. The Spare Vital Battery Charger 2-S is aligned to 480V Shutdown Board 2A2-A while supplying Vital Battery Board III.

A. Incorrect. Battery Bank V may be substituted for any other bank

B. Correct. Charger V is not allowed in Tech Specs to replace the normal charger.

C. Incorrect. This is an acceptable TS configuration, does not violate any TS requirements for alignment

D. Incorrect. This is an acceptable TS configuration, does not violate any TS requirements for alignment

Equipment Control Knowledge of limiting conditions for operations and safety limits..

Question No. 21

Tier 2 Group 1

Importance Rating: RO 3.4

Technical Reference: TS 3.8.2.3

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.DC, B.6

Question Source: Bank

Question History:

Question Cognitive Level: Lower

10 CFR Part 55 Content: 43.2

Comments: Modified B to align vital charger V to the vital battery board which is not allowed by LCO 3.8.2.3.

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: B B B D A D B A C A Scramble Range: A - D

Source:	BANK	Source If Bank:	SQN BANK
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

61. 064 K4.01 001

Diesel Generator 1A-A has been started by the manual emergency start switch on the M-1 panel.

Which ONE (1) of the following conditions / actions will stop Diesel Generator 1A-A?

A. Low lube oil pressure

B. High jacket water temperature

C. Actuation of the generator reverse power relay

D✓ Actuation of the generator differential relay

a. *Incorrect because only the differential and overspeed protection is available following manual emergency start from M-1 panels. Low lube Oil trip is disabled*

b. *Incorrect because only the differential and overspeed protection is available following manual emergency start from M-1 panels. High Jacket Water temp trip is disabled*

c. *Incorrect because only the differential and overspeed protection is available following manual emergency start from M-1 panels. Reverse power trip is disabled*

d. *Correct because only the differential and overspeed protection is available following manual emergency start from M-1 panels.*

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of ED/G system design feature(s) and/or inter-lock(s) which provide for the following: Trips while loading the ED/G (frequency, voltage, speed).

Question No. 22

Tier 2 Group 1

Importance Rating: RO 3.8

Technical Reference: OPT200.DG

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL200.DG Obj 4.i

Question Source: Bank

Question History: SQN Bank

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.7

Comments: Corrected typo in D

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: D D D C D D A C A D Scramble Range: A - D

Source:	BANK	Source If Bank:	SQN BANK
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

62. 068 AA2.02 001

Given the following plant conditions:

- Unit 1 is at 100%.
- A fire is in progress in the Control Building Cable Spreading Room.
- The Fire Brigade is on the scene and has requested backup assistance.

Which ONE (1) of the following describes the correct procedure to be entered, and how RCS boration will be monitored throughout the RCS cooldown after the reactor is tripped?

A. ✓ Enter AOP-N.01, Plant Fires.
Initiate and monitor boration to cold shutdown conditions in accordance with AOP-C.04, Shutdown From Auxiliary Control Room.

B. Enter AOP-N.08, Appendix R Fire Safe Shutdown.
Initiate and monitor boration to cold shutdown conditions in accordance with AOP-C.04, Shutdown From Auxiliary Control Room.

C. Enter AOP-N.01, Plant Fires.
Initiate and monitor boration in accordance with 0-GO-7, Plant Cooldown from Hot Standby to Cold Shutdown.

D. Enter AOP-N.08, Appendix R Fire Safe Shutdown.
Initiate and monitor boration in accordance with 0-GO-7, Plant Cooldown from Hot Standby to Cold Shutdown.

A. Correct. AOP-N.01 will be entered for plant fires, and crew will transition to AOP-C.04 at step 21.d since the fire is in the control building.

B. Incorrect. Initial procedure entry is incorrect. AOP C.04 will be entered

C. Incorrect. AOP C.04 will direct the trip. Boration will be done in accordance with the AOP vs the GO. If conditions of the fire did not affect the unit and the conditions required plant shutdown then the boration of the RCS would be conducted in accordance with GO-7.

D. Incorrect. Initial procedure entry is incorrect and AOP C.04 will control boration

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Ability to determine and interpret the following as they apply to the Control Room Evacuation: Local boric acid flow

Question No. 82

Tier 1 Group 2

Importance Rating: SRO 4.2

Technical Reference: AOPs N.01, N.08, C.04

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271AOP N.01 B.6

Question Source: New

Question History:

Question Cognitive Level: Higher

10 CFR Part 55 Content: 43.5

Comments: corrected typo in C and D. Removed indication from Aux Control Room in A and B.

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: A D A A D B A D A A Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	SRO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

63. 068 AK2.02 001

Given the following plant conditions:

- Unit 1 is at 100% RTP when a fire occurs in the cable spreading room.
- Due to the large amount of smoke in the main control room, it is decided by the Shift Manager that the main control room must be abandoned.

Which ONE (1) of the following responses below describes the proper operating crew actions for the given conditions?

A. Prior to evacuation, trip the reactor in the Main Control Room and perform post trip actions in accordance with E-0, Reactor Trip or Safety Injection.

B. ✓ Prior to evacuation, trip the reactor in the Main Control Room and dispatch personnel to perform applicable sections of AOP-C.04, Shutdown From Auxiliary Control Room, Appendix Z.

C. Evacuate the Main Control Room, then trip the reactor from the Auxiliary Control Room after the Auxiliary Control Room is manned and perform perform post trip actions in accordance with E-0, Reactor Trip or Safety Injection.

D. Evacuate the Main Control Room, then trip the reactor from the Auxiliary Control Room after the Auxiliary Control Room is manned and dispatch personnel to perform applicable sections of AOP-C.04, Shutdown From Auxiliary Control Room, Appendix Z.

A. Incorrect. AOP-C.04 Sect. 2.1, Step 1 Note: "EOPs are NOT applicable when evacuating the MCR." Therefore, carrying out E-0 post trip actions is not the correct procedural action path to expediously evacuate the MCR.

*B. Correct. AOP-C.04, Section 2.1 steps 1&3- **ENSURE** the reactor is TRIPPED & **DISPATCH** CRO with ...Appendix Z...**Ensure** personnel dispatched...*

C. Incorrect. See A; EOPs are not applicable when evacuating MCR

D. Incorrect. AOP-C.04 does not contain adequate instructions for initiating reactor trip from outside the MCR nor does the ACR contain/provide adequate controls to perform this. Dispatching personnel per Appendix Z is correct.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the interrelations between the Control Room Evacuation and the following: Reactor trip system

Question No. 62

Tier 1 Group 2

Importance Rating: RO 3.7

Technical Reference: AOP C.04

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271AOP-C.04, B.6

Question Source: Bank

Question History: SQN Bank

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.10

Comments: Editorial change to D wording to be similar to wording in the AOP.

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B B B A C A A A B D Scramble Range: A - D

Source:	BANK	Source If Bank:	SQN BANK
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

64. 071 K3.04 001

Given the following plant conditions:

- A Gas Decay tank release is in progress with A- A ABGTS running for dilution flow.
- A leak occurs on the waste gas compressor which results in a gas release to the Auxiliary Building.
- 0-RE-90-101, Auxiliary Building Vent Monitor, is in alarm.

Which ONE (1) of the following indicates the effect this leak will have on the plant? (Assume no operator actions)

A. Gas Decay Tank release will be terminated; ONLY A-A ABGTS will be running.

B. Gas Decay Tank release will be terminated; BOTH A-A and B-B ABGTS will be running.

C. Gas Decay Tank release will continue; ONLY A-A ABGTS will be running.

D✓ Gas Decay Tank release will continue; BOTH A-A and B-B ABGTS will be running.

A. Incorrect. Applicant may believe that Aux Bldg high radiation will terminate gas release, but it would be terminated only by 0-RE- 90-118 Rad Monitor in release discharge piping to the Shield Bldg. Applicant may think that only the A-A ABGTS will receive a start signal since the gas release is out the U-1 Shield Building and the A-A ABGTS is the U-1 fan.

B. Incorrect. Applicant may believe that Aux Bldg high radiation will terminate gas release, but it would be terminated only by 0-RE- 90-118 Rad Monitor in release discharge piping to the Shield Bldg. Correct portion is that both ABGTS fans will start on an ABI.

C. Incorrect. Applicant should know the waste gas release will continue since it discharges to the Shield Bldg vent via 0-RE- 90-118 Rad Monitor in release discharge piping.

D. <u>Correct</u> - Waste gas release continues since RE-90-118 Rad Monitor would terminate only if high radiation in release discharge piping to the Shield Bldg is detected. ABGTS will continue to run- no interface from the AB area rad monitors.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the effect that a loss or malfunction of the Waste Gas Disposal System will have on the following: Ventilation system.

Question No. 35

Tier 2 Group 2

Importance Rating: RO 2.7

Technical Reference: 0-SO-77-15, Section 6.0 Step 9 and NOTE; 47W611-77-4; 47W611-30-6

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.GRW, Obj. 9d, 9e, 9h

Question Source: Bank

Question History: SQN Bank

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.7

Comments: editorial change to stem wording

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: D A B C A A D D D B Scramble Range: A - D

Source:	BANK	Source If Bank:	SQN BANK
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

65. 073 A2.01 001

Given the following plant conditions:

- Unit 1 is at 100% RTP.
- Alarm "1-RA-120B/121B STM GEN BLDN LIQ SAMP MON INSTR MALFUNC" annunciates.

Which ONE (1) of the following describes the cause of the alarm and the mitigating actions that the crew should implement?

	Cause	**Mitigating Action**
A.	Loss of power to the radiation monitor	Manually terminate S/G blowdown release. (there is no automatic termination)
B.	Loss of power to the radiation monitor	Verify automatic termination of S/G blowdown release.
C.	High flow through the radiation monitor	Verify automatic termination of S/G blowdown release.
D.	High flow through the radiation monitor	Manually terminate S/G blowdown release. (there is no automatic termination)

A. Incorrect. S/G blowdown should automatically isolate. If it fails to isolate the operator would manually isolate.

B. Correct. High radiation or instrument malfunction would auto isolate S/G blowdown.

C. Incorrect. A low flow would cause the alarm; not high flow. Applicant may confuse with RM90-119 which does give a malfunction alarm on high flow.

D. Incorrect. A low flow would cause the alarm; not high flow. S/G blowdown should automatically isolate. If it fails to isolate the operator would manually isolate.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Ability to (a) predict the impacts of the following malfunctions or operations on the PRM system; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Erratic or failed power supply.

Question No. 24

Tier 2 Group 1

Importance Rating: RO 2.5

Technical Reference: 0-AR-M12A

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.RM, B.5

Question Source: Bank

Question History: SQN Bank

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.11

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B B D B A B C B B D Scramble Range: A - D

Source:	BANK	Source If Bank:	SQN BANK
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

66. 073 K5.01 001

Which ONE (1) of the following describes the type of radiation detector used by the Condenser Vacuum Exhaust Radiation Monitor 1-RM-90-119, and whether condenser vacuum exhaust stack backpressure affects sample flow for 1-RM-90-119?

A. Scintillation detector. Backpressure does not affect the sample flow.

B. ✓ Scintillation detector. Backpressure does affect the sample flow.

C. Geiger-Mueller detector. Backpressure does not affect the sample flow.

D. Geiger-Mueller detector. Backpressure does affect the sample flow.

A. Incorrect. Correct detector type. Plausible, applicant may believe that since RE-90-119 has its own sample pump, adequate sample flow to/from the rad monitor could be independent of back pressure effects; see B below.

B. Correct. Process rad monitors use scintillation detector type; primarily monitors for Beta; any Gamma would also be detected. 0-AR-M12-A, C-2 Step 2 Note states that high condenser backpressure in the CVP exhaust stack can cause low flow through monitor resulting in 1-RM-90-119 instrument malfunction alarms.

C. Incorrect. Wrong detector type. Plausible, applicant may believe that since RE-90-119 has its own sample pump, adequate sample flow to/from the rad monitor could be independent of condenser back pressure effects; see B below.

D. Incorrect. Wrong detector type; correct effect, see B above.

Radiation monitor indication is a function of activity level and sample flowrate past the detector for process side-stream rad monitors. If flow is reduced and/or isolated, detector indication will be low.

Area Rad monitors use G-M detectors

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the operational implications of the following concepts as they apply to the PRM system: Radiation theory, including sources, types, units, and effects.

Question No. 23

Tier 2 Group 1

Importance Rating: RO 2.5

Technical Reference: 0-AR-M12-A, C-2; OPT200.RM, Slide 69/70

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.RM, B.4

Question Source: New, 2007 ILT NRC Exam

Question History:

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.11

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B A D A D D D D C A Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

67. 074 EA1.08 001

Given the following plant conditions:

- The crew is responding to a LOCA.
- RCS pressure is 400 psig.
- Containment pressure is 7.5 psig.
- Due to equipment failures, the crew has entered FR-C.1, Response to Inadequate Core Cooling.

Which ONE (1) of the following methods is the **highest** priority in restoring the Core Cooling CSF?

A. Depressurize the RCS by venting to Containment.

B. Initiate RHR flow to provide maximum cooling flow.

C. Rapidly depressurize the secondary to facilitate RCS depressurization.

D✓ Start available CCP and SI pumps and align ECCS valves as necessary.

A. Incorrect. Depressurizing the RCS to Cntmt is a last resort.
B. Incorrect. RHR flow would be established after significant depressurization has occurred. This would not be the primary plan to establish core cooling
C. Incorrect. Would perform once it was determined that HPI is unavailable
D. Correct. Top priority is to establish HPI if possible, although HPI failure most likely led to entry to this procedure

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Ability to operate and monitor the following as they apply to a Inadequate Core Cooling: HPI System

Question No. 63

Tier 1 Group 2

Importance Rating: RO 4.2

Technical Reference: FR-C.1

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271FR-C.1, B.3

Question Source: Bank

Question History: SQN Bank

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: D A D B D D B C A B Scramble Range: A - D

Source:	BANK	Source If Bank:	SQN BANK
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

68. 075 G2.1.23 001

Given the following plant conditions:

- Unit 1 is in Mode 3.
- Condenser vacuum is being established.
- The crew is starting up the CCW system in accordance with 0-SO-27-1, Condenser Circulating Water System.

Which ONE (1) of the following describes the required sequence of actions to start the FIRST CCW Pump in accordance with 0-SO-27-1?

A. 1-Verify Discharge valve 5% open
2-Place Control switch in START
3-Verify discharge valve travels full open

B. 1-Verify discharge valve is closed
2-Place Control switch in START
3-STOP Discharge valve travel at 25% open

C. 1-Verify discharge valve is closed
2-Place Control switch in START
3-Verify Discharge valve travels full open

D. 1-Verify discharge valve is 5% open
2-Place Control switch in START
3-STOP Discharge valve travel at 25% open

A. Incorrect. Incorrect order; plausible because operators are taught to start centrifigual pumps with some limited flow, other centrifugal pumps have a preset bypass/discharge valve feature like this. Since the CCWPp motor is a synchronous motor started as an induction motor with excitation being applied as the motor approaches rated speed, excitation, therefore power factor, is adjusted to bring the CCW Motor to synchronous rated speed. Discharge valve opening, is limited until this adjustment is completed.

B. Correct. 0-SO-27-1 Sect 5.4 Step 10.b. directs the operator to verify CCWPp discharge valves closed; Step 10.c **NOTE:** *CCW pump will start when discharge valve is approximately 5% open; Step 10.c directs placing the appropriate pump handswitch to 'START'; Step 10.d directs the AUO at approximately 25% open, to stop CCWPp discharge valve from further opening using the associated [local] pushbutton control.*

C. Incorrect. Plausible because other centrifugal pumps have a preset bypass and automatic discharge valve opening feature actuated by placing the pump handswitch to start position.

D. Incorrect. Discharge valve at 5% open is plausible because operators are taught to start centrifigual pumps with some limited flow [lack of knowledge of the start circuit]. Pump start/discharge valve operating sequence is correct.

Sequence is from 0-SO-27-1and ensures a lower starting current on the pump motor, protects against dead-heading and prevents short-circuiting backflow through an idle pump.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Conduct of Operations: Ability to perform specific system and integrated plant procedures during all modes of plant operation..

Question No. 37

Tier 2 Group 2

Importance Rating: RO 3.9

Technical Reference: 0-SO-27-1

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.CCW, B.4.g

Question Source: New

Question History:

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.10

Comments: Modified answers B and C to read similar to A and D. Modified step 1 of D to read same as A.

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B A A B C B C A A C Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

69. 076 K1.16 001

Given the following plant conditions:

- One ERCW pump is running off of each Shutdown Board.
- A Safety Injection occurs on Unit 1.
- After the SI, a loss of off-site power occurs.

Which ONE (1) of the following describes the preferred alignment of the ERCW pump selector switches per 0-SO-67-1, Essential Raw Cooling Water, and which pumps will be running after loads have sequenced on following the blackout?

	Selector Switch Position	**ERCW Pumps**
A.	Selected to the running pump	Pumps running prior to the blackout will be running
B.	Selected to the non-running pump	Pumps NOT running prior to blackout will be running
C.	Selected to the running pump	Pumps NOT running prior to blackout will be running
D.	Selected to the non-running pump	Pumps running prior to the blackout will be running

A. Correct. Four pumps would be selected for auto start, and those that are selected will start.

B. Incorrect. Credible because the the non-running pumps can be selected, but this is not the preferred alignment per 0-SO-67-1. If this were the case then this would be a correct answer.

C. Inorrect. Credible because the the running pumps are selected, but the running pumps would be running vs the non-running. Credible because the applicant may believe that loss of header presure would result in backup pumps starting. Have to consider that the sequence for blackout will be controlling pumps.

D. Incorrect. Credible because the the non-running pumps can be selected, Credible if applicant confuses this with the start from an SI which indepent of the blackout signal. Have to consider that the sequence for blackout will be controlling pumps.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the physical connections and/or cause- effect relationships between the SWS and the following systems: ESF.

Question No. 25

Tier 2 Group 1

Importance Rating: RO 3.6

Technical Reference: 0-SO-67-1, OPT200.ERCW, Slides 21 & 22, 47W611-67-6, ERCW SD

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.ERCW, B.4.g

Question Source: Bank

Question History: SQN Bank

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.8

Comments: need to look at procedure. Has different names for the selector switch.

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: A C B B B A A B C B Scramble Range: A - D

Source:	BANK	Source If Bank:	SQN BANK
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

70. 078 G2.4.6 001

Given the following plant conditions:

- Unit 1 is in **MODE 3** following a shutdown.
- A loss of Auxiliary Air occurred.
- Auxiliary Feedwater was aligned as directed by AOP-M.02, "Loss Of Control Air" to support current plant operations.
- EA-3-4, "Local Alignment of TD AFW LCV Backup Air Supply" has been implemented.

Which ONE (1) of the following describes the actions necessary to **RESTORE** Auxiliary Feedwater normal and meet design basis requirements following the restoration of the plant air systems?

A. Using EA-3-4, Local Alignment of TD AFW LCV Backup Air Supply; isolate the backup air supply and maintain bottle pressure at a minimum of 800 psig.

B. Using EA-3-4, Local Alignment of TD AFW LCV Backup Air Supply; isolate the backup air supply and maintain bottle pressure at a minimum of 1500 psig.

C. Using M.02, Loss of Control Air, Section 2.1 for Loss of Auxiliary Air; isolate the backup air supply and maintain bottle pressure at a minimum of 800 psig.

D. Using M.02, Loss of Control Air, Section 2.1 for Loss of Auxiliary Air; isolate the backup air supply and maintain bottle pressure at a minimum of 1500 psig.

*A is correct; EA-3-4, "*Local Alignment of TD AFW LCV Backup Air Supply*" Section 4.3.*

B is incorrect; correct procedure, but air pressure must be maintained >800 psig per EA-3-4, credible since 1500 psig is the air pressure at which a Work Order is written to change the bottle.

C is incorrect; Wrong procedure usage, AOP-M.02 directs the operator to use EA-3-4, align backup air supply. Correct minimum bottle pressure.

D is incorrect; Wrong procedure usage. Incorrect bottle pressure.

Emergency Procedures / Plan Knowledge symptom based EOP mitigation strategies.

KA Match justification: Actions for a loss of essential air are included in AOPs vs. EOPs. The actions would be the same

Question No. 90

Tier 2 Group 1

Importance Rating: SRO 4.0

Technical Reference: M.02, EA 3-4, T/S LCO 3.7.1.2

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271C424, Obj. B.4

Question Source: Bank

Question History: Sequoyah AOP-M.02B2

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: A A A C A B C A D D Scramble Range: A - D

Source:	BANK	Source If Bank:	SEQUOYAH BANK
Cognitive Level:	LOWER	Difficulty:	
Job Position:	SRO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

71. 078 K1.04 001

Given the following plant conditions:

- Both units at 100% RTP.
- Aux Air Compressor "A" is running.
- Annunciator panel 1-XA-55-15B window C6 "LS-32-63 AUX AIR COMPR A LOW OIL LVL HI AIR TEMP" is in alarm.
- Auxiliary Building AUO reports a red indicating light for high discharge air temperature for Aux Air Compressor "A".

Which ONE (1) of the following is the correct crew response in accordance with 1-AR-M15B, C6?

A. Verify Aux Air Compressor "A" automatically trips.

B. Verify Aux Air Compressor "A" is running unloaded.

C✓ Verify proper cooling valve alignment from ERCW supply header 1A to the compressor.

D. Verify proper cooling valve alignment from ERCW supply header 1A and 1B cross-tie to the compressor.

A. Incorrect. High temperature is not an automatic trip. ARP only requires this action for low oil level which is an automatic trip.

B. Incorrect. This is not a requirement in the ARP.

C. Correct. Cooling of the Aux air compressors is trained.

D. Incorrect. This would be correct for the A, B, C, and D air compressors, not the Aux Air compressors.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the physical connections and/or cause-effect relationships between the IAS and the following systems: Cooling water to compressor.

Question No. 26

Tier 2 Group 1

Importance Rating: RO2.6

Technical Reference: 1AR-M15-B, window C-6

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.CSA, Obj 9.d

Question Source: Bank

Question History: SQN Bank

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.10

Comments: Editorial modification to A based on NRC comments. Revised B to ensure answer is incorrect.

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: C D C C D A A A A D Scramble Range: A - D

Source:	BANK	Source If Bank:	SQN BANK
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

72. 086 A2.01 001

Given the following plant conditions:

- A fire has occurred on the Main Transformer.
- The Fire Brigade has extinguished the fire.
- The High Pressure Fire Protection System is being restored to normal in accordance with 0-SO-26-1 and 0-SO-26-2.
- An AUO is dispatched to the Fire Pump House to shut down the Fire Pump.
- System Header pressure is 100 psig when the order to shut down Fire Pump is given.

Which ONE (1) of the following describes the impact of the Fire Pump shutdown?

A. The fire pump will **not** restart. HPFP tie to Potable Water will maintain system pressure at the normal standby value without Fire Pump operation.

B. The fire pump will **not** restart. Jockey Pumps will operate to maintain system pressure at the normal standby value without Fire Pump operation.

C✓ The fire pump will restart. Determine where system flow demand is coming from, and once corrected, attempt to shut down the Fire Pump again.

D. The fire pump will restart. Ensure the HPFP header is repressurized to 105 psig prior to attempting another shutdown of the pump.

A. Incorrect. System pressure normally maintained by a combination of Potable Water and Jockey Pump operation. In this case, pressure is not high enough to prevent Fire Pump restart

B. Incorrect. System pressure normally maintained by a combination of Potable Water and Jockey Pump operation. In this case, pressure is not high enough to prevent Fire Pump restart

C. Correct. If system pressure is not 110-112 psig, the Fire Pump will restart. Action is to find out where system demand is coming from

D. Incorrect. Correct system response but incorrect HPFP pressure. Pump would restart again if pressure was 105 when it was secured

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Ability to (a) predict the impacts of the following malfunctions or operations on the Fire Protection System; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Manual shutdown of the FPS.

Question No. 38

Tier 2 Group 2

Importance Rating: RO 2.9

Technical Reference: 0-SO-26-1

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.HPFP, B.16.a

Question Source: New

Question History:

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.10

Comments: editorial change to D. Removed greater than to make it incorrect.

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: C C A C A C D D B D Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

73. 103 A1.01 001

Given the following plant conditions:

- The plant is in Mode 5.
- Containment Purge is in operation.
- The Personnel Airlock and Equipment Hatch are closed.
- The Containment Purge Exhaust Isolation valve is inadvertently closed.
- NO other components reposition.

Which ONE (1) of the following describes the containment parameter immediately affected by this failure and the design limit for that parameter?

	Parameter	**Design Limit**
A.	Temperature	250°F
B.✔	Pressure	12 psig
C.	Temperature	125°F
D.	Pressure	9.5 psig

A. Incorrect. Temperature will not be adversely affected, Purge system does not provide a cooling function. Correct containment temperature design limit.

B. Correct. Purge exhaust flow loss will couse containment pressure to increase in the specified conditions; 12 psig is the Tech Spec maximum allowable pressure during LOCA conditions.

C. Incorrect. Temperature not affected. 125°F is plausible since it is the lower Comtainment temperature Tech Spec upper limit.

A. Incorrect. Pressure is affected; 9.5 psig is plausible because it is the containment setpoint for placing RHR Spray in service in FR-Z.1 and for running Cntmt Spray Pumps in ECA-1.1.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the containment system controls including: Containment pressure, temperature, and humidity.

Question No. 27

Tier 2 Group 1

Importance Rating: RO 3.7

Technical Reference: Tech Spec 3.6.1.4, 3.6.1.5 & bases; 47W610-30-1

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.CONTPURGE, B.5.d

Question Source: Bank

Question History: Harris 2005 NRC Exam

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.5

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B C B B D A C D A D Scramble Range: A - D

Source:	BANK	Source If Bank:	HARRIS 2005 NRC
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

74. 103 K3.03 001

Given the following plant conditions:

- Unit 2 is in Mode 6.
- Core off-load is in progress.

Which ONE (1) of the following situations requires immediate suspension of irradiated fuel movement? (Consider each individually)

A. One Train of ABGTS is declared inoperable.

B. Both Lower Containment Airlock doors are open.

C. Equipment Hatch is closed with 2 bolts fastened.

D. Containment Purge Supply Fan is declared inoperable

A. Incorrect. One train of ABGTS is required operable if One Airlock door will be open. Refueling does not have to stop if ABGTS inop

B. Incorrect. Both doors may be open as long as 1 is capable of being closed.

C. Correct. Equipment door is required to be fastened by 4 bolts.

D. Incorrect. Containment Purge inop does not require stopping refueling, only concern is containment purge radiation monitors being operable for refueling

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the effect that a loss or malfunction of the containment system will have on the following: Loss of containment integrity under refueling operations.

Question No. 28

Tier 2 Group 1

Importance Rating: RO 3.7

Technical Reference: TS 3.9.4

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.CntmtStructure, B.6.c

Question Source: New

Question History:

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.10/43.2

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: C C D A B D B C A B Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

75. E02 EA1.3 001

Given the following plant conditions:

Initial conditions:

- A steam break has occurred inside containment.
- Reactor trip and containment high-high pressure have actuated.
- The faulted S/G has completely blown down.
- The crew has entered ES-1.1, SI Termination.
- One containment spray pump is in service.

Current conditions:

- Containment pressure is 2.5 psig.
- The crew has just transitioned from ES-1.1 to the appropriate plant procedure.

Which ONE (1) of the following correctly describes the status of the CCPs and Containment Spray pump immediately upon transition from ES-1.1?

	CCP	**Containment Spray Pump**
A.	1 CCP injecting via CCPIT	In Service
B.	1 CCP injecting via CCPIT	Stopped and placed in A-AUTO
C.	1 CCP injecting via seal injection and normal charging	Stopped and placed in A-AUTO
D.	1 CCP injecting via seal injection and normal charging	In Service

A. Incorrect. Meet SI termination criteria; therefore, second CCP removed from service and normal charging established.

B. Incorrect. Meet SI termination criteria; therefore, second CCP removed from service and normal charging established. Containment pressure is > 2 psid; therefore, CS is not stopped.

C. Incorrect. Containment pressure is > 2 psid; therefore, CS is not stopped.

D. Correct. Meet SI termination criteria; therefore, second CCP removed from service and normal charging established. Containment pressure is > 2 psid; therefore, CS is not stopped.

Ability to operate and / or monitor the following as they apply to the (SI Termination) Desired operating results during abnormal and emergency situations.

Question No. 64

Tier 1 Group 2

Importance Rating: RO 3.8

Technical Reference: ES-1.1

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271ES-1.1, Objective 6
OPL273C502C; Obj. 8.i, 8.j

Question Source: Bank

Question History: SQN ES-1.1.B.1-2

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: D B D A D C C A C A Scramble Range: A - D

Source:	BANK	Source If Bank:	SEQUOYAH BANK
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

76. E04 G2.1.28 001

Given the following plant conditions:

- Reactor Trip and Safety Injection have occurred on Unit 2.
- The crew has transitioned to ECA-1.2, LOCA Outside Containment.
- The leak location has NOT been identified and the crew is preparing to isolate Cold Leg Injection.
- Radcon reports increased radiation levels in the 690' Pipe Chase.

Which ONE (1) of the following describes how Cold Leg Injection is isolated, and how to determine if the leak has been stopped in accordance with ECA-1.2?

A. Close FCV-63-93 and FCV-63-94, Cold Leg Injection Valves, simultaneously. Verify isolation by observing pressurizer level.

B. Close FCV-63-93 and FCV-63-94, Cold Leg Injection Valves, simultaneously. Verify isolation by observing RCS pressure.

C. Close FCV-63-93 and FCV-63-94, Cold Leg Injection Valves, one at a time. Verify isolation by observing pressurizer level.

D. Close FCV-63-93 and FCV-63-94, Cold Leg Injection Valves, one at a time. Verify isolation by observing RCS pressure.

A. Incorrect. Valves are closed 1 at a time, not simulataneously. RCS pressure is checked

B. Incorrect. Correct parameter but 1 valve closed at a time

C. Incorrect. PZR level is not the parameter checked, but actions are correct.

D. Correct.Valves are closed one at a time and pressure is checked prior to determining whether to reopen or leave closed. RCS pressure is the parameter checked

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Conduct of Operations: Knowledge of the purpose and function of major system components and controls.

Question No. 53

Tier 1 Group 1

Importance Rating: RO 3.2

Technical Reference: ECA-1.2

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271ECA-1.2 Objective 4

Question Source: New

Question History:

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: D B C A A A C B B C Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

77. E05 EA1.3 001

Given the following plant conditions:

Unit 1 is responding to a Loss of Heat Sink per FR-H.1, Response to Loss of Secondary Heat Sink.

- All Steam Generator Wide Range levels are Off-Scale low.
- RCS temperature is approximately 588°F and rising slowly.

Which ONE (1) of the following describes the preferred method of initiating Auxiliary Feed flow for these conditions?

A. Feed at the highest possible rate to one S/G to preclude initiation of RCS Bleed and Feed.

B. Feed at the minimum required flow to prevent possible SG tube failures.

C✓ Feed at the highest possible rate to one S/G to reestablish SG inventory and secondary heat sink.

D. Feed at the minimum required flow to establish a controllable cooldown rate and prevent RCS pressure from reaching the PORV setpoint.

A. Incorrect. Bleed and Feed would already be initiated under these conditions.

B. Incorrect. Tube failures are the primary concern when initiating feed, but for these conditions, restoration of 1 SG as soon as possible is the priority

C.Correct. If RCS temp is rising with no inventory, AFW flow should be directed to one SG at the max rate in an attempt to recover heat sink. This minimizes the chance for multiple tube failures as well as the quickest way to recover at least 1 SG as heat sink. At this point, bleed and feed should already be initiated.

D. Incorrect. On a loss of heat sink, cooldown rate is not the priority. The RCS has already heated up. Loss of inventory is a concern due to potential tube failures, but addressed by feeding only 1 SG

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the reasons for the following responses as they apply to the (Loss of Secondary Heat Sink) Desired operating results during abnormal and emergency situations.

Question No. 54

Tier 1 Group 1

Importance Rating: RO 3.8

Technical Reference: FR-H.1 BD

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271FR-H.1 Objective 4

Question Source: Bank

Question History: WTSI Various previous NRC

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: C A D B D B C B D A Scramble Range: A - D

Source:	BANK	Source If Bank:	WTSI
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

78. E07 EA2.1 001

Given the following plant conditions:

- A Steam Generator Tube Rupture has occurred on Unit 1.
- Due to equipment failures, the crew is performing actions contained in ECA-3.2, SGTR and LOCA - Saturated Recovery.
- The STA informs you that all CSF Status Trees are GREEN with the exception of the following:
  - Core Cooling - YELLOW path for FR-C.3, Saturated Core Cooling
  - Inventory - YELLOW path for FR-I.2, Voids in Reactor Vessel

Which ONE (1) of the following describes the required implementation of procedures for this event, and the reason?

A. Transition from ECA-3.2 to FR-I.2 to restore the Inventory CSF to a green condition.

B. Transition from ECA-3.2 to FR-C.3 to restore the Core Cooling CSF to a green condition.

C. Remain in ECA-3.2. Implementation of Yellow Path procedures is **not** allowed in the ECA procedures in accordance with EPM-4, User's Guide.

D. Remain in ECA-3.2. The actions contained in FR-C.3 and FR-I.2 conflict with ECA-3.2 actions.

A. Incorrect. The crew may treat the actions is this way, but FR-I. will return SRO to procedure in effect is Reactor vessel head voids are expected. *ECAs do not preclude the use of yellow path procedures*

B. Incorrect. Normally this would be true, but a caution in ECA-3.2 reminds SRO that upper head may void during depressurization and step 1 of FR-C.3 returns SRO to ECA-3.2 if performance of that procedure is in affect.

C. Incorrect. Transition is not required, and although FR-C.3 is a higher priority, it would not be performed due to the conflict with ECA-3.2

D. Correct. Both FRs will return SRO to ECA-3.2.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Ability to determine and interpret the following as they apply to the (Saturated Core Cooling) Facility conditions and selection of appropriate procedures during abnormal and emergency operations.

Question No. 83

Tier 1 Group 2

Importance Rating: SRO 4.0

Technical Reference: EOP User's Guide, FR-C.3 step 1

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271EPM-4, B.11.c

Question Source: New

Question History:

Question Cognitive Level: Higher

10 CFR Part 55 Content: 43.5

Comments: Editorial change to B and D wording based on NRC comment

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: D D A A C B C B A A Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	SRO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

79. E09 G2.2.22 001

Given the following plant conditions:

- A reactor trip has occurred on Unit 1.
- Off-Site power has been lost.

- Plant Cooldown to Mode 5 will be performed.

Which ONE (1) of the following describes the Technical Specification Shutdown Margin requirements prior to, and after the cooldown, and the minimum action required if Shutdown Margin requirements are not met at any time during the cooldown?

A. 1.0% delta k/k prior to RCS Cooldown;
1.6% delta k/k upon completion of RCS Cooldown;
Perform boration in accordance with EA-68-4, Emergency Boration, to restore Shutdown Margin.

B. 1.0% delta k/k prior to RCS Cooldown;
1.6% delta k/k upon completion of RCS Cooldown;
Perform boration in accordance with SO-62-7, Boron Concentration Control, to restore Shutdown Margin.

C✓ 1.6% delta k/k prior to RCS Cooldown;
1.0% delta k/k upon completion of RCS Cooldown;
Perform boration in accordance with EA-68-4, Emergency Boration, to restore Shutdown Margin.

D. 1.6% delta k/k prior to RCS Cooldown;
1.0% delta k/k upon completion of RCS Cooldown;
Perform boration in accordance with SO-62-7, Boron Concentration Control, to restore Shutdown Margin.

A. Incorrect. Correct boration procedure but required Shutdown Margins are reversed from Tech Spec requirements.

B. Incorrect. required Shutdown Margins are reversed from Tech Spec requirements. Incorrect boration procedure. Incorrect procedure per ES-0.1, this procedure would be used if borating RCS per GO-7 Shutdown from HSB to CSD.

C. Correct.

D. Incorrect. Correct SDM, but incorrect procedure.

Equipment Control Knowledge of limiting conditions for operations and safety limits.

KA Match: the KA is matched since the

Question No. 84

Tier 1 Group 2

Importance Rating: SRO 4.1

Technical Reference: EA-68-4, TS 3.1.1.2

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271ES-0.2, B.6.a

Question Source: New

Question History:

Question Cognitive Level: Higher

10 CFR Part 55 Content: 43.5

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: C B C B A A B C B A Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	SRO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

80. E11 EK3.2 001

Which ONE (1) of the following describes two objectives of procedure ECA-1.1, Loss of RHR Sump Recirculation?

A. Ensure only one train of SI in service to prevent cavitation and initiate makeup to the RWST to ensure RCS inventory can be maintained.

B. Reduce SI flow to delay depletion of the RWST and stabilize RCS temperature to minimize RCS inventory requirements.

C. Perform necessary system alignments to restore emergency coolant recirculation capability and stabilize RCS temperature to minimize RCS inventory requirements.

D. ✓ Reduce SI flow to delay depletion of the RWST and perform necessary system alignments to restore emergency coolant recirculation capability

A. Incorrect. SI is reduced to the minimum required for heat removal. Plausible because core cooling requirements must be maintained.

B. Incorrect. Stabilizing RCS temperature is not an action or priority, but plausible because cooling down would result in RCS shrinkage, and therefore, additional makeup required

C. Incorrect. Stabilizing RCS temperature is not an action or priority, but cooling down would result in RCS shrinkage, and therefore, additional makeup required

D. Correct. The procedure has 3 objectives: Minimizes depletion of RWST, depressurize RCS to minimize break flow and cause accumulator injection, and continue attempts to restore recirculation capability

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the reasons for the following responses as they apply to the (Loss of Emergency Coolant Recirculation) Normal, abnormal and emergency operating procedures associated with (Loss of Emergency Coolant Recirculation).

Question No. 55

Tier 1 Group 1

Importance Rating: RO 3.5

Technical Reference: ECA-1.1 and basis

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271ECA-1.1 Objective 4

Question Source: Bank

Question History: WTSI Last Exam VCS 06 Audit

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: D D B B A D D C D C Scramble Range: A - D

Source:	BANK	Source If Bank:	
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

81. E12 G2.4.31 001

Given the following plant conditions:

- A steam line rupture has occurred in the Unit 1 West Valve Vault Room.
- The crew was unable to isolate SGs.
- ECA-2.1, Uncontrolled Depressurization of All Steam Generators, is in progress.
- The crew has taken action to minimize the plant cooldown.
- AFW flow to S/Gs 1, 2, 3 and 4 are currently at 25 gpm.
- Thots are decreasing slowly.
- The following alarms are received:
  - 1-XA-M3-C3, STM GEN #1 LEVEL LOW
  - 1-XA-M3-C4, STM GEN #2 LEVEL LOW
  - 1-XA-M3-C5, STM GEN #3 LEVEL LOW
  - 1-XA-M3-C6, STM GEN #4 LEVEL LOW

Which ONE (1) of the following actions is required in accordance with ECA-2.1?

A. Raise AFW flow to #1, #2, #3, and #4 SGs. The minimum NR level, per ECA-2.1, is 25%.

B. Raise AFW flow to #1, #2, #3, and #4 SGs. The minimum NR level, per ECA-2.1, is 50%.

C. Maintain AFW flow at its current value. If Thot starts to rise, raise AFW flow to stabilize RCS temperature.

D. Maintain AFW flow at its current value. When 3 of 4 SGs are at the applicable setpoint, transition to FR-H.1, Response to Loss of Secondary Heat Sink.

A. Incorrect. After throttling to minimize RCS cooldown, even if levels are low, AFW remains throttled until Thot begins to rise. At that point, AFW is throttled just enough to stabilize temperature. Credible because 10% is the lower limit that level is checked at

B. Incorrect. After throttling to minimize RCS cooldown, even if levels are low, AFW remains throttled until Thot begins to rise. At that point, AFW is throttled just enough to stabilize temperature. Credible because 50% is the upper limit that level is checked at

C. Correct.

D. Incorrect. Since this an operator induced reduction of AFW flow, FR-H.1 actions would not be performed

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Emergency Procedures / Plan Knowledge of annunciators alarms and indications, and use of the response instructions

Question No. 56

Tier 1 Group 1

Importance Rating: RO 3.3

Technical Reference: ECA-2.1, AR M3

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271ECA-2.1, B.6.a

Question Source: New

Question History:

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: C B A B C C B B A B Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

82. E13 EK2.1 001

Given the following plant conditions:

- The crew entered FR-H.2, "Steam Generator Overpressure", due to an overpressure condition on S/G #2.
- SG #2 pressure is 1170 psig.
- S/G #2 narrow range level is 72%.

Which ONE (1) of the following describes the appropriate actions, in sequence, to mitigate this event in accordance with FR-H.2?

A. First Verify Feedwater Isolation and then initiate SG Blowdown.

B. ✓ First Verify Feedwater Isolation and then attempt to dump steam from the affected SG.

C. First Isolate AFW flow and then initiate SG Blowdown.

D. First Isolate AFW flow and then attempt to dump steam from the affected SG.

A. Incorrect. First action is correct, but SG blowdown is an action that would be performed in FR-H.3. Applicant may confuse these actions since the indicated level in the SG is 72% and think this is the cause of the high pressure.

B. Correct.

C. Incorrect. AFW is isolated later if pressure cannot be brought under control by dumping steam. Additionally, SG blowdown is a later action

D. Incorrect. AFW is isolated later; attempting to dump steam is correct.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the interrelations between the (Steam Generator Overpressure) and the following: Components, and functions of control and safety systems, including instrumentation, signals, interlocks, failure modes, and automatic and manual features

Question No. 65

Tier 1 Group 2

Importance Rating: RO 3.0

Technical Reference: FR-H.2

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271FR-H.2, Obj. 5

Question Source: Bank

Question History: New

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B D D A D D C A A C Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

83. E15 G2.1.32 001

Given the following plant conditions:

A LOCA has occurred and the following containment conditions exist after transition to E-1, Loss of Reactor or Secondary Coolant:

- Pressure is 2.5 psig and rising.
- Sump level is 70% and rising.
- Upper and Lower Containment Radiation level is 102 Rem per hour.

Which ONE (1) of the following describes the procedure required to mitigate the above conditions?

A. Transition to FR-Z.1, Response to High Containment Pressure.

B. ✓ Transition to FR-Z.2, Response to Containment Flooding.

C. Transition to FR-Z.3, Response to High Containment Radiation.

D. Remain in E-1, Loss of Reactor or Secondary Coolant.

A. Incorrect. Pressure is below the criteria for an orange path that would require entry to FR-Z.1

B. Correct.

C. Incorrect. A yellow condition for radiation level does exist, but the orange condition on cntmt flood level requires entry to a higher priority procedure

D. Incorrect. There is an orange and yellow condition on the Containment CSF. E-1 will be performed after addressing the CSF

Conduct of Operations: Ability to explain and apply all system limits and precautions.

Question No. 85

Tier 1 Group 2

Importance Rating: SRO 3.8

Technical Reference: FR-Z.2 background, FR-0

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271FR-Z.2, B.5

Question Source: New

Question History:

Question Cognitive Level: Higher

10 CFR Part 55 Content: 43.5

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: B D A C C D D C C D Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	LOWER	Difficulty:	
Job Position:	SRO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

84. G2.1.13 001

A card reader is broken, prohibiting access to a vital area.

If conditions require immediate access, who by title, has control over Vital Area Access keys in accordance with SPP-1.3, Plant Access and Security and NSDP-8, Keys and Locks?

A. Security ONLY

B. ✓ Security or Shift Manager/Unit Supervisor ONLY

C. Security or Duty Operations Manager ONLY

D. Security or Duty Plant Manager ONLY

A. Incorrect. SM/US are also issued keys

*B. Correct. The Shift Manager/US holds the Vital Area Access key, and issues it as needed. [Refer to NSDP-8 Sect 3.0 B: "...*All unissued keys, locks, and cores are stored and maintained in locked repositories or in cabinets under the direct control of Security or the Shift Manager (SM) to reduce the probability of compromise..."}

C. Incorrect. SM, see above

D. Incorrect. SM, see above.

Memory level item.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of facility requirements for controlling vital / controlled access.

Question No. 95

Tier 3 Group 1

Importance Rating: SRO 2.9

Technical Reference: SPP-1.3; NSDP-8

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271SECURITY Objective 4

Question Source: New

Question History:

Question Cognitive Level: Lower

10 CFR Part 55 Content: 43.5

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B C A C A B C B A A Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	LOWER	Difficulty:	
Job Position:	SRO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

85. G2.1.18 001

In accordance with OPDP-1, Conduct of Operations, which ONE (1) of the following describes when the words 'LATE ENTRY' are required in eSOMS and how the 'LATE ENTRY' is made?

A late entry is required any time that required information was not entered at the time of event...

A. if logs have NOT been approved since the time of the event.
Enter 'LATE ENTRY' followed by the event description.

B. ✓ if logs have been approved since the actual time of the event.
Enter 'LATE ENTRY' followed by the event description.

C. if logs have NOT been approved since the time of the event.
Enter the event description followed by 'LATE ENTRY'.

D. if logs have been approved since the actual time of the event.
Enter the event description followed by 'LATE ENTRY'.

A. Incorrect. Late entries are only required after they are found when approval has been made without the original entry of event (For instance, after shift turnover it is found that an entry was not made). The sequence of the entry is correct.

B. Correct. Late entry is only required after the log has been approved, and the log is annotated with "LATE ENTRY" followed by event description.

C. Incorrect. wrong requirement wrong order of entry.

D. Incorrect. Partially correct, but the order of the log entry is wrong.

Ability to make accurate, clear and concise logs, records, status boards, and reports.

Question No. 67

Tier 3 Group 1

Importance Rating: RO 2.9

Technical Reference: OPDP-1, Appendix E, section E

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271C209 Objective 9

Question Source: New

Question History:

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: B C D C B B D B A C Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

86. G2.1.2 001

OPDP-1, Conduct of Operations, describes the " Departure From License Condition" which can be invoked to protect the health and safety of the public.

As a minimum, which ONE (1) of the following conditions must ALWAYS be met when departing from a license condition or technical specification in accordance with 10 CRF 50.54 (x) and (y)?

A. ✓ The action must be approved by a licensed SRO prior to taking the action.

B. The action must be taken in accordance with the provisions of the Emergency Plan.

C. The NRC must be notified prior to the action and must concur with the action to be taken.

D. The Plant Manager must be notified prior to the action and must concur with the action to be taken.

A Correct.

B incorrect. Although the unit is most likely in the E-Plan, it is not a requirement prior to invoking 10CFR50.54(x)

C incorrect. NRC concurrence is not required for the action; they must be notified as soon as possible but no more than 1 hour prior.

D incorrect. Preventing damage or injury is a reason for invoking the rule, but Plant Manager concurrence or approval is not required

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of operator responsibilities during all modes of plant operation.

Question No. 66

Tier 3 Group 1

Importance Rating: RO 3.0

Technical Reference: OPDP-1, Appendix F

Proposed references to be provided to applicants during examination: None

Learning Objective: OPI271C209, B.8

Question Source: Bank

Question History:

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: A A C B D D B B A A Scramble Range: A - D

Source:	BANK	Source If Bank:	WTSI
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

87. G2.1.21 001

You are preparing to perform a control rod exercise surveillance on your shift.

BSL is not operating.

Which ONE (1) of the following describes the correct location(s) to obtain the current controlled copy revision of the procedure?

A. Main Control Room ONLY

B. Main Control Room, Operations Field Office ONLY

C. Main Control Room, Work Control Center ONLY

D. Main Control Room, Operations Field Office or Work Control Center

A. Correct. .

B. Incorrect. Copies in the OFO are not controlled, but plausible because OSC is controlled

C. Incorrect. WCC does not have controlled copies of surveillances

D. Incorrect. Copies in the OFO are not controlled

Ability to obtain and verify controlled procedure copy.

Question No. 68

Tier 3 Group 1

Importance Rating: RO 3.1

Technical Reference: SPP-2.2

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL27SPP-2.2 Objective 2 and 5

Question Source: Bank

Question History:

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.10

Comments:

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: A A A D D B C C C D Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

88. G2.1.7 001

Given the following plant conditions:

- A Normal Plant cooldown is in progress.
- The following table is a plot of the cooldown:

TIME	RCS TCOLD	TIME	RCS TCOLD
0800	547°F	0945	425°F
0815	530°F	1000	395°F
0830	520°F	1015	382°F
0845	505°F	1030	364°F
0900	498°F	1045	340°F
0915	478°F	1100	320°F
0930	447°F	1115	220°F

Which ONE (1) of the following describes the first time that the Technical Specification RCS Cooldown rate limit was exceeded, and the Technical Specification basis for the cooldown rate limit?

A. 1000; brittle fracture of reactor vessel ONLY

B. 1115; brittle fracture of reactor vessel and RCS pressure boundary

C. ✓ 1000; brittle fracture of reactor vessel and RCS pressure boundary

D. 1115; brittle fracture of reactor vessel ONLY

A. Incorrect. Correct time, but PZR is excluded from concern about brittle fracture

B. Incorrect. Incorrect time and PZR is excluded from brittle fracture concern.

C. Correct. This is 103 degrees in one hour.

D. Incorrect. Limits were exceeded at 1000 because c/d rate was 103 deg F for that hour

> The LCO establishes operating limits that provide a margin to brittle failure of the reactor vessel and piping of the reactor coolant pressure boundary (RCPB). The vessel is the component most subject to brittle failure, and the LCO limits apply mainly to the vessel. The limits do not apply to the pressurizer, which has different design characteristics and operating functions. The reactor vessel materials have been tested to determine their initial RT_{NDT} and the results of these tests are shown on Table B 3/4.4-1.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Ability to evaluate plant performance and make operational judgments based on operating characteristics, reactor behavior, and instrument interpretation.

Question No. 94

Tier 3 Group 1

Importance Rating: SRO 4.4

Technical Reference: TS 3.4.9.1 and basis, 0-SI-SXX-068-127, PTLR

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.RCS Objective 6.a

Question Source: Bank

Question History: Robinson 2007 NRC

Question Cognitive Level: Higher

10 CFR Part 55 Content: 43.2

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: C B C C B C B D C C Scramble Range: A - D

Source:	BANK	Source If Bank:	ROBINSON 2007 NRC
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	SRO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

89. G2.2.12 002

Given the following plant conditions:

- Unit 2 is currently in MODE 4.
- At 0900 today, it is discovered that a routine 24-hour surveillance involving Shutdown Margin was last performed at 0600 on the previous day.

Which ONE (1) of the following is the LATEST time the surveillance may be performed in accordance with Technical Specification requirements?

A. 1200 today

B. 1500 today

C. 0600 tomorrow

D. 0900 tomorrow

A. Correct. The surveillance requirements are satisfied if the surveillance is completed by 1200, because the surveillance interval of 1.25 would be satisfied.

B. Incorrect. This time would represent the surveillance interval times 1.25 from the time of discovery of the missed surveillance

C. Incorrect. This time indicates the 24 hour extension granted by TS 4.0.3 from the time the surveillance was missed. LCO 4.0.3 does not apply in this condition. It is applied if failure to perform a surveillance, outside the allowable surveillance interval including allowable extension time is discovered; the delayed LCO entry allows performance time for surveillance completion.

D. Incorrect. This time indicates the 24 hour extension from time of discovery of the missed surveillance. LCO 4.0.3 does not apply in this condition. It is applied if failure to perform a surveillance, outside the allowable surveillance interval including allowable extension time is discovered; the delayed LCO entry allows performance time for surveillance completion.

Knowledge of surveillance procedures.

Question No. 69

Tier 3 Group 2

Importance Rating: RO 3.0

Technical Reference: TS 4.0.1, TS 4.0.3

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271SPP-2.2 Objective 4

Question Source: Bank

Question History:

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: A B C B D C A B B D Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

90. G2.2.23 001

Which ONE (1) of the following describes the requirement for logging of LCO's in accordance with OPDP-8, Limiting Conditions for Operations Tracking, if the LCO is entered and exited during the same shift?

	Unit Log	LCO Tracking Log
A.	Log entry required	Log entry required
B. ✓	Log entry required	Log entry NOT required
C.	Log entry NOT required	Log entry required
D.	Log entry NOT required	Log entry NOT required

A incorrect. LCO may entries may be put in LCO Tracking log but the only ones required are the entries that will go past the end of the shift

B Correct. OPDP-8 page 4 of 24 states: The US/designee is responsible for logging the entry and exit from TS LCOs. LCOs should be entered into the LCO Tracking Log. LCOs that will be exited before the end of the assigned shift do not need to be entered into the LCO Tracking Log. The Unit Log shall be the official log for LCOs. Times and dates entered on his/her log shall be used as the official time/date for TS LCO action statements and for all matters that require a time/date of discovery.

C incorrect. The Unit Log is required at all times for all entries as the primary log.

D incorrect. The Unit Log is required as the official log

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Ability to track limiting conditions for operations.

Question No. 70

Tier 3 Group 2

Importance Rating: RO 2.6

Technical Reference: OPDP-8

Proposed references to be provided to applicants during examination: None

Learning Objective: OPS271OPDP-8 Objective 6

Question Source: New

Question History:

Question Cognitive Level: Lower

10 CFR Part 55 Content: 41.10

Comments: editorial change to B and D to make them read the same as the OPDP

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B D C D D D A A B A Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

91. G2.2.26 001

According to Tech Spec 3.9.3, Decay Time, which ONE (1) of the following describes when irradiated fuel movement in the reactor vessel would be allowed?

100 hours from _____

A. Hot Standby

B. Hot Shutdown

C. Cold Shutdown

D. Refueling Shtudown

A. Correct. TS 3.9.3 specifies 100 hours from critical. In this case, achieving Hot Standby.

B. Incorrect. This is 100 hrs from Hot Shutdown.

C. Incorrect. This is 100 hrs from Cold Shutdown.

D. Incorrect. This is 100 hours from Refueling.

Knowledge of refueling administrative requirements.

Question No. 71

Tier 3 Group 2

Importance Rating: RO 2.5

Technical Reference: TS 3.9.3

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.FH Objective 6.a

Question Source: Bank

Question History: Sequoyah FH-B.5.C-11,
Developed from Kewaunee NRC 2000 exam

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.10, 43.2

Comments:

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: A A C D B A B D C B Scramble Range: A - D

Source:	BANK	Source If Bank:	SEQUOYAH BANK
Cognitive Level:	LOWER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

92. G2.2.5 001

Given the following plant conditions:

- A plant design change request form is in the approval process.
- The proposed modification will modify the control rod overlap setpoints in the logic cabinets.

Which ONE (1) of the following describes the final management position, by title, required to approve the change prior to implementation?

A. Plant Manager

B. Site Vice President

C. Maintenance and Mods Manager

D. Engineering and Support Manager

A. Correct. Per SSP-9.3

B. Incorrect. The Site Vice President will be involved in the approval process, but the Plant Manager has final authority for approval.

C. Incorrect. The MODs manager has responsibility for completion of the physical work, but does not have final approval authority.

D. Incorrect. The engineering manager does handle the completion of the DCN and MODs package, but does not have final approval authority.

Knowledge of the process for making changes in the facility as described in the safety analysis report.

Question No. 96

Tier 3 Group 2

Importance Rating: SRO 2.7

Technical Reference: SPP-9.3

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271C209, Obj. 12

Question Source: Bank

Question History: Sequoyah Bank SPP-9.3-2

Question Cognitive Level: Lower

10 CFR Part 55 Content: 43.3

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: A D B B C C B C B B Scramble Range: A - D

Source:	BANK	Source If Bank:	SEQUOYAH BANK
Cognitive Level:	LOWER	Difficulty:	
Job Position:	SRO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

93. G2.2.9 001

Given the following plant conditions:

- Unit 2 is in Mode 3.
- Engineering has requested that the 2A SI pump be started with the discharge valve throttled to 75% open to determine starting current.
- The test is NOT described in the current test procedure or the Safety Analysis Report.
- The Operations Manager has determined that an Urgent Procedure change is required to support the outage critical path schedule.

The Shift Manager may approve the test procedure change _____.

A. with concurrence from licensing ONLY.

B. with concurrence from another SRO ONLY.

C. with concurrence from licensing AND another SRO.

D✓ after a written 10CFR50.59 safety evaluation has been approved.

A. Incorrect; Not described in FSAR, then the SM cannot approve by him(her)self.

B. Incorrect; 2 SROs can approve normal procedure changes.

C. Incorrect; Licensing concurrence is not required, results of a review would be sent through Licensing.

D. Correct; See SPP-9.4 Screening Review Form, question number 4. The screening review will result in a 50.59 safety evaluation.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of the process for determining if the proposed change, test or experiment increases the probability of occurrence or consequences of an accident during the change, test or experiment.

Question No. 97

Tier 3 Group 2

Importance Rating: SRO 3.3

Technical Reference: SPP-2.2, SPP-9.4

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271C209 Objective 12

Question Source: Bank

Question History: Sequoyah Bank 10CFR50.59-1

Question Cognitive Level: Higher

10 CFR Part 55 Content: 43.3

Comments:

I need the procedure to verify and justify. Need to beef up justification

MCS Time: 3 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: D D D D D D D D D D Scramble Range: A - D

Source:	BANK	Source If Bank:	SEQUOYAH BANK
Cognitive Level:	LOWER	Difficulty:	
Job Position:	SRO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

94. G2.3.10 001

Given the following plant conditions:

- A rapid load reduction from 100% power to 60% power was performed on Unit 1 approximately 3 hours ago.
- Chemistry confirms that RCS I-131 activity exceeds Technical Specification limit of acceptable operation.
- The US directs a plant shutdown to be performed.

Which ONE (1) of the following post shutdown actions is subsequently performed to limit the release of activity?

A. All MSIVs are closed

B. ✓ RCS temperature is reduced below 500°F

C. All S/G PORV setpoints are raised

D. Maximum Condensate Polishers are placed in service

A is incorrect because closing MSIVs does not prevent rad release from SG ARVs

B is correct. Reduce temp IAW TS

C is incorrect. Would not stop a release from SG SV

D is incorrect. Cation Demin may be placed in service on Letdown, but placing Condensate Demins in service would still not minimize a release off-site if SV or SG ARV lifted

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure.

Question No. 73

Tier 3 Group 3

Importance Rating: RO 2.9

Technical Reference: TS 3.4.8, AOP R.06

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271AOP-R.06 Objective 6 and 9

Question Source: Bank

Question History: WTSI Bank

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B C A D A D B D A A Scramble Range: A - D

Source:	BANK	Source If Bank:	WTSI
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

95. G2.3.2 001

Given the following conditions at a work site:

- Airborne activity - 3 DAC
- Radiation level - 40 mrem/hr.
- Radiation level with shielding - 10 mrem/hr.
- Time to place shielding - 15 minutes.
- Time to conduct task WITH respirator - 1 hour.
- Time to conduct task WITHOUT respirator - 30 minutes.

Assumptions:

- The airborne dose with a respirator will be zero.
- A dose rate of 40 mrem/hr will be received while placing the shielding.
- All tasks will performed by one worker, including initial placement of shielding, if required.
- Shielding can be placed in 15 minutes with or without a respirator.
- The shielding will not be removed

Which ONE of the following would result in the lowest whole body dose?

A. Conduct task WITHOUT respirator or shielding.

B. Conduct task WITH respirator and WITHOUT shielding.

C. Place shielding WITH respirator and conduct task WITH respirator.

D✓ Place shielding WITH respirator but conduct task WITHOUT respirator.

DISTRACTORS:

A INCORRECT 20 mrem (conduct task) + 3.75 mrem (airborne) = 23.75 mrem.

B INCORRECT 40 mrem (conduct task) + 0 mrem (airborne) = 40 mrem.

C INCORRECT 10 mrem (place shielding) + 10 (conduct task) + 0 mrem (airborne) = 20 mrem.

D CORRECT 10 mrem (place shielding) + 5 mrem (conduct task) + 3.75 mrem (airborne) 18.75 mrem. NOTE: 3 DAC x 2.5 mrem = 7.5 mrem

REFERENCES:
1.

K/A CATALOGUE QUESTION DESCRIPTION:
- Ability to perform procedures to reduce excessive levels of radiation and guard against personnel exposure.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: D D B A A B A A A C Scramble Range: A - D

Source:	BANK	Source If Bank:	WTSI
Cognitive Level:	HIGHER	Difficulty:	C/A(2.9/3.3)
Job Position:	RO	Plant:	SM05301
Date:	R	Last 2 NRC?:	MC/SDR

96. G2.3.4 001

Given the following plant conditions:

A General Emergency has been declared.

A severely injured individual is in the Pipe Chase in a radiation field of 50 R/Hr.

Two individuals have volunteered for the rescue. BOTH of the volunteers have been briefed on the risks involved:

- Individual A is a 37 year old male.
- Individual B is a 46 year old male.

In accordance with EPIP-15, Emergency Exposure Guidelines, which volunteer should be selected for the rescue, and what is the maximum exposure the SED may authorize him to receive?

A. Individual A; 10 Rem.

B. Individual B; 10 Rem.

C. Individual A; 25 Rem.

D✓ Individual B; 25 Rem.

A Incorrect. because the older employee will be selected due to a lower chance of long term effects of radiation exposure affecting this person. 10 Rem is the maximum authorization limit for procection of equipment.

B Incorrect. because the authorization is only for 25 rem.

C incorrect because the older employee will be selected due to a lower chance of long term effects of radiation exposure affecting this person.

D Correct The older individual will be selected and the maximum authorization exposure is 25 Rem per EPIP-15, page 6 and page 4, section 4.1.E.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of radiation exposure limits and contamination control, including permissible levels in excess of those authorized.

Question No. 98

Tier 3 Group 3

Importance Rating: SRO 3.1

Technical Reference: EPIP 15

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271C198REP Objective 1.f

Question Source: Modified

Question History: Robinson 2007 NRC Exam

Question Cognitive Level: Higher

10 CFR Part 55 Content: 43.5

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: D D A D D C B A D D Scramble Range: A - D

Source:	MODIFIED	Source If Bank:	
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	SRO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

97. G2.4.25 001

The following lines are observed on the 0-M-29 "Blue Goose" and printer:

- 2D43 A 50 IN 07-Nov-02 09:15 ZONE 85 CHARGING PUMP ROOM 2A CROSS ZONE W/ZONE 82 ACTUATES FSV-26-191;
- 2D46 A 50 IN 07-Nov-02 09:16 ZONE 82 U2 SI & CHARGING PUMP ROOMS CROSS ZONE W/ZONES 83, -84, -85, 86, & 87 ACTUATES FSV-26-191 ZN LOCATED IN PNL 0-L-606;
- 2H38 A 50 IN 07-Nov-02 09:16 PNL 0-L-670/ELECTRIC FIRE PUMP A RUNNING ZONE 528 FIRE PUMP HOUSE RM A NOT OPERATIONALLY REQUIRED ZONE SEND OPERATOR TO PUMP.

0-FCV-26-191 is an Auxiliary Building el 669' Pre-action Valve.

Which ONE (1) of the following describes the condition under which sprinkler flow occurs and the whether the fire brigade is required to be dispatched in accordance AOP-N.01, Plant Fires?

	Sprinkler Flow	**Action Required**
A.	sprinkler flow occurs with or without a heat source.	Fire Brigade is NOT immediately dispatched.
B.	sprinkler flow occurs ONLY with a heat source.	Immediately dispatch the Fire Brigade.
C.	sprinkler flow occurs with or without a heat source.	Immediately dispatch the Fire Brigade.
D.	sprinkler flow occurs ONLY with a heat source.	Fire Brigade is NOT immediately dispatched.

A. Incorrect. and a cross zone alarm has occurred and spray would be initiated in the area. According to the AOP- N.01 the fire brigade will be dispatched.

B. Correct. Actuation has occurred.

C. Incorrect. Spray would occur. Correct that the fire brigade would be dispatched.

D. Incorrect. Sprinkler heads did not actuate as indicated by Alarm 2H38.

Knowledge of fire protection procedures.

Question No. 74

Tier 3 Group 4

Importance Rating: RO 2.9

Technical Reference: 0-SO-13-1; 0-AR-M-29

Proposed references to be provided to applicants during examination: None

Learning Objective: OPT200.HPFP B.16.c, 17.a, c, 18.b

Question Source: Bank

Question History: Sequoyah FPS-3

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 3 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: B C A C D C B C A D Scramble Range: A - D

Source:	MODIFIED	Source If Bank:	SEQUOYAH BANK
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

98. G2.4.30 001

Given the following plant conditions on Unit 1:

Time	Plant Status/Condition
0955	Unplanned loss of 80% of MCR alarms and annunciator printer and CRT in horseshoe.
1025	SM determines that increased surveillance is required above current shift complement.
1040	Loss of ICS.

Which ONE (1) of the following correctly states the time requirement for notifying state and local authorities in accordance with EPIP-1, Emergency Plan Clasification Matrix?

Assume that the REP classification is made as soon as conditions are met to make the declaration.

(Reference provided)

A. 1010

B. 1025

C. ✓ 1040

D. 1055

A. Incorrect. 15 minutes from initial event; this timeframe is allowed to diagnois and determine classification.

B. Incorrect. Actual time of classification. 15-minute notification clock starts at this time.

C. Correct. 15 minutes maximum allowed following event declaration for notification of state and local authorities.

D. Incorrect. 15 minutes from NOUE declaration to Alert diagnosis based on ICS loss-may be confused with Alert declaration time.

QUESTIONS REPORT

for SEQUOYAH 2007 - NRC EXAM REV FINAL AS GIVEN 5-7-07

Knowledge of which events related to system operations/status should be reported to outside agencies.

Question No. 100

Tier 3 Group 4

Importance Rating: SRO 3.6

Technical Reference: EPIP-1

Proposed references to be provided to applicants during examination: EPIP-1

Learning Objective: OPL271C168 Objective 2.c

Question Source: New

Question History:

Question Cognitive Level: Higher

10 CFR Part 55 Content: 43.5

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: C B C D D D A B C A Scramble Range: A - D

Source:	NEW	Source If Bank:	
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	SRO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

99. G2.4.49 001

Given the following plant conditions:

- Unit 1 is at 100% power with Control Rods in manual.
- A transient occurs resulting in the following alarms:
  - OTDT RUNBACK/ROD STOP ALERT
  - OVERPOWER ROD STOP
  - OPDT RUNBACK
- Reactor power indicates the following and is rising:
  - N41 – 105.2%
  - N42 – 106.2%
  - N43 – 105.9%
  - N44 – 106.1%
  - Tavg is 571°F

Which ONE (1) of the following identifies the procedure(s) required to be implemented?

A. AOP-C.01, Rod Control Malfunctions, then E-0, Reactor Trip or Safety Injection.

B. AOP-C.01, Rod Control Malfunctions ONLY.

C✓ AOP-S.05, Steam Line or Feedwater Line Break/Leak, then E-0, Reactor Trip or Safety Injection.

D. AOP-S.05, Steam Line or Feedwater Line Break/Leak ONLY.

A and B are incorrect because Tave is lower than required for the power level. Tavg should be at 578 for 100% power, so a rod withdrawal is likely not the initiator. Also, rods will not withdraw if there is an urgent failure. A does contain the correct action. Action for B would be correct if a trip wasn't required and the event was a rod withdrawal.

C is correct. Must recognize that the action of AOP-S.05 requires a reactor trip if reactor power is >100% power and increasing.

D is incorrect because a setpoint for reactor trip has been exceeded as indicated by the first out annunciator for OPDT

Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.

Question No. 99

Tier 3 Group 4

Importance Rating: SRO 4.0

Technical Reference: ARPs, E-0

Proposed references to be provided to applicants during examination: None

Learning Objective: E-0, B.6.a

Question Source: Bank

Question History: WTSI

Question Cognitive Level: Higher

10 CFR Part 55 Content: 43.5

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: C C C A D A D D D D Scramble Range: A - D

Source:	BANK	Source If Bank:	WTSI
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	SRO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO

100. G2.4.9 001

Given the following plant conditions:

- Unit 1 is in Mode 5.
- RCS temperature is 195°F.
- RCS pressure is 325 psig.
- Train "A" RHR in service.
- Train "B" RHR out of service for surveillance testing.
- SGs #2 and #3 are intact and at 33% NR.
- Pressurizer level at 30% cold cal.

Which ONE (1) of the following is the preferred method of core cooling if a loss of RHR shutdown cooling occurs with RCS temperature rising, in accordance with AOP-R.03, RHR System Malfunctions?

A. RWST fill to RCS; bleed through Reactor Head Vents.

B. Normal charging to RCS; bleed through RHR letdown.

C. Natural or forced RCS flow while steaming intact S/Gs.

D. Normal charging to RCS; bleed through the PZR PORVs.

A. Incorrect; With RCS intact, steaming will be the preferred method. Cold leg manway will not be open.

B. Incorrect; Hot leg manway not open if in Mode 5 with RCS pressure higher than atmospheric.

C. Correct. AOP-R.03 Section 2.3 will transition to Section 2.6 due to the inability to restore RHR shutdown cooling. The stem states that the RCS is intact. With one RHR train operable, TS 3.4.1.4 requires the two-SG level requirement to meet TS heat sink requirements. #s 2 and 3 SGs satisfy the TS requirement as stated. Therefore, Section 2.3 Step 7 RNO transitions to Section 2.6 since forced flow cannot be re-established. Section 2.6 steps 5, 6, and 9.a are satisfied. Pzr level greater than 20% cold cal satisfies step 7. Whether forced flow is established or not, step 9 uses steaming from intact SGs.

D. Incorrect; Could potentially be used if required but would be an alternate heat removal, not preferred .

Knowledge of low power / shutdown implications in accident (e.g. LOCA or loss of RHR) mitigation strategies.

Question No. 75

Tier 3 Group 4

Importance Rating: RO 3.3

Technical Reference: AOP-R.03

Proposed references to be provided to applicants during examination: None

Learning Objective: OPL271C358, Obj. B.2
OPL271AOP-R.03; 4

Question Source: Bank

Question History: Sequoyah AOP R.02.B.2-4

Question Cognitive Level: Higher

10 CFR Part 55 Content: 41.10

Comments:

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: C B A A A B C B D A Scramble Range: A - D

Source:	BANK	Source If Bank:	SEQUOYAH BANK
Cognitive Level:	HIGHER	Difficulty:	
Job Position:	RO	Plant:	SEQUOYAH
Date:	4/2007	Last 2 NRC?:	NO