Draft Submittal
(Pink Paper)

1. Senior Reactor Operator Written Exam

CRYSTAL RIVER EXAM
50-302/2002-301

JAN. 28 - FEB. 6, 2002

1. 3-03 001/ 10/ / 1150401013/ 061K5.01/ 3.6/ 3.9/ 33 [1]/ NC
Given the following plant conditions:

Reactor trip has occurred.
Natural Circulation cooldown in progress with Emergency Feedwater.
During the cooldown, a transition is made from EFW to MFW.

Which of the following identifies the resulting core delta T (Thot minus Tcold) following this transition?

A. Decreases because OTSG saturation temperature decreases.

B. Decreases because natural circulation flow in the RCS decreases due to a higher thermal center with MFW.

✓C. Increases because natural circulation flow in the RCS decreases due to a lower thermal center with MFW.

D. Remains the same because of the hotter water and lower thermal center with MFW.

A. This only affects the OTSG Tcold.
B. The thermal center is lower with MFW.
C. CORRECT: Lower thermal center less driving head lower flow therefore higher delta T
D. With lower flow and lower center delta T has to change.

NEW 2002 NRC EXAM KEH (INPO BANK) 8/28/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
10		1150401013	061K5.01	3.6	3.9	33 [1]	NC

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

2. 3-24 001/ 3/ / 1150401013/ 038EA2.01/ 4.1/ 4.7/ 33 [1]/ SGTR
Which of the following identify when the Tube Rupture Alternate Control Criteria (TRACC) limits apply?

A. Emergency cooldown limits cannot reduce or maintain OTSG levels.

B. An uncontrolled release via a MSSV is in progress.

C. Limits identified in 10 CFR 100 for unrestricted areas are exceeded.

✓D. Unable to fill the RB sump with adequate inventory for recirculation.

A. Emergency C/D limits are not allowed to maintain levels.
B. A stuck MSSV is not a critieria for TRACC
C. Dose limits for even the design basis transient should not even reach the 10 CFR 100 limits.
D. CORRECT: This requires enough inventory in the BWST to have recirc cooling for the RCS.

NEW 2002 NRC EXAM KEH 8/28/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3		1150401013	038EA2.01	4.1	4.7	33 [1]	SGTR

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

3. 4-12 001/ 5/ / 0120402004/ 029EA2.07/ 4.2/ 4.3/ 44-[2/3]/ ATWAS
Given the following plant conditions:

100% power

The following events occur:
Both MFW pumps trip

The following alarms are actuated:
EFW actuated H-6-3
DSS channel trip J-1-1
Main turbine trip O-3-1
AMSAC trip O-5-1

Control rod groups 5, 6, and 7 rods indicate fully inserted.

NO OPERATOR ACTIONS HAVE OCCURRED!

Which of the following describes the status of the CRD Diamond panel trip confirm light, and the breaker trip lights on the RPS cabinets?

A. Trip confirm : LIT
Breaker trip lights : DIM

B. Trip confirm : OFF
Breaker trip lights : BRIGHT

C. Trip confirm : LIT
Breaker trip lights : BRIGHT

✓D. Trip confirm : OFF
Breaker trip lights : DIM

A. RPS failed, no trip confirm because CRD breakers did not open, DSS tripped the groups 5,6,7 rods. NO operator actions means no manual trip
B. RPS failed, no trip confirm because CRD breakers did not open, DSS tripped the groups 5,6,7 rods. NO operator actions means no manual trip
C. RPS failed, no trip confirm because CRD breakers did not open, DSS tripped the groups 5,6,7 rods. NO operator actions means no manual trip
D. CORRECT: RPS failed therefore no breakers tripped and no trip confirm, DSS tripped the rods however, the reactor did not trip from RPS.

3. 4-12 001/ 5/ / 0120402004/ 029EA2.07/ 4.2/ 4.3/ 44-[2/3]/ ATWAS
NEW NRC 2002 exam KEH 10/16/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5		0120402004	029EA2.07	4.2	4.3	44-[2/3]	ATWAS

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

4. 4-13 001/ 2/ / 1150401013/ 013A2.05/ 3.7/ 4.2/ 44-[1]/ ES
Given the following plant conditions:

MUP-1B/C are ES selected
ES has actuated both HPI pumps are running
EOP rule 4 PTS is in effect
MUP-1C has no DC control power

Which of the following describes the MUP indicating lights on the main control board for these conditions?

A. ES selection light "ON"
Green breaker light "ON"
Red breaker light "ON"

B. ES selection light "ON"
Green breaker light "ON"
Red breaker light "OFF"

✓C. ES selection light "ON"
Green breaker light "OFF"
Red breaker light "OFF"

D. ES selection light "OFF"
Green breaker light "OFF"
Red breaker light "OFF"

A. No control power the breaker lights are both OFF.
B. No control power the breaker lights are both OFF.
C. CORRECT: the ES light remains lit and with no control power the breaker lights are both OFF.
D. The ES selection light remains lit, it is supplied from the ES DC power, no control power the breaker lights are both OFF.

The ES light is fed from VBDP-4 (24V AC); The breaker control power is from DPDP-5B (125V DC). See electrical drawing B-208-041 MU-04.

NEW 2002 NRC exam KEH 11/06/01

4. 4-13 001/ 2/ / 1150401013/ 013A2.05/ 3.7/ 4.2/ 44-[1]/ ES

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
2		1150401013	013A2.05	3.7	4.2	44-[1]	ES

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

5. 4-29 001/ 6/ / 1150402016/ 033A2.03/ 3.1/ 3.5/ 44-[1]/ SF
Which of the following design features of the Spent Fuel Cooling system minimizes the probability of uncovering spent fuel?

A. Auto makeup from demin water system.

✓B. Spent fuel cooling piping arrangement.

C. Spent fuel cooling auto isolation on ITS low level alarm.

D. Auto makeup from BWST.

A. Make up capability exist but it is not automatic for loss of level.
B. CORRECT: The piping arrangement is where the suction is 4 feet from the top of the pool, so any leaks in the system will not uncover the spent fuel.
C. The low level alarm does not isolate the SFP cooling system.
D. No automatic makeup capabilities from the BWST.

NEW 2002 NRC exam KEH 10/16/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
6		1150402016	033A2.03	3.1	3.5	44-[1]	SF

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

6. 4-54 001/ 5/ / 0050102006/ COCG2.1.32/ 3.4/ 3.8/ 44-[2/3]/ DH/MUP
Given the following plant conditions:

MODE 5,
T_{incore} is 142 °F
PZR level is 100" with a N_2 bubble
RCS pressure is 45#
DHP-1A is running with a flow rate of 3000 gpm
DHHE-1A outlet temperature is 141°F
OTSG "A" level is 590" full range with a N_2 blanket
OTSG "B" level is 590" full range and on recirculation for today
All MU/HPI pumps are RED tagged
All HPI injection valves are CAUTION tagged with power OFF on the MCB
Purification flow exists via 1 demin and 2 post filters with a flow rate of 220 gpm

Which of the following basis, identifies a limit and precaution that is being exceeded given the situation above?

A. Low Temperature Overpressure Protection.

B. Prevent exceeding the maximum design of components.

✓C. Protect anion resin from thermal degradation.

D. Prevent lifting the MU system relief valves.

A. LTOP is not a concern with the HPI pumps tagged out.
B. MUP demins and filters are within their design, the max is 225.
C. CORRECT, the Decay Heat Cooler outlet is above the high temperature limit for the demin of 135°F.
D. The RCS pressure is below 105# at 45#.

OP-404 L&P 3.2.8 outlet temp of 135°F.

BANK 2002 NRC exam KEH 10/20/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5		0050102006	COCG2.1.32	3.4	3.8	44-[2/3]	DH/MUP

6. 4-54 001/ 5/ / 0050102006/ COCG2.1.32/ 3.4/ 3.8/ 44-[2/3]/ DH/MUP

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

7. 4-59 001/ 5,6,9/ / 1190101019/ RACG2.3.6/ 2.1/ 3.1/ 44-[1]/ LIQ REL
The SSO/CRS must sign all radioactive liquid release permits prior to the initiation of the release.

What is the purpose of the SSO/CRS signature?

✓A. It serves to acknowledge and confirm the approval to complete the release.

B. It serves to acknowledge and confirm the appropriate liquid radiation monitor is operating properly.

C. It acknowledges and confirms the estimated volume of fluid to be released.

D. It acknowledges and confirms the estimated amount of radioactivity to be released to the environment.

Reasons:

A. CORRECT: This documents management approval for the release.
B. This is done after the signature.
C. Volume of the release is determined by the size of the tank.
D. The signature acknowledges only the completion of the chemistry portion of the permit not the amount of reactivity release.

OPSA1.BNK 2002 NRC exam KEH 10/13/01
OP-407A Section 4.3; 1-11

BANK; ROT 5-48 #18; NRC 6-97; ROTs M - 5B; NRCM

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5,6,9		1190101019	RACG2.3.6	2.1	3.1	44-[1]	LIQ REL

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

8. 4-60 001/ 3/ / 0020402013/ 010K4.03/ 3.8/ 4.1/ 33 [1]/ PORV
Which of the following indications identify the PORV open in response to a valid RCS pressure indication?

A. 2475 psig; Pressurizer level lowering.

✓B. 2465 psig; Ultrasonic needle in red area of meter.

C. 2475 psig; Red indication light on panel lit.

D. 2465 psig; Tail pipe temperature of 110°F.

A. PZR level lowering does not prove the PORV is open.
B. CORRECT: The Ultrasonic meter identifies flow from the PORV.
C. The light can be lit and the PORV not open.
D. Tail pipe temperature would be much higher than 110°F.

NEW 2002 NRC exam KEH 10/3/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3		0020402013	010K4.03	3.8	4.1	33 [1]	PORV

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

9. 4-61 001/ 9/ / 1190101020/ G2.3.8/ 2.3/ 3.2/ 55-[2/3]/
The following conditions exist:

- Preparations are underway to release WDT-1B, "B" Waste Gas Decay Tank
- RM-A11 has failed low.
- All other radiation monitors are functional.

Under what conditions may the release take place?

✓A. Two independent samples of WDT-1B are analyzed and two qualified persons independently verify the release rate calculations and discharge valve lineup.

B. A continuous sample of WDT-1B is analyzed and two qualified persons independently verify the release rate calculations and suction valve lineup.

C. At least two grab samples of WDT-1B are analyzed and two qualified persons independently verify the release rate calculations and suction valve lineup.

D. Samples are taken every 4 hours and analyzed while WDT-1B is being released and two qualified persons independently verify the release rate calculations and discharge valve lineup.

Reasons:

A. Correct, the release may be initiated, if RM-A2 is operable (stem) and at least two independent samples of the tank's contents are analyzed; two qualified persons independently verify the release rate calculations, and two qualified persons independently verify the discharge valve lineup.

B. and C. The tank contents must have at least two independent samples analyzed and two qualified persons independently verify the discharge valve lineup.

D. The tank contents must have at least two independent samples analyzed.

Provide ODCM; New question written for Sept 2000 SRO exam. (4-6-2000 mg)
REPEAT

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
9		1190101020	G2.3.8	2.3	3.2	55-[2/3]	

9. 4-61 001/ 9/ / 1190101020/ G2.3.8/ 2.3/ 3.2/ 55-[2/3]/

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

10. 4-64 001/ 7,9/ / 0630402001/ 058AA2.03/ 3.5/ 3.9/ 44-[2/3]/ DC DIST
Given the following plant conditions:

100% power
DC control power is lost to the 6900V Reactor Auxiliary Bus 3A.
One minute later a loss of offsite power occurs.

Which of the following describes the response of the RCPs if AC power is restored to the 6900V Reactor Auxiliary Bus 3A prior to the restoration of its DC control power?

✓A. RCPs "A" and "C" will start because the RCP breakers are closed.

B. RCPs "A" and "C" will remain off because the RCP breakers will trip on a loss of DC control power.

C. RCPs "A" and "B" will start because the RCP breakers are closed.

D. RCPs "A" and "B" will remain off because the RCP breakers will trip on a loss of DC control power.

A. CORRECT: THe Breakers will remain closed and will re-energize with the bus for the "A" & "C" RCPs (Bus 3A pumps)
B. The breaker do not trip with no control power.
C. Wrong combination of pumps
D. Wrong combination of pumps, breakers don't trip.

OPSA1.BNK 2002 NRC exam KEH 10/13/01
NRC 5-93; ROT-4-64 F6; CP FPC final; ROTs M - T1; ROTs N - T3 & 3A; ROTs O - T3; LOI1-T7AR; LOI1-T7AS; LOI1-T7BR/T7BS

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
7,9		0630402001	058AA2.03	3.5	3.9	44-[2/3]	DC DIST

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

11. 4-90 002/ 4/ 5-30 1/ 1150401001/ 055EA2.03/ 3.9/ 4.7/ 44-[2/3]/
The following plant conditions exist:

- A Station Blackout has occurred.
- The Offsite Transformer is available.
- The "B" Emergency Diesel Generator is tagged out for maintenance
- Annunciator Q-02-03, Diesel Generator "A" Breaker Closed, is in alarm but Breaker 3209, "A" EDG 4160V ES Bus Supply Breaker has reopened.
- Electricians have reported that there is no fault on the "A" 4160V ES bus.

Which of the following actions by itself is sufficient to allow closure of Breaker 3211, "A" Offsite Transformer 4160V ES Bus Supply Breaker, and energize the "A" ES 4160V ES Bus?

✓A. Defeat the "A" 4160 V ES Bus lockout.

B. Depress the "4160V ESA UV Reset" pushbutton.

C. De-energize the undervoltage relay for the "A" 4160V ES Bus.

D. De-energize the DC control circuit for Breaker 3209.

Reasons:

A. Correct, the bus lockout has to be reset to energize the bus from one of the normal supply breakers.

B. This action is only a portion of what is needed to permit closure of an offsite power supply breaker. Unless the undervoltage relay for the "A" ES 4160V Bus is de-energized, the action will have no effect on permitting breaker closure.

C. De-energizing the undervoltage relay will permit resetting of the 4160V ES Bus lockout but this action alone will not allow closure of the offsite breaker.

D. De-energizing the DC control circuit for Breaker 3209 will only prevent remote operation of that breaker.

11. 4-90 002/ 4/ 5-30 1/ 1150401001/ 055EA2.03/ 3.9/ 4.7/ 44-[2/3]/
New question written for Sept 2000 SRO exam. (2-14-2000 mg)
Stem modified 8-10-00 CMC
REPEAT

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4	5-30 1	1150401001	055EA2.03	3.9	4.7	44-[2/3]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

12. 5-01 004/ 5/ / 1190201002/ G2.2.22/ 3.4/ 4.1/ 55-[2/3]/
The following conditions exist:

- The plant is in Mode 5 following a refueling outage.
- SP-370, Quarterly Cycling of Valves, is being conducted.
- The operators testing CAV-2, Pressurizer and Letdown combined sample containment isolation, report that it has not met the requirements specified on its engineering data sheet.

What action(s), if any, should be taken prior to entry into Mode 4?

A. No action is required prior to entry into Mode 4.

B. Ascension into Mode 4 is prohibited until CAV-2 is repaired.

C. Close CAV-2 and de-energize within 4 hours of entering Mode 4.

✓D. Isolate the penetration associated with CAV-2 prior to entering Mode 4.

Reasons:

A. Containment isolation valves are required to be operable in Modes 1-4, an action is required.

B. Mode ascension can be performed if LCO 3.0.4 is complied with.

C. Containment isolation valves are required to be operable in Modes 1-4, an action is required. These actions do not comply with LCO 3.0.4.

D. Correct, these actions comply with LCO 3.0.4 and 3.6.3 condition A. Mode ascension is allowed.

Unmodified bank question (5-01 #60) for Sept 2000 SRO exam. (4-5-2000 mg) Provide TS 3.0.4 and 3.6.3
BANK

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5		1190201002	G2.2.22	3.4	4.1	55-[2/3]	

12. 5-01 004/ 5/ / 1190201002/ G2.2.22/ 3.4/ 4.1/ 55-[2/3]/

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

13. 5-01 005/ 10/ / 1150401001/ COCG2.1.4/ 2.3/ 3.4/ 33 [1]/ ITS
While on watch a reactor operator must leave due to illness.

The Control Room Supervisor (CRS) has called for a relief operator to correct the situation, which of the following conditions describes the maximum time the shift crew may remain below minimum staffing requirements?

A. 1 hour, at all RCS temperatures.

B. 1 hour, provided that RCS temperature is greater than 200°F.

✓C. 2 hours, at all RCS temperatures.

D. 2 hours, provided that RCS temperature is greater than 200°F.

A. Does not disallow the situation, but incorrectly states the time restriction.
B. Incorrectly restricted by RCS temperature.
C. CORRECT; T.S. section 5.2.2 identifies for up to 2 hours and no RCS temp limitation.
D. Incorrectly restricted by RCS temperature.

NEW 2002 KEH (7/12/01) Provide ITS section 5.2.2

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
10		1150401001	COCG2.1.4	2.3	3.4	33 [1]	ITS

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

14. 5-01 006/ 5/ / 1190201006/ 005G2.1.12/ 2.9/ 4.0/ 33 [1]/ ITS
Given the following plant conditions:

- Mode 6; preparing for refueling operations.
- Refueling Water Canal level is < 154 feet.
- BWST level is 12 feet.
- RCS temperature is 90°F.
- "A" DHR loop is in service.
- Eddy current testing is in progress on both OTSGs.

Which of the following statements describes the Technical Specification requirements for the DHR system during these conditions?

A. One DHR loop shall be in operation.

B. One DHR loop shall be in operation. The required DHR loop may be removed from operation for ≤ 1 hour per 8 hour period.

✓C. Two DHR loops shall be operable and at least one DHR loop shall be in operation.

D. Two DHR loops shall be operable. The DHR loops may be removed from operation for ≤ 1 hour per 8 hour period.

A. Level is <156, this spec does not apply.
B. Level is <156, this spec does not apply.
C. Both DHR loops are required to be operable, with one in service.
D. Both DHR loops are required to be operable, there is no note for removal.

NEW 2002 KEH (7/12/01) Provide ITS 3.9.4 and 3.9.5

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5		1190201006	005G2.1.12	2.9	4.0	33 [1]	ITS

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

15. 5-01 007/ 5/ / 1190201006/ COCG2.1.33/ 3.4/ 4.0/ 33 [2/3]/ ITS-CRD
Given the following plant conditions:

- Reactor power is 70%.
- 3 RCP operation for the last 48 days.
- Control rod Group 5 Rod 8 has been determined to be inoperable due to a failed stator, but the rod will TRIP.
- Control rod Group 5 Rod 8 is positioned 10 inches from the Group 5 average postion.

Which of the following describes the required action?

A. Calculate SDM within 2 hours.

✓B. Reduce power to 44% within 2 hours.

C. Place the reactor in MODE 3 within 12 hours.

D. Align Group 5 rods to within 6 inches of rod (5-8) within 12 hours.

A. The SDM calculation is required W/I 1 hour. (Condition A. Action A.2.1.1.)
B. CORRECT; Reduce power to ≤ 60% of the allowable thermal power W/I 2 hours (Condition A. Action A.2.2) (75 x .6 = 45%)
C. IF unable to perform required actions then W/I 6 hours be in mode 3. (Condition B. Action B.1.)
D. The rods should be realigned W/I 1 hour if that action is appropriate. Also the rods would be W/I 6.5% not 6 inches.

NEW 2002 KEH (7/13/01) Provide ITS 3.1.4

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5		1190201006	COCG2.1.33	3.4	4.0	33 [2/3]	ITS-CRD

ANSWERS: Single Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

16. 5-01 008/ 8/ OPS 5-01/ 1190201006/ COCG2.1.12/ 2.9/ 4.0/ 55-[2/3]/ ITS
Given the following plant conditions:

100% power.
At 0815 on October 23, the results of performing SR 3.8.6.1 were as follows:

3A1 Pilot cell Parameters:
2.22 VDC
Level between high and low marks
Specific Gravity = 1.212

3A2 Pilot cell Parameters:
2.18 VDC
Level between high and low marks
Specific Gravity = 1.205

3B1 Pilot cell Parameters:
2.20 VDC
Level between high and low marks
Specific Gravity = 1.210

3B2 Pilot cell Parameters:
2.05 VDC
Level between high and low marks
Specific Gravity = 1.198

Which of the following describes the required ITS actions?

✓A. Restore only the Train B battery cell parameters to within limits by 1015 on October 23.

B. Immediately enter LCO 3.0.3 and initiate a plant shutdown by 0915 on October 23.

C. Restore only the Train A battery cell parameters to within limits by 1015 on November 23.

D. Restore the Train A and B battery cell parameters to within limits by 1015 on November 23.

16. 5-01 008/ 8/ OPS 5-01/ 1190201006/ COCG2.1.12/ 2.9/ 4.0/ 55-[2/3]/ ITS

A. CORRECT: At 0815 on October 23, the Train B battery is declared inoperable since 3B2 battery cell parameters are outside the Category C limits of Table 3.8.6-1. TS 3.8.6 Condition B requires immediately declaring the associated battery inoperable. Per LCO 3.0.6, this Required Action results in entering Condition A of TS 3.8.4.

B. LCO 3.0.3 would be entered if a battery in both trains were inoperable. However, only the 3B2 battery is inoperable for the above conditions.

C. Train A battery parameters are within Category A limits of Table 3.8.6-1.

D. Only Train B DC electrical power subsystem is inoperable. Train A battery parameters are within Category A limits of Table 3.8.6-1.

Ref:
ITS 3.8.6 and 3.8.4
LCO 3.0.6

BANK 2002 NRC exam KEH 10/20/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
8	OPS 5-01	1190201006	COCG2.1.12	2.9	4.0	55-[2/3]	ITS

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

17. 5-01 009/ 7/ / 1190201006/ EQC2.2.25/ 2.5/ 3.7/ 44-[2/3]/ ITS
Given the following plant conditions:

The "B" RPS channel was scheduled for SR 3.3.1.5 Channel Calibration on 3 Jan 2002. This is a 92 day frequency surveillance, and it was NOT performed.

Which of the following dates identifies when the "B" RPS channel must be declared inoperable?

A. If the surveillance is not completed by 4 Jan 2002.

✓B. If the surveillance is not completed by 26 Jan 2002.

C. If the surveillance is not completed by 3 Feb 2002.

D. If the surveillance is not completed by 17 Feb 2002.

A. This is within 24 hours 1 day, SR 3.0.2 allows 1.25 times the frequency for completion of a surveillance. (92 X .25 = 23 days)
B. CORRECT: SR 3.0.2 allows 1.25 times the frequency for completion of a surveillance. (92 X .25 = 23 days) This is 23 days later.
C. This is 31 days later which is the frequency for some of the RPS surveillances.
D. This is 45 days later which is the frequency for some of the RPS surveillances.

Modified BANK 2002 NRC exam KEH 11/8/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
7		1190201006	EQC2.2.25	2.5	3.7	44-[2/3]	ITS

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

18. 5-01 010 (HARDLINK 178-29072 001)/ 5/ / 1190201006/ 017G2.1.12/ 2.9/ 4.0/ 55-[2/3]/ I/C
Given the following plant conditions:

Power 100%
SP-338 has been performed
Evaluate the data sheet (See Attached; Enclosure 1, page 5)

Which of the following identifies the required actions in accordance with ITS 3.3.17?

A. Restore required channel(s) to operable status immediately.

B. Restore required channel(s) to operable status within 7 days.

C. Restore required channel(s) to operable status within 30 days.

✓D. No action required.

A. Have not exceeded the time or action taken IAW Condtion A, ALL channels are operable.
B. ALL channels are operable.
C. ALL channels are operable.
D. All channels are operable, have a reading that may or may not be out by 42 degrees but only one for each quadrant and between different channels. The channels are the chessel recorders "A" & "B" as designated in ITS 3.3.17 (page B 3.3-125B)

NEW 2002 NRC exam KEH 11/12/01 **(PROVIDE ITS 3.3.17 and BASES)**

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5		1190201006	017G2.1.12	2.9	4.0	55-[2/3]	I/C

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

19. 5-113 001/ 6/ / 1150502013/ 024AA2.05/ 3.3/ 3.9/ 44-[1]/ AP-490
AP-490 has you verify that you have > 10 gpm boration flow rate.

Which of the following will provide adequate SDM based on the ITS assumptions (BOC, BAST @ 11,600 ppm) with this flow rate.

A. 30 minutes

B. 1 hour

✓C. 2 hours

D. 4 hours

A. ITS uses BAST at 11,600 ppm, with 10 gpm at BOC would give a 1% delta K/K in 2 hours.
B. ITS uses BAST at 11,600 ppm, with 10 gpm at BOC would give a 1% delta K/K in 2 hours.
C. CORRECT: ITS uses BAST at 11,600 ppm, with 10 gpm at BOC would give a 1% delta K/K in 2 hours.
D. ITS uses BAST at 11,600 ppm, with 10 gpm at BOC would give a 1% delta K/K in 2 hours.

ITS bases for 3.1.1

NEW 2002 NRC exam KEH 10/16/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
6		1150502013	024AA2.05	3.3	3.9	44-[1]	AP-490

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

20. 5-116 001/ 2/ / 1150502012/ E14EA.2.2/ 4.0/ 4.0/ 33-[1]/ EOP-02
Enclosure 1 of EOP-14, SPO Post Trip Actions, states:

"Isolate the drains from the 5A and 5B FWHE's (Feedwater Heaters) to the DFT (Deaerator)."

Which of the following is the reason for this action following a Reactor Trip?

A. This prevents oxygen intrusion into the DFT.

B. This prevents damage to the 5A and 5B FWHE's from reverse flow of DFT steam and water.

✓C. This prevents water hammer in the DFT due to exposure to vacuum.

D. This prevents possible FWHE tube leaks due to formation of excessive differential pressures.

A. This is true for the DFT vents, NOT the drains.
B. This is for the DFT protection, not the FWHE.
C. CORRECT: This separates the DFT from the condenser, therfore exposure to vacuum. The flow path would cause water hammer.
D. This is for the DFT protection, not the FWHE.

OPSA1.BNK 2002 NRC exam KEH 1013/01
ROTs J - T10A; ROTs M - T6A; ROTs N - T4B & T4BA

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
2		1150502012	E14EA.2.2	4.0	4.0	33-[1]	EOP-02

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

21. 5-14 001/ 6/ / 1190402001/ 009G2.4.22/ 3.0/ 4.0/ 44-[1]/ AI-505
In accordance with AI-505, which of the following is an allowable exception to performing symptom response in the EOPs?

A. Any loss of SCM during HPI/PORV cooling does not require branching to EOP-3 for 2 minutes.

B. During a Loss of Off-site Power, EOP-2 Immediate Actions do not need to be performed unless the EDGs fail to power the ES busses.

C. During an OTSG Tube Rupture the reactor is tripped because pressurizer level drops below 100", EOP-2 does not need to be entered since EOP-6 contains all necessary guidance.

✓D. SCM is lost during restart of an RCP, EOP-3 does not have to be entered unless SCM is not restored within 1.5 minutes.

A. If a pressure decrease occurs during EOP-4 that results in an ISCM then must enter EOP-3
B. If the EDG had not started than this is a Station Blackout and EOP-12 applies.
C. If the reactor was tripped due to pressurizer level by the operator than you must go to EOP-2.
D. CORRECT: You can wait 1.5 minutes to recover SCM before transition to EOP-3.

This is from AI-505 section 4.1.2.5.a page 10 of 35

OPSA1.BNK 2002 NRC exam KEH 10/13/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
6		1190402001	009G2.4.22	3.0	4.0	44-[1]	AI-505

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

22. 5-31 001/ 4,7/ / 1150401001/ 067G2.4.27/ 3.0/ 3.5/ 33-[1]/ FIRE
Given the following plant conditions:

- A "Control Complex Fire Alert" alarm has been received.
- A Halon bank has actuated in the cable spreading room.
- Multiple plant components/equipment are cycling erratically causing a loss of plant control.

Which of the following describes the action(s) that should be initiated?

A. Enter AP-880, Fire Protection, and concurrently perform AP-510, Rapid Power Reduction.

B. Enter AP-880, Fire Protection, only and perform required actions.

✓C. Enter AP-990, Shutdown from Outside the Control Room, only and perform required actions.

D. Enter AP-990, Shutdown from Outside the Control Room, and concurrently perform AP-880, Fire Protection.

Reasons: REWORD 'D' DISTRACTOR. COULD BE ARGUED AS CORRECT ALSO. 8-16-00 Modified "D" to have concurrently perform AP-880 which is not correct when entering AP-990. KEH 10/13/01

A. AP-990 should be entered due to the loss of plant control. Per note at begining of AP-990, no other procdure to be used unless directed by AP-990.

B. AP-990 should be entered due to the loss of plant control. Per note at begining of AP-990, no other procdure to be used unless directed by AP-990.

C. CORRECT: AP-990 should be entered due to the fire and loss of plant control. Per note at begining of AP-990, no other procdure to be used unless directed by AP-990.

D. AP-990 should be entered due to the loss of plant control. Per note at begining of AP-990, no other procdure to be used unless directed by AP-990.

OPSA1.BNK 2002 NRC exam KEH 10/13/01
NRCM; ROTs O - T13 K/A# 067AA2.13 3.3/4.4

22. 5-31 001/ 4,7/ / 1150401001/ 067G2.4.27/ 3.0/ 3.5/ 33-[1]/ FIRE

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4,7		1150401001	067G2.4.27	3.0	3.5	33-[1]	FIRE

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

23. 5-31 002/ 7/ / 1190402001/ 068G2.4.35/ 3.3/ 3.5/ 44-[1]/ AP-990
Given the following plant conditions:

Fire in the cable spreading room
AP-990 has been implemented and transfer is complete
Step 3.50 states; "Notify PPO to ensure selected MUP lube oil pumps are running."
Step 3.51 states; " WHEN MUP lube oil pumps are running, THEN notify RO to start selected MUP.

Which of the following identifies the location for the completion for each of the two steps above?

✓A. Lube oil pumps are started locally, and the MUP is started from the switchgear.

B. Lube oil pumps are started from the switchgear, and the MUP is started from the remote shutdown panel.

C. Lube oil pumps are started from the switchgear, and the MUP is started from the switchgear.

D. Lube oil pumps are started locally, and the MUP is started from the remote shutdown panel.

A. CORRECT: LO pumps are started in the MUP cubicles, and the pumps are started from the 4160V ES switchgear.
B. LO pumps are started in the MUP cubicles, and no controls on the RSD panel for the MUPs
C. LO pumps are started in the MUP cubicles.
D. No controls on the RSD panel for the MUPs.

NEW 2002 NRC exam KEH 10/13/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
7		1190402001	068G2.4.35	3.3	3.5	44-[1]	AP-990

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

24. 5-42 001/ 18/ / 1190101035/ G2.4.30/ 2.2/ 3.6/ 55-[2/3]/
Which of the following will require a notification to the NRC within a maximum of four (4) hours?

A. Axial power imbalance is -61% at 92% power.

✓B. State of Florida notification following the death of a turtle on the bar racks.

C. Apprehension by security of 2 persons selling cocaine in the Ready Warehouse.

D. The hospitalization of two employees following a crane accident in the Turbine Building.

Reasons:

A. -61% imbalance at 92% power violates safety limit 2.1.1.1 and by safety limit violation 2.2.4 the NRC must be notified within 1 hour.

B Correct, the NRC must be notified within 4 hours of notifying other government agencies. (CP-151 Encl. 2 pg 12 of 23, pg 2 of 23 #4.)

C. The NRC requires 24 hour notification for the sale, use, or possession of illegal drugs within the protected area.

D. A report to OSHA is made for a fatality or hospitalization of three or more employees within 8 hours. As only 2 employees are injured in this circumstance, OSHA notification will be through normal channels.

Provide CP-151, TS 2.1, TS 2.2 and the COLR. New question written for Sept 2000 SRO exam. (3-7-2000 mg)
REPEAT

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
18		1190101035	G2.4.30	2.2	3.6	55-[2/3]	

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

25. 5-50 001/ 1/ / 1150101004/ EQCG2.2.28/ 2.6/ 3.5/ 44-[1]/ FP-601A
Which of the following statements is correct concerning operating a fuel handling bridge with interlock functions bypassed?

A. Operation of the bridge with interlocks bypassed is not administratively controlled if done by an SRO qualified person.

✓B. Manual operation should not be routinely discounted as a possible alternative to bypassing.

C. The bridges are never to be operated if it requires an interlock to be bypassed.

D. Operation with interlocks bypassed requires permission from the CR-3 Safety specialist and the Man-on-Call.

A. SRO permission is required to bypass, it is controlled.
B. CORRECT: L&P in FP-601A that manual is an option, because it is slower and more controlled.
C. Interlock have to be bypassed sometimes, never is not an option.
D. Refueling SRO or SSO but not safety man and man on call.

OPSA1.BNK 2002 NRC exam KEH 10/13/01
ROTs J - T10B

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
1		1150101004	EQCG2.2.28	2.6	3.5	44-[1]	FP-601A

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

26. 5-69 001/ 6/ / 1150501001/ EPPG2.4.27/ 3.0/ 3.5/ 44-[1]/ FIRE
Given the following plant conditions:

A fire has been burning in the Auxiliary building
The fire team leader has just reported the fire is OUT.

Which of the following is your required action as control room supervisor with respect to AP-880?

A. Restore control complex ventilation.

B. Restore FSP-2A/B, Diesel Fire Service Pumps, to standby.

C. Notify the SSO to assess plant conditions.

✓D. Establish a fire watch.

A. Step 18 plant ventilation once fire out step 13 has fire watch established.
B. This is step 15 states fire protection system not specific pumps once fire out step 13 has fire watch established.
C. This is step 16 for fire damage, once fire out step 13 has fire watch established.
D. CORRECT: Once fire out step 13 has fire watch established.

NEW 2002 NRC exam KEH 10/13/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
6		1150501001	EPPG2.4.27	3.0	3.5	44-[1]	FIRE

ANSWERS: Single Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices
Scramble Range: A - D

27. 5-85 001/ 5/ / 1150502007/ 011G2.4.5/ 3.0/ 4.0/ 55-[2/3]/ EOP-03
Given the following plant conditions:

- A LOCA with a Loss of SCM.
- RCS pressure is 1100 psig.
- High pressure injection (HPI) and reactor building isolation and cooling (RBIC) have actuated.
- Emergency feedwater initiation and control (EFIC) has actuated.
- Steam generator levels are progressing toward their required setpoint.
- OTSGs pressure is 500 psig and decreasing.
- RCS temperature begins to increase up the saturation line.

Which of the following procedures should be entered?

A. EOP-2, Vital System Status Verification.

✓B. EOP-4, Inadequate Heat Transfer.

C. EOP-7, Inadequate Core Cooling.

D. EOP-8, LOCA Cooldown.

Reasons:

A. Adequate SCM does not exist to go to EOP-2 per step 3.20.
B. CORRECT: Step 3.17 sends you to EOP-4 for inadequate primary to secondary heat transfer, (feeding OTSGs and still the RCS is heating up) based on entry conditions.
C. The system is saturated therefore, entry conditions for EOP-7 are not met.
D. Since LPI flow does not exist the branch point to EOP-8 should not be taken per step 3.11.

OPSA1.BNK (Modified) 2002 NRC exam KEH 10/13/01

NEED COPY EOP-03

NRC 6-97; ROTs N - FPCF K/A# 009EA2.01 4.2/4.8 TSK# 3440403001(STA?)

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5		1150502007	011G2.4.5	3.0	4.0	55-[2/3]	EOP-03

27. 5-85 001/ 5/ / 1150502007/ 011G2.4.5/ 3.0/ 4.0/ 55-[2/3]/ EOP-03

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

28. 5-97 001/ 4/ / 1150501001/ 074G2.4.21/ 3.7/ 4.3/ 33 [2/3]/ EOP
Plant conditions are as follows:

In EOP-7 Inadequate Core Cooling (ICC) with the RCS in region 3.
MUP-1B is running, with ONLY MUV-24 open.
RCPs-1B/D are running.
MUP-1C will be started within the next minute, and MUVs-25 and 26 will be re-energized and available.

Which of the following actions are applicable for this scenario?

A. When MUP-1C is started, revert to the begining of EOP-7, step 3.1.

✓B. Open high point vents until the cooldown is complete.

C. Secure the RCPs to prevent tube failure in the OTSGs.

D. Throttle HPI to control cooldown rate.

A- DO NOT REVERT to the begining if conditions change. NOTE prior to step 3.21
B- CORRECT; Until cooldown is complete these should be open to remove non-condensable gases.
C- The pumps continue to run until in the severe accident region.
D- HPI will not be throttled until SCM is re-established, NOTE identifies that cooldown may be excessive due to HPI flow.

NEW 2002 SRO KEH 7/11/2001 Provide EOP-7

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		1150501001	074G2.4.21	3.7	4.3	33 [2/3]	EOP

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

29. 5-97 002/ 5/ OPS 5-97/ 0170502001/ COCG2.1.20/ 4.3/ 4.2/ 11-[2/3]/ EOP-7
Given the following plant conditions:

- All feedwater has been lost.
- No High Pressure Injection (HPI) pump is operating due to multiple mechanical failures.
- Reactor Coolant (RCS) pressure is 1285 psig.
- SPDS indicates superheat conditions.

Twenty minutes later (at the same pressure) the incore thermocouples (SPDS) indicate 1250°F.

What actions would the operators be following after initially completing steps to attempt to restore HPI and Emergency Feedwater (EFW)?

✓A. Operators will exit the EOPs and be under the control of the TSC and the Severe Accident Mitigation Guidelines.

B. Reduce OTSG pressures, open all high point vents, then open the PORV.

C. Attempt to restore HPI and EFW, reduce RCS pressure to 100 psi greater than OTSG pressure if > 2400 psi and reduce OTSG pressure.

D. Transition to EOP-8, LOCA Cooldown, only after successful restoration of HPI and/or EFW.

Reasons:

A. Correct, conditions are in the severe accident region.
B. These are actions for region 3, and the plant conditions are in the severe accident region.
C. These are actions for region 2, and the plant conditions are in the severe accident region.
D. These are actions for region 1, and the plant conditions are in the severe accident region.

BANK 2002 NRC exam KEH 10/20/01

Provide EOP-07 and steam tables; New question written for LOI-99-01 SRO and RO Audit exam. (8-1-2000 mf) Modified 10/27 per G.C./M.V.

29. 5-97 002/ 5/ OPS 5-97/ 0170502001/ COCG2.1.20/ 4.3/ 4.2/ 11-[2/3]/ EOP-7

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5	OPS 5-97	0170502001	COCG2.1.20	4.3	4.2	11-[2/3]	EOP-7

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

SP-338 001 (HARDLINK 178-29072 002)

ENCLOSURE 1
(Page 5 of 11)

POST ACCIDENT MONITORING CHANNEL CHECK (Continued)

CONTROL ROOM
(Unless otherwise noted)

DEVICE	UNIT	READING All Channels Agree Within 42F ***
RC-171-TR, Core Exit Temperature		
IM-5G-TE Channel 1 Quadrant WX	°F	610
IM-9E-TE Channel 6 Quadrant XY	°F	608
IM-9H-TE Channel 5 Quadrant YZ	°F	611
IM-3L-TE Channel 2 Quadrant ZW	°F	663
IM-6C-TE Channel 3 Quadrant WX	°F	642
IM-13G-TE Channel 8 Quadrant XY	°F	609
IM-10O-TE Channel 7 Quadrant YZ	°F	610
IM-6O-TE Channel 4 Quadrant ZW	°F	611
RC-172-TR, Core Exit Temperature		
IM-7F-TE Channel 9 Quadrant WX	°F	608
IM-10C-TE Channel 16 Quadrant XY	°F	608
IM-10M-TE Channel 13 Quadrant YZ	°F	650
IM-4N-TE Channel 12 Quadrant ZW	°F	610
IM-2G-TE Channel 10 Quadrant WX	°F	612
IM-11G-TE Channel 15 Quadrant XY	°F	636
IM-13L-TE Channel 14 Quadrant YZ	°F	613
IM-6L-TE Channel 11 Quadrant ZW	°F	608

*** To meet all of the requirements of operability for Core Exit Temperature (Thermocouple), each quadrant requires at least two OPERABLE detectors, one from each channel. Operability of only one detector for any quadrant constitutes entry into Condition A of LCO 3.3.17. Any quadrant with no operable detector constitutes entry into Condition C of LCO 3.3.17. Separate Condition entry is allowed for each quadrant.

1. 1-47 001/ 15/ / 1150402016/ 035K5.01/ 3.4/ 3.9/ 33-[1]/
Which of the following states when the potential reactivity effects of a steam line break are most severe?

A. Effects remain the same over core life.

B. Beginning of core life.

C. Middle of core life.

✓D. End of core life.

Reasons:

As the core ages MTC becomes increasingly more negative. A steam line break results in a cooldown of the RCS and MTC adds positive reactivity as this occurs. Because MTC has a larger negative value as the core ages, the effect of the steam line break gets greater also.

NOB 2002 NRC exam KEH 10/12/01
Unmodified bank question for LOI-99-01 SRO and RO Audit exam (7-28-2000 CMC)
[039K5.08 3.4/3.9]

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
15		1150402016	035K5.01	3.4	3.9	33-[1]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

2. 1-50 001/ 7/ / 0150102001/ 032AA2.02/ 3.6/ 3.9/ 33 [2/3]/ RX S/U
Given the following plant conditions:

Reactor Startup in progress.
Initial Source Range counts NI-1 = 70 cps; NI-2 = 80 cps.
ECP 50% on group 6.
Rods are currently at 75% on group 5 and holding.
NI-1/2 count rate is stable.

Which of the following count rates for NI-1/2 would you expect for this condition?

A. 105/120

✓B. 140/160

C. 350/400

D. 2100/2400

A. This is a factor of 50% increase the rods have moved 50% of travel but the counts are not a factor 0f 50% higher.
B. CORRECT: a factor of two if you have added half of the reactivity which is 50 % of the rod movement. Therefore, twice the initial CR at this level.
C. Factor of 5 doublings is for criticality from initial CR not at 50 % of rod motion.
D. Factor of 30 times the inital CR is for not reaching criticality within the ECP.

NEW 2002 NRC KEH/MKG 8/9/01 no reference required, thumbrules and OP-210.

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
7		0150102001	032AA2.02	3.6	3.9	33 [2/3]	RX S/U

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

3. 2-32 001/ 12/ GT-001R 24/ 1190102008/ G2.3.2/ 2.5/ 2.9/ 33-[1]/
A valve needs to be repositioned for the completion of a surveillance. The valve is located in the Make-up Demin Valve Alley. Lead shielding is draped over the valve handwheel. Which of the following is an accepted ALARA practice for repositioning the valve?

A. Reposition the lead shielding along the valve piping enough to reposition the valve; replace the shielding to its original position; inform Health Physics when you have completed the task.

B. Reposition the lead shielding so that it stays between you and the valve; reposition the valve by reaching around the shielding; replace the shielding to its original position.

C. Remove the lead shielding; reposition the valve; leave the lead shielding for the Health Physics technician to replace.

✓D. Remove the lead shielding with the permission of Health Physics; reposition the valve; replace the lead shielding.

Reasons:

A., B., and C. Lead shielding must not be moved without permission from Health Physics.

D. Lead shielding can only be moved with prior permission from Health Physics.

New question written for Sept 2000 RO exam. (3-15-2000 mg)
REPEAT

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
12	GT-001R 24	1190102008	G2.3.2	2.5	2.9	33-[1]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

4. 2-34 001/ 8/ / 1150502005/ 037AK1.01/ 2.9/ 3.3/ 11 [2/3]/ SGTL
Given the following plant conditions:

"A" OTSG primary to secondary leak in progress.
Reactor is tripped.
A Main Steam Safety Valve (MSSV) is cycling at 950 psig.

Which of the following temperatures is the maximum RCS temperature to maintain OTSG pressure equal to 950 psig?
(All temperatures are rounded to the nearest whole number)

A. 524°F.

✓B. 540°F.

C. 555°F.

D. 565°F.

A. Assume 950 - 125 bias = 825psig + 15 = 840psia, sat temp = 523.8
B. CORRECT: 950 +15 = 965 psia, sat temp = 540.2
C. Assume 950 + 125 bias = 1075 psig + 15 = 1090 psia, sat temp = 555.1
D. Assume EOP-6 number of 565 from procedure.

NEW 2002 NRC KEH/MKG 8/9/01 need steam tables

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
8		1150502005	037AK1.01	2.9	3.3	11 [2/3]	SGTL

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

5. 2-34 002/ 5, 15/ / 0020402013/ 008AK3.02/ 3.6/ 4.1/ 33 - [1]/
Given the following plant conditions:

100% power
RCV-8 is leaking
Tailpipe temperature is less than the saturation temperature of the pressurizer.

Which of the following identifies this type of process?

A. Isobaric

B. Isometric

✓C. Isenthalpic

D. Isentropic

A- Constant pressure, not for PZR to RCDT
B- Constant volume, not for PZR to RCDT
C- Constant enthalpy, through a valve this is CORRECT!
D- Constant entropy, not for PZR to RCDT

LP 2-34 definition and constant enthalpy process section.

NEW for 2002 NRC EXAM KEH 5/8/2001

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5, 15		0020402013	008AK3.02	3.6	4.1	33 - [1]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

6. 3-20 001/ 3/ / 1150502002/ E03EK3.1/ 3.2/ 3.8/ 33 [2/3]/ EOP-3
Given the following plant conditions:

- The reactor is tripped.
- RCS subcooled margin is zero.

Which of the following actions would result in increasing RCS subcooling margin?

A. Decrease RCS pressurizer level.

B. Decrease RCS hot leg flow.

✓C. Increase RCS loop pressure.

D. Increase RCS hot leg temperature.

A- This would further reduce RCS pressure, if a bubble still exists in the PZR, level may increase if voids are forming.
B- This would decrease the ability to transfer heat, and therefore would not increase SCM
C- CORRECT Raising pressure will increase the SCM by moving the RCS up and to the left on the SPDS trace moving away from the saturation and zero SCM line.
D- This would move the RCS to the right on the SPDS trace and therefore decrease RCS SCM.

NEW 7/9/01 KEH

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3		1150502002	E03EK3.1	3.2	3.8	33 [2/3]	EOP-3

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

7. 4-07 001/ 4/ / 0860402001/ 086A1.01/ 2.9/ 3.3/ 33 [2/3]/ FIRE
Given the following plant conditions:

A fire is in progress on the startup transformer
A Loss of Offsite Power
Fire header pressure has decreased to 100 psig.

Which of the following will provide fire fighting water pressure?

A. FSP-1, Electric driven fire service pump.

✓B. FSP-2A/B, Diesel driven fire service pumps.

C. FSP-3, Jockey fire pump.

D. FST-3, Fire service surge tank.

A. The LOOP will de-energize ACDP-7, no power.
B. CORRECT: The LOOP will de-energize ACDP-7, loss of power to the battery chargers would start these pumps, with pressure at 100 psig the pressure setpoints have not been reached for starting.
C. The LOOP will de-energize ACDP-7, no power.
D. The surge tank is for damping system surge pressure, not adequate to supply fire header pressure during actuation of fire system.

NEW 2002 NRC exam KEH 10/2/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		0860402001	086A1.01	2.9	3.3	33 [2/3]	FIRE

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

8. 4-09 001/ 3,7/ / 0160402005/ 016G2.1.31/ 4.2/ 3.9/ 33 [2/3]/ SASS
Given the following RCS instruments, during full power operation:

INSTRUMENT	LABEL	INITIAL	FINAL
PZR Level	RC1-LT1	220	208
RCS Tcold (NR)	RC5A-TE1	555	557
PZR Temp	RC2-TE1	648	665
RCS Press (NR)	RC3A-PT1	2155	2135

Instrument signal failure rates are rapid from the inital value to the final value.

Which instrument would the Smart Auto Signal Selector (SASS) module perform an automatic TRANSFER?

✓A. PZR Level

B. RCS Tcold

C. PZR Temp

D. RCS Press

A. CORRECT, (0 - 320) X .03 = 9.6"; this was 12"
B. (520 - 620) X .03 = 3°; this was 2° .
C. (0 - 700) X .03 = 21°; this was 17°, in addition SASS does not control this instrument.
D. (1700 -2500) X .03 = 24#; this was 20#.

NEW 2002 KEH (8/7/01)

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3,7		0160402005	016G2.1.31	4.2	3.9	33 [2/3]	SASS

ANSWERS: Single Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

9. 4-09 002/ 3,4,7/ / 0160102003/ 027AA1.01/ 4.0/ 3.9/ 33-[2/3]/ 01CYC2
The following plant conditions exist:

- RC-3A-PT1, RCS narrow range pressure transmitter, is selected for control when the pressure transmitter failed high.
- SASS failed to transfer to the alternate instrument.

Based on these failures which of the following describes the resulting plant response?

A. ES Channel 1 will be inoperable.

B. Channel A of the Diverse Scram System (DSS) will actuate.

C. RCS pressure will decrease slowly.

✓D. RCS pressure will decrease rapidly.

Reasons:

A. Wide range pressure transmitters feed the ES system. This failure has no effect on ES.

B. This transmitter does not feed DSS so no actuation will occur.

C. The PZR heaters are receiving a false high pressure signal.

D. RCS pressure will decrease rapidly due to the Spray valve and PORV opening.

OPS 4-09 Section 1-4 and Figure 5; KA #'s 027AA2.11 4.0/4.1, 010K1.03 3.6/3.7, 010K3.01 3.8/3.9, 010K4.03 3.8/4.1, 010A3.02 3.6/3.5, 016K1.08 3.4/3.4, 016K3.08 3.5/3.7; Task # 0020402013

NRCM; LOI1-T5
BANK

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3,4,7		0160102003	027AA1.01	4.0	3.9	33-[2/3]	01CYC2

9. 4-09 002/ 3,4,7/ / 0160102003/ 027AA1.01/ 4.0/ 3.9/ 33-[2/3]/ 01CYC2

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

10. 4-10 001/ 5/ / 0150102003/ 015A4.01/ 3.6/ 3.6/ 33 [2/3]/ NI
Given the following plant conditions:

NI-5 88%
NI-6 90%
NI-7 90%
NI-8 89%

SASS is selected to NI 7/8
NI-7 fails high
SASS mismatch alarm (K-3-2) is actuated
SASS transfer alarm (K-3-3) is actuated

Which of the following is the input to the ICS for reactor power?

A. NI-5

✓B. NI-6

C. NI-7

D. NI-8

A. 5/6 is a high autioneer and 6 is the highest.
B. CORRECT: 5/6 is a high autioneer and 6 is the highest, the transfer was to 5/6.
C. 7 fails high but the transfer takes that input away
D. 8 is still selected by sass but the transfer took that selection away.

NEW 2002 NRC exam KEH 10/4/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5		0150102003	015A4.01	3.6	3.6	33 [2/3]	NI

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

11. 4-10 002/ 3/ / 1150402016/ 002K5.10/ 3.6/ 4.1/ 33-[2/3]/
The initial power escalation following a refueling outage is being performed. The reactor power level is stabilized to perform testing. The following indications are available to the operator at the control board:

NI-5	26.0%
NI-6	29.0%
NI-7	26.0%
NI-8	29.0%

T-hot Loop A	588.5° F
T-hot Loop B	588.0° F
T-cold Loop A	570.0° F
T-cold Loop B	569.5° F
Tave	579.0° F

Which of the following is an accurate estimate of the thermal power level of the reactor at this point?

A. 372 MWt

B. 661 MWt

C. 738 MWt

✓D. 1070 MWt

11. 4-10 002/ 3/ / 1150402016/ 002K5.10/ 3.6/ 4.1/ 33-[2/3]/
Reasons:

A, B, C. Due to the change in Tcold on a power increase, the NIs will need calibrating at approximately 25% power increments. Using alternate indications, such as core delta-T is a more accurate indication of power level. A core delta-T of 18.5° F indicates a power level of approximately 42% with a corresponding thermal power level of approximately 1070 MWt.

A. If the student uses 100% power Megawatt Electric instead of Megawatt Thermal, this answer will be obtained.
(18.5° F X 1% power/.44° F X 885 MWe/% power = 372 MWe)

B. If the student uses the value of power displayed on NI 5 and NI 7, this answer will be obtained.
(.26 X 2544 MWt = 661 MWt)

C. If the student uses the highest value of power displayed on NI 6 and NI 8, this answer will be obtained.
(.29 X 2544 MWt = 738 MWt)

D. 18.5° / 44° dT = .42 x 2544 = 1069.63 = 1070

Unmodified repeat question from LOI 99-01 program; NRCN
Modified 8-2-00 CMC Modified 6/29/2001 KEH (18.5° dT = new 1070)
REPEAT

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3		1150402016	002K5.10	3.6	4.1	33-[2/3]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

12. 4-10 003/ 5,6/ 5-01/ 1150402016/ 033AK3.01/ 3.2/ 3.6/ 33-[2/3]/

A reactor start-up is in progress with power indicating 10^{-10}amps on NI-3 and NI-4. Which of the following describes the changes in indication and power level restrictions if the auxiliary power supply for NI-3 fails?

✓A. NI-3 will indicate greater than 10^{-10}amps and power is restricted to less than 5%.

B. NI-3 will indicate less than 10^{-10}amps and power is restricted to less than 5%.

C. NI-3 will indicate greater than 10^{-10}amps and power is restricted to less than 1 x 10^{-9}amps

D. NI-3 will indicate less than 10^{-10}amps and power is restricted to less than 1 x 10^{-9}amps

Reasons:

A. Correct Answer. Loss of compensating voltage will cause the NI to see both neutron and gamma flux. This will increase the indication on NI-3. ITS 3.3.10, condition A requires repair of the Intermediate Range NI prior to entry into Mode 1 which occurs at 5% power.

B. Loss of compensating voltage will cause the NI to see both neutron and gamma flux. This will increase the indication on NI-3.

C. ITS 3.3.10, condition A requires repair of the Intermediate Range NI prior to entry into Mode 1 which occurs at 5% power.

D. Loss of compensating voltage will cause the NI to see both neutron and gamma flux. This will increase the indication on NI-3. TS 3.3.10, condition A requires repair of the Intermediate Range NI prior to entry into Mode 1 which occurs at 5% power.

New Question written for Sept. 2000 RO exam. (2-29-00 CMC); Additional Task# 1190302001
REPEAT

12. 4-10 003/ 5,6/ 5-01/ 1150402016/ 033AK3.01/ 3.2/ 3.6/ 33-[2/3]/

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5,6	5-01	1150402016	033AK3.01	3.2	3.6	33-[2/3]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

13. 4-12 001/ 4/ / 0010502002/ 054AK3.01/ 4.1/ 4.4/ 33 [1]/ RPS
An anticipatory reactor trip (ARTS) is designed to prevent which of the following condition(s)?

A. Challenges to OTSG tube integrity.

B. Exceeding core thermal limits (fuel centerline melt).

✓C. Challenges to the PORV and code safeties.

D. Exceeding core DNBR limits.

A. They would be stressed but still within design limits.
B. These limits are based on LOCAs.
C. CORRECT; based on limiting the pressure spike on the loss of heat sink.
D. These are based on RCS flow, temperature, and flux.

NEW 2002 KEH (8/7/01)

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		0010502002	054AK3.01	4.1	4.4	33 [1]	RPS

ANSWERS: Single Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

14. 4-12 003/ 4/ / 0120102010/ 012K6.04/ 3.3/ 3.6/ 33 [2/3]/ RPS
Which of the following is correct concerning RPS "MANUAL BYPASS" interlock?

A. Takes both channels out of "MANUAL BYPASS" when the second RPS channel is place in "MANUAL BYPASS".

B. The first RPS channel in "MANUAL BYPASS" will trip the second RPS channels Reactor Trip Module, if that channel is placed in "MANUAL BYPASS".

✓C. The first RPS channel in "MANUAL BYPASS" prevents placing any additional channels in "MANUAL BYPASS".

D. The reactor trips if a second RPS channel is placed in "MANUAL BYPASS".

A. Admin and electrical interlock prevent two channels in bypass at same time see (C.)
B. Admin and electrical interlock prevent two channels in bypass at same time see (C.)
C. CORRECT: this interlock will actuate a relay that will prevent any of the remaining three channels to be placed in bypass.
D. Admin and electrical interlock prevent two channels in bypass at same time see (C.)

NEW 2002 NRC EXAM KEH 8/27/01 (INPO BANK)

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		0120102010	012K6.04	3.3	3.6	33 [2/3]	RPS

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

15. 4-12 004/ 4/ / 0120402007/ 045K1.18/ 3.6/ 3.7/ 33 [2/3]/ RPS
The following plant conditions exist:

PARAMETER	DATA
Rx power	75%
Linear amp power range	top 35% bottom 40%
RCS T_{hot}	597°
RCS pressure	2155#
RCS flow	9 x 10^7 lbm/hr
RB pressure	+0.5 psig
RCP monitor	A 8,300 kw
	B 7,100 kw
	C 9,500 kw
	D 0 kw
Turbine auto-stop oil	99 psig
Both MFW control oil	114 psig

Based on the above data which of the *following* parameter changes will require immediate entry into EOP-2, Vital System Status Verification? (consider each option independently)

A.	RB pressure	3.5 psig
B.	RCS pressure	1911 psig
C.	RCP monitor	B 2152 kw
✓D.	Turbine auto-stop oil	44 psig

Reasons:

A. RB Pressure would need to be >4 psig

B. Pressure would need to be < 1900# for the low pressure trip or < 1881# for the variable low pressure trip.

C. RCP pump monitor setpoint is <1152 kw.

D. CORRECT: Turbine control oil pressure setpoint is 45 psig.

15. 4-12 004/ 4/ / 0120402007/ 045K1.18/ 3.6/ 3.7/ 33 [2/3]/ RPS
TS Table 3.3.1-1; COLR; EOP-2 Step 1.0; OPS 5-01; KA #'s E02EK2.1 3.8/4.0, 003K3.04 3.9/4.2

LOI1-T7BR/T7BS

Bank 9/20/01 KEH

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		0120402007	045K1.18	3.6	3.7	33 [2/3]	RPS

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

16. 4-12 005/ 4,5/ / 0450402001/ A04AK3.2/ 3.4/ 3.6/ 33 [2/3]/ AMSAC
Given the following plant conditions:

52% power
AMSAC channel "B" is in TEST/CAL
"A" main feedwater flow instrument fails to 0%

Which of the following identifies the plant conditions?

✓A. AMSAC does not actuate.

B. AMSAC actuates the "A" channel of EFIC.

C. AMSAC actuates and trips the turbine, the reactor will not trip.

D. AMSAC actuates and trips the turbine, which trips the reactor.

A. CORRECT: With a channel in TEST the other channel is blocked, no trip or actuation will occur.
B. The channel signal to EFIC is blocked and it will not actuate.
C. The channel is blocked no turbine trip will occur.
D. The channel is blocked no turbine trip will occur or reactor.

NEW 2002 NRC exam KEH 10/2/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4,5		0450402001	A04AK3.2	3.4	3.6	33 [2/3]	AMSAC

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

17. 4-12 006/ 4/ / 0020102009/ 015AA1.03/ 3.7/ 3.8/ [2/3]/
The following conditions exist:

The plant is operating at 85% power.
One RCPPM channel test switch (SS6) is placed in "TEST" for RCP-1D.

Which of the following indicates the plant response should RCP-1C experience a locked rotor?

A. Only RPS Channel "C" trips.

✓B. All RPS Channels trip.

C. Only EFIC Channel "C" trips.

D. All EFIC Channels trip.

A- With the test on RCP-1D, and RCP-1C trips; RPS will see a loss of two RCPs and each RPS pump monitor will trip their respective RPS channel.
B- CORRECT With each RPS pump monitor tripping their respective channel then all RPS channels will be tripped.
C & D EFIC looks for all four RCPs to be tripped to trip (actuate) the EFIC system.

OPS-4-12 RPS (OBJ. 4), section on RCPPM
OPS-4-31 EFIC (OBJ 2), section on actuation and ITS

NEW for 2002 NRC exam KEH 4/30/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		0020102009	015AA1.03	3.7	3.8	[2/3]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

18. 4-13 001/ 2/ / 0130502001/ 013K3.02/ 4.3/ 4.5/ 33 [2/3]/ ES
Given the following plant conditions:

The reactor is shutdown.
The "HPI BYPASS PERMIT" lights are WHITE.
At 1700 psig, the operator bypasses all three channels for both trains of HPI.
An RCP seal leak then develops, causing the operator to trip the affected RCP and increase the plant cooldown rate.
RCS pressure decreases to 900 psig.

Select the appropriate ES response:

A. HPI initiates on low RCS pressure due to the RCS leak.

✓B. The HPI "BISTABLE TRIPPED" lights are BLUE.

C. LPI initiates on low RCS presssure due to the RCS leak.

D. The LPI "BISTABLE TRIPPED" lights are BLUE.

A. HPI was bypassed and will not actuate.
B. CORRECT: The bistables will trip and light the lights, but will not actuate.
C. LPI setpoint is not actuated at this pressure
D. LPI bistables will not trip at this pressure.

NEW 2002 NRC EXAM KEH 8/27/01 (INPO BANK)

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
2		0130502001	013K3.02	4.3	4.5	33 [2/3]	ES

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

19. 4-13 002/ 5/ / 0130102006/ 013K2.01/ 3.6/ 3.8/ 33-[2/3]/
At 100% full power the following Engineered Safeguards (ES) conditions exist:

- Reactor coolant (RCS) pressure is 1950 psig.
- ES channel 3 has the pressure bistable in the "test/operate" position for maintenance.

What will be the status of the ES system if ES channel 1 loses power?

A. No ES channels are tripped for these conditions; no ES actuation will occur.

B. Only channel 1 will be tripped; no ES actuation will occur.

C. Both channels 1 and 3 will be tripped; only "A" side ES actuation will occur.

✓D. Both channels 1 and 3 will be tripped; both "A" and "B" side ES actuations will occur.

Reasons:

A. and B. ES actuation is de-energize to actuate, channel 1 would be tripped. Channel 3 would also be tripped because it is in "test/operate". A full actuation should occur.

C. With both channels 1 and 3 tripped the 2 out of 3 logic is made and both an "A" and "B" ES actuation should occur.

D. Correct, ES actuation is de-energize to actuate, channel 1 would be tripped. Channel 3 would also be tripped because it is in "test/operate". A full actuation should occur.

NOB 2002 NRC exam KEH 10/12/01

LOI-99-01 FPCF; LOI1-T9BR/BS

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5		0130102006	013K2.01	3.6	3.8	33-[2/3]	

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

20. 4-13 003/ 2/ / 0130502001/ 006A3.03/ 4.1/ 4.1/ 33-[1]/ ES

The plant has just received a valid engineered safeguards actuation system (ESAS) signal. A motor operated valve (MOV) in the high pressure injection system is repositioning to its ES position.

Which of the following is the expected sequence of ES status monitor light changes for this MOV as it repositions?

A. green -- off -- amber

B. green -- white -- amber

✓C. amber -- off -- green

D. amber -- white -- green

A- Amber is the non-ES position which is the normal alignment
B- See above and there is no white light associated with the status lights
C- Correct. Amber to green and during the stroke the light would be off
D- There is no white light associated with the status lights

BANK QUESTION 2002 NRC EXAM KEH 5/10/2001 COMMON BANK BANK

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
2		0130502001	006A3.03	4.1	4.1	33-[1]	ES

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

21. 4-14 001/ 3/ / 0410402001/ 003AK1.13/ 3.2/ 3.6/ 33 [2/3]/ ICS
Given the following plant conditions:

- Reactor is at 70% power.
- ICS Reactor Bailey and Diamond stations are in MANUAL.
- All other ICS stations are in AUTOMATIC.
- Group 5 rod 6 is dropped fully into the core.

Which of the following indicates the core power distribution concern, and the Tave parameter response?

ASSUME NO OPERATOR ACTIONS.

A. Negative Quadrant Power Tilt; Tave decreases and remains low.

B. Negative Quadrant Power Tilt; Tave decreases and returns to setpoint.

C. Positive Quadrant Power Tilt; Tave decreases and remains low.

✓D. Positive Quadrant Power Tilt; Tave decreases and returns to setpoint.

A/B/C. QPT will become more negative in the quadrant the rod is dropped into but the main operator limit concern is the flux shift and the positive QPT for the other 3 quadrants. Tave will return to setpoint as MFW has Tave control with the reactor in manual
D. CORRECT; As the rod is fully dropped into the core, power distribution is changed between the quadrants. The quadrant that the rod is dropped into is poisoned and the flux decreases and shifts the flux to the other quadrants. The quadrant that contains the dropped rod will indicate a negative QPT value and the other quadrants will indicate positive. These positive quadrants are producing most of the power and is the operators main power distribution limit concern. Tave will return to setpoint as MFW has Tave control with the reactor in manual.

NEW 2002 KEH (7/13/01) No references required

OPS 5-01(ITS) Obj 2,3; OPS 5-68 (AP545) Obj. 6,7 Task # 1150402013

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3		0410402001	003AK1.13	3.2	3.6	33 [2/3]	ICS

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

22. 4-14 002/ 3,5/ / 0410402013/ 059K1.07/ 3.2/ 3.2/ 33-[2/3]/
Reactor power has been reduced to 80% to investigate indicated Main Feedwater flow oscillations in the "A" loop. With the plant stable at this power, the "A" Main Feedwater flow transmitter fails low. Assuming no SASS transfer occurs, which of the following describes the expected ICS response to this failure? Consider the results if the transient is allowed to continue for at least one minute.

✓A. ICS will increase FW to both OTSGs. Reactor Power will decrease.

B. ICS will increase FW to the "A" OTSG and decrease FW to the "B" OTSG. Reactor Power will decrease.

C. ICS will increase FW to both OTSGs. Reactor Power will increase.

D. ICS will increase FW to the "A" OTSG and decrease FW to the "B" OTSG. Reactor Power will increase.

Reasons:

A. Correct Answer. Feedwater will increase on the "A" side due to the failed transmitter. This will decrease Tc on that side. The delta Tc circuit will attempt to decrease flow to the affected side (unable to decrease due to failed instrument) while increasing flow to the other OTSG. The net result is an increase in feedwater flow to both OTSGs. When the transimitter fails, a large reduction in indicated feedwater flow will result. The indicated flow will be more than 5% below demand and therefore result in a feedwater to reactor cross limit reducing reactor demand by the amount of error above 5%.

B. FW to the "B" OTSG will increase due to the actions of the delta Tc circuit discussed above.

C. Reactor power will decrease because of the feedwater to reactor cross limit discussed above.

D. FW to the "B" OTSG will increase and reactor power will decrease as discussed above.

22. 4-14 002/ 3,5/ / 0410402013/ 059K1.07/ 3.2/ 3.2/ 33-[2/3]/
New question written for Sept. 2000 RO and SRO exam. (3-15-00 CMC)
Additional KA # 1150402016
REPEAT

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3,5		0410402013	059K1.07	3.2	3.2	33-[2/3]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

23. 4-14 003/ 3/ / 0410402001/ 003K3.05/ 3.6/ 3.7/ [2/3]/
Given the following plant conditions:

Plant is at 85% power
All ICS stations are in AUTOMATIC
RCP-1D trips its breaker on overcurrent

Which of the following identifies the initial ICS response?

A. Feedwater flow will re-ratio based on the total feedwater flow control circuit.

B. "TRACK" will be actuated based on the "Feedwater limited by Reactor" cross limit.

✓C. The Integrated Master will decrease demand at a rate sufficent to block the calibrating integral.

D. The Unit Load Demand will decrease demand to the low load limit setpoint.

Reasons-
A- the total feedwater flow control will not control any feedwater flow until one OTSG is on low level limits, and the RCP trip (RCP flow circuit) will re-ratio feedwater

B- Track is actuated by a cross limit that would not be actuated based on the conditions during the runback.

C- Correct. The runback will be at 50%/min which is faster than the 2%/min rate that blocks the calibrating integral.

D- The ULD will decrease its demand but based on the runback to 75%, NOT the low load limit of 129 MWe

NEW NRC 2002 KEH 5/2/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3		0410402001	003K3.05	3.6	3.7	[2/3]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

24. 4-16 001/ 3/ / 1010402004/ 068AK2.07/ 3.3/ 3.4/ 33 [2/3]/ RSP
Given the following plant conditions:

Fire in the cable spreading room, the Control Room has been evacuated and transfer to the Remote Shutdown Panel has been completed.
Following the transfer, RCS pressure decreased to 1400# and initiated Engineering Safeguards.

Which of the following identifies the starting status of the Emergency Diesel Generators for this scenario?

A. Must be started locally.

B. Must be started at the Remote Shutdown Panel.

C. Should have started when the transfer switches transferred control to the Remote Shutdown Panel.

✓D. Should have auto started as a result of the Engineering Safegaurds actuation.

A. Local start is not required, auto start still functions.
B. There is no remote start capabilities at the RSP.
C. The transfer switch will not start the EDG
D. CORRECT, ES actuates on low RCS pressure, AND this is the one circuit that ES will still actuate when control is transfered to the RSP.

OPS-4-16 page 7 refers to the EDG ES actuation, Objective 3

NEW 2002 KEH 8/1/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3		1010402004	068AK2.07	3.3	3.4	33 [2/3]	RSP

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

25. 4-21 001/ 2/ / 1150502002/ E03EK1.2/ 3.8/ 4.0/ 33 [2/3]/ SPDS
Given the following SPDS indication of SCM:

Which combination would allow the operator to throttle or terminate HPI flow?

✓A. Black number(s) on Green background of +2.

B. Black number(s) on Yellow background of -2.

C. White number(s) on Red background of +20.

D. White number(s) on Red background of -20.

A. CORRECT: Green is ASCM numbers are +
B. Yellow is ISCM numbers are -
C. Red is Superheat numbers are +
D. Red is Superheat numbers are +

NEW NRC exam 2002 KEH 9/25/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
2		1150502002	E03EK1.2	3.8	4.0	33 [2/3]	SPDS

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

26. 4-25 001/ 7/ / 0720402013/ 061AA1.01/ 3.6/ 3.6/ 33 [2/3]/ RM

Which of the following would cause the control board operator to request chemistry to sample for failed fuel?

A. Power has been stable at 80% rated thermal power for the last 4 hours; RM-A7, nuclear sample room monitor, is in warning.

✓B. Power has been stable at 80% rated thermal power for the last 4 hours; RM-L1, letdown monitor, is in warning.

C. Power decreased rapidly 2 hours ago, but is now stable at 55% rated thermal power; RM-G3, aux building sample room monitor, is in warning.

D. Power decreased rapidly 2 hours ago, but is now stable at 55% rated thermal power; RM-L7, disharge canal monitor, is in warning.

A. Sample room does not indicate failed fuel.
B. CORRECT; Stable power with a letdown monitor warning, the AR has the operator call for a sample.
C. Sample room does not indicate failed fuel.
D. Down power can create a spike and it is anticipated after a down power, RM-L7 would not be the first indication of failed fuel.

INPO Bank : KEH 9/25/01 NRC 2002 exam

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
7		0720402013	061AA1.01	3.6	3.6	33 [2/3]	RM

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

27. 4-25 002/ 4/ / 0720102001/ 072A4.03/ 3.1/ 3.1/ 33 [1]/ RM
Placing an RMG ratemeter module check source switch in the "CHECK SOURCE" position will provide which of the following indications in the control room?

A. No scale reading change on the detector, both warning and high alarm lights will be lit.

✓B. Up scale reading on the detector, warning and high alarm lights may or may not be lit.

C. Mid-scale reading on the detector, the warning alarm light will be lit.

D. Full scale reading on the detector, the high alarm light will be lit.

A. This checks the detector movement, the alarms would not light without meter movement.
B. CORRECT: This shows the detector response, and depending on the strength of the source it may actuate the warning or even the high alarms.
C. This will move based on the strength of the source and the warning may or may not be lit.
D. The movement may move to full scale, however, the warning light should also be lit, prior to the high alarm.

NEW 2002 NRC exam KEH 10/1/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		0720102001	072A4.03	3.1	3.1	33 [1]	RM

ANSWERS: Single Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

28. 4-25 003/ 3/ / 0070402004/ 068K6.10/ 2.5/ 2.9/ 33-[2/3]/
The following plant conditions exist:

- The plant is in Mode 6 with refueling operations in progress.
- The 'A' DH Train is in service.
- Control room operators notice a slow decreasing trend in refueling canal water level.

Which of the following combination of indications could be used to determine the reason for the decrease in refueling canal water level?

A. If the leak is into the SF cooler; RM-L3 would increase and DHCCC surge tank level would increase.

✓B. If the leak is into the DHHE; RM-L5 would increase and DHCCC surge tank level would increase.

C. If the leak is into the SF cooler; RM-L5 would increase and SW surge tank level would increase.

D. If the leak is into the DHHE; RM-L3 would increase and SW surge tank level would increase.

Reasons:

A. RM-L3 will not detect a leak into the SF system.

B. CORRECT. RM-L5 will detect a leak into the DC system.

C. RM-L5 will not detect a leak into the SF system.

D. RM-L3 will not detect a leak into the DC system.

ROT 4-25 Table 3, OPS 4-55 Obj. 3; AR-301 EP 0204; K/A #'s 068K1.01 2.4/2.6, 034A1.02 2.9/3.7, 008K1.04 3.3/3.3, A08AK2.2 3.8/4.0; Task # 0020402013

NRCN; LOI1-T5
BANK

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3		0070402004	068K6.10	2.5	2.9	33-[2/3]	

28. 4-25 003/ 3/ / 0070402004/ 068K6.10/ 2.5/ 2.9/ 33-[2/3]/

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

29. 4-25 004/ 4/ / 1190101031/ 060AA1.02/ 2.9/ 3.1/ 33-[1]/ 01CYC2

A waste gas leak has just developed in the Waste Gas Decay Tank area. RM-A2, Auxiliary Building Exhaust Duct Monitor; RM-A3, Auxiliary Building Exhaust Duct Waste Gas Area; and RM-A8, Auxiliary Building Exhaust Duct Monitor, are in high alarm. The RO reports the following fan status:

- AHF-9A, Penetration Cooling Fan is tripped.
- AHF-9B, Penetration Cooling Fan is off.
- AHF-10, Fuel Handling Area Supply Fan is running.
- AHF-11A, Auxiliary Building Supply Fan is off.
- AHF-11B, Auxiliary Building Supply Fan is off.
- AHF-30, Chemistry Laboratory Supply Fan is running.
- AHF-34A, Hot Machine Shop Welding Hood Exhaust Fan is tripped.

Which of the following components may need to be evaluated for proper operation?

A. RM-A3 because AHF-9A and AHF-34A are tripped.

B. RM-A3 because AHF-10 and AHF-30 are running.

✓C. RM-A2 because AHF-10 and AHF-30 are running.

D. RM-A2 because AHF-9A and AHF-34A are tripped.

Reasons:

A. and B. RM-A3 in high alarm automatically trips AHF-11A and AHF-11B. There is no interlock between RM-A3 and AHF-9A, AHF-10, AHF-30 and AHF-34A.

C. Correct, RM-A2 in high alarm automatically trips AHF-9A, AHF-9B, AHF-10, AHF-11A, AHF-11B, AHF-30, and AHF-34A.

D. RM-A2 in high alarm automatically trips AHF-9A, AHF-9B, AHF-10, AHF-11A, AHF-11B, AHF-30, and AHF-34A.

New question written for LOI-99-01 SRO Audit exam (3-1-2000 mg)
Removed any mention of operability and now is a common question KEH 5/21/2001

BANK

29. 4-25 004/ 4/ / 1190101031/ 060AA1.02/ 2.9/ 3.1/ 33-[1]/ 01CYC2

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		1190101031	060AA1.02	2.9	3.1	33-[1]	01CYC2

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

30. 4-25 005/ 4/ / 0720402002/ 029K1.01/ 3.4/ 3.7/ 33-[1]/
Given the following plant conditions:

- Mode 5
- RB purge in progress
- RMA-1 (RB purge exhaust duct radiation monitor) gas high alarm actuates

Which of the following components are interlocked (stop or close) in this condition?

A. AHF-6A/6B (RB purge supply fans)

B. AHF-7A/7B (RB purge exhaust fans)

C. AHFL-1A/1B (RB purge exhaust dampers)

✓D. AHV-1A/1B/1C/1D (RB purge supply/exhaust valves)

Reasons:
A/B Per AP-250 the fans must be tripped manually
C- these dampers are to the charcoal filters and are not interlocked with RMA-1
D- CORRECT RMA-1 is interlocked to close AHV-1A/B/C/D

Other K/A 069AA1.01 3.5/3.7/ 029K4.03 3.2/3.5
MODIFIED BANK

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		0720402002	029K1.01	3.4	3.7	33-[1]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

31. 4-28 001/ 4/ / 0080402011/ 001K1.09/ 2.8/ 3.1/ 33 [2/3]/ CRD
Given the following plant conditions:

CRD system is de-energized

Which of the following provide the Service water / Control Rod Drive interlock for the "A" and "B" CRD breakers?

A. Service water flow switch in parallel with both CRD breakers closing coils.

✓B. Service water flow switch in series with each CRD breakers closing coil.

C. Service water pump(s) breaker contact(s) in parallel with both CRD breakers closing coils.

D. Service water pump(s) breaker contact(s) in series with each CRD breakers closing coil.

A. The flow switch can not be in parallel, it would not ensure SW flow.
B. CORRECT; The flow switch is in series with the closing coil of each breaker.
C/D. SW pump breaker contacts are not used.

NEW 2002 NRC KEH 8/9/01 No reference needed.

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		0080402011	001K1.09	2.8	3.1	33 [2/3]	CRD

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

32. 4-28 002/ 4/ / 0450402001/ 007EK2.02/ 3.5/ 3.6/ 33 [2/3]/ CRD
Given the following plant conditions:

Reactor trip from 100% power

Which of the following actuates the turbine trip?

A. RPS reactor trip module will energize the reactor trip lockout relay.

✓B. Redundant trip confirm circuit will energize the reactor trip lockout relay.

C. RPS reactor trip module will energize the turbine trip lockout relays.

D. Redundant trip confirm circuit will energize the turbine trip lockout relays.

A. The RTM does not interface with the Rx Trip L/O
B. CORRECT; Redundant trip confirm will actuate the Rx Trip L/O to trip the turbine.
C. RTM does not interface with the Turbine L/O relays
D. Redundant trip confirm does not interface with the Turbine trip L/O relays.

OPS 4-28 page 20 of 77 refers to the reactor trip lockout relay

NEW 2002 KEH 8/2/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		0450402001	007EK2.02	3.5	3.6	33 [2/3]	CRD

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

33. 4-28 003/ 3,4/ / 0010402004/ 014K4.04/ 2.6/ 2.9/ 33-[1]/ CRD
Given the following plant conditions:

- A power increase is in progress.
- Group 7 rods are at 50% withdrawn
- Rod 7-4 is stuck at 47% withdrawn.
- PI panel indication is selected to RPI.

Which of the following indications would indicate that rod 7-4 is no longer moving?

A. Individual control rod position indication on PI panel.

B. Individual control rod position indication on plant computer.

C. Group average indication on MCB or plant computer.

✓D. Individual control rod position on zone reference position panel.

Reason:

A. & B. With RPI selected neither the PI panel or plant computer will indicate actual rod position, only rod position as a function of field rotation.

C. The group average cannot determine which particular rod is not moving.

D. CORRECT: the zone reference would show all the other rods at the 50% zone reference point and rod 7-4 would not have reached the 50 % level.

NOB 2002 NRC exam KEH 10/12/01

ROT 4-28 Section 1.4.8; [K/A # 001K4.01 3.5/3.8; 001A3.05 3.5/3.5 ; Task # 0010402022; 0010402013

NRCN; ROTs O - T8 & T8S; LOI1-T1

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3,4		0010402004	014K4.04	2.6	2.9	33-[1]	CRD

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

34. 4-28 004/ 5/ / 0010402019/ 001G2.1.32/ 3.4/ 3.8/ 33-[2/3]/
The following conditions exist:

- A reactor startup is in progress.
- Control rod groups 1 through 3 are fully withdrawn.
- Group 4 rod withdrawal is stopped at 48%
- Source range NI counts are 540 cps and slowly increasing on NI-1 and NI-2
- Start-up rate is 0.2 DPM and constant on NI-1 and NI-2
- All rod motion has been stopped

Which of the following states the appropriate actions for the conditions stated above?

A. Monitor the increasing count rate and verify power stabilizes below the point of adding heat before continuing rod withdrawal.

B. Insert group 4 control rods, verify a Shutdown Margin of more than 1% exists and inform the Reactor Engineer of plant conditions.

C. Insert groups 1 through 4 sequentially, request Chemistry to resample the RCS for boron concentration, and recalculate the ECP.

✓D. Trip the reactor and enter EOP-2, Vital System Status Verification.

Reasons:

A. The indications in the stem of this question show that the reactor has achieved criticality on Safety Rods. Limits and Precautions of OP-502 direct the crew to immediately trip the reactor and enter EOP-2. Continued power increase should not be permitted.

B. Insertion of all safety rods is required for these conditions. Insertion of only group 4 rods is not adequate.

C. The safety rods should be inserted by tripping the reactor, not sequential insertion.

D. Correct Answer: The indications in the stem of this question show that the reactor has achieved criticality on Safety Rods. Limits and Precautions of OP-502 direct the crew to immediately trip the reactor and enter EOP-2.

34. 4-28 004/ 5/ / 0010402019/ 001G2.1.32/ 3.4/ 3.8/ 33-[2/3]/
New question written for Sept. 2000 RO and SRO exam. (3-8-00 CMC)
Additional Task # 0010102004, 0010502001
REPEAT

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5		0010402019	001G2.1.32	3.4	3.8	33-[2/3]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

35. 4-28 005/ 3/ / 1150502001/ 014A2.01/ 2.8/ 3.3/ 33-[1]/
Following a loss of off site power, what are the indications, if any, that Control Rod groups 1 through 7 are fully inserted?

A. The CRD panel is de-energized, there are no indications that CRD groups 1 through 7 are fully inserted.

B. All in-limit lights on the position indication panel and the diamond control panel are on.

✓C. Only the in-limit lights on the position indication panel are on.

D. Only the in-limit lights on the diamond control panel are on.

Reasons:

A. Following a plant modification made in 1999 (MAR 96-07-17-03) a battery backup power supply was added that powers the position indication in-limit lights following a loss of off-site power. The in-limit lights on the position indication panel would be on.

B. The CRD system is de-energized, only the in-limit lights on the position indication panel would be on.

C. Correct, because of the installation of MAR 96-07-17-03 only the in-limit lights on the position panel would be on.

D. The in-limit lights on the diamond control panel will be de-energized.

New question written for Sept 2000 RO and SRO exam. (3-22-2000 mg)
REPEAT

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3		1150502001	014A2.01	2.8	3.3	33-[1]	

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

36. 4-52 001/ 3,4/ / 0040402006/ 004G2.1.30/ 3.9/ 3.4/ 33-[1]/ MUP

Given the following plant conditions:

- 100% full power.
- "B" MUP is in operation.
- Channel "B" (LT-2) is selected for MUT indication.

Which of the following describes the response of the makeup system if the Channel "A" (LT-1), MUT level transmitter fails low?

✓A. Only "A" side BWST suction valve (MUV-73) will receive an open signal.

B. Only "B" side BWST suction valve (MUV-58) will receive an open signal.

C. Both "A" and "B" side BWST suction valves (MUV-73/58) will receive an open signal.

D. Neither BWST suction valve (MUV-73/58) will receive an open signal.

Reasons:

A. CORRECT: LT-1 ("A" Channel) supplies the signal to MUV-73
B., C. & D. These transmitters control their individual BWST suction valves.

OPSA1.BNK 2002 NRC exam KEH 10/12/01 [004A3.09 3.3/3.2]
NRCM; ROTs O - T13; LOI1-T9AR/T9AS

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3,4		0040402006	004G2.1.30	3.9	3.4	33-[1]	MUP

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

37. 4-52 002/ 3,4,7/ / 1150402016/ 057AA1.05/ 3.2/ 3.4/ 33-[1]/ MUP
Given the following plant conditions:

100% power
NNI-X power is lost.

Which of the following describes how seal injection flow to the RCPs would be controlled via MUV-16, seal injection control valve?

✓A. Will respond in the manual mode.

B. Will respond in auto from a backup power supply.

C. Will fail closed, the bypass valve, MUV-452, will need to be throttled.

D. Will fail open, the auxiliary building operator will need to control flow locally.

A. CORRECT: Will control in manual with a loss of NNI-X
B. No auto power backup exist.
C. The valve does not fail closed.
D. The valve does not fail open.

OPSA1.BNK 2002 NRC exam KEH 10/12/01
ROTs K - T2; ROTs M - T6B

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3,4,7		1150402016	057AA1.05	3.2	3.4	33-[1]	MUP

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

38. 4-55 001/ 7/ / 0070402005/ 026A1.06/ 2.7/ 3.0/ 33-[2/3]/ DHCC

Given the following plant conditions:

- Reactor Coolant pressure is 1600 psig.
- Reactor Building pressure is 2.1 psig.
- The "B" Decay Heat Closed Cycle Cooling Pump (DCP-1B) is tagged out for maintenance.

Which of the following safety related equipment will be without cooling water?

A. MUP-1C, RWP-2B and BSP-1B are without cooling water.

B. MUP-1B, RWP-3B and BSP-1B are without cooling water.

C. MUP-1B, RWP-2B and BSP-1B are without cooling water.

✓D. MUP-1C, RWP-3B and BSP-1B are without cooling water.

A. RWP-2B is cooled from SW
B. MUP-1B is cooled from SW
C. MUP-1B and RWP-2B are cooled from SW
D. CORRECT: All of these pumps are cooled from DC "B"

OPSA1.BNK 2002 NRC exam KEH 10/12/01 [008K1.02 3.3/3.4]
ROTs O - T8 & T8S; LOI1-T8AR/T8AS

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
7		0070402005	026A1.06	2.7	3.0	33-[2/3]	DHCC

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

39. 4-56 001/ 4/ / 0080402006/ 008K4.09/ 2.7/ 2.9/ 33-[1]/ SW

Given the following plant conditions:

- The "C" Nuclear Services Closed Cycle Cooling Water Pump (SWP-1C) is in operation.
- An accident in the seawater room results in completely shearing off the SW surge tank suction line.

Which of the following describes the initial response of the SWPs?

A. SWP-1B auto starts and SWP-1C trips. SWP-1A remains in standby.

✓B. SWP-1B auto starts first; then SWP-1A auto starts and SWP-1C trips.

C. SWP-1A auto starts first; then SWP-1B auto starts and SWP-1C trips.

D. Both SWP-1A and SWP-1B auto start and SWP-1C continues to run.

Reasons:

A. SWP-1A auto starts 8 seconds later.
B. CORRECT: SWP-1B starts first, the loss of suction low pressure would require SWP-1A. The first Emergency SWP that starts, will then tripSWP-1C 15 seconds later
C. SWP-1B auto starts first.
D. SWP-1C trips 15 seconds after SWP-1A or 1B starts.

NOB 2002 NRC exam KEH 10/12/01
K/A # 076K4.02 2.9/3.2; 008K4.01 3.1/3.1;

NRCN; LOI-99-01 FPCF; LOI1-T9BR/BS

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		0080402006	008K4.09	2.7	2.9	33-[1]	SW

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

40. 4-57 001/ 7/ / 0760402003/ 075K1.01/ 2.5/ 2.5/ 33-[2/3]/ RW
Given the following plant conditions:

- A controlled plant shutdown is in progress due to a shaft failure of RWP-2A.
- The reactor is critical with RCS temperature at 545° F.
- PZR level is 95".
- The SPO reports that CWTS-2 is completely clogged with debris and will not start and the flume water level is almost empty.

Which of the following actions, and applicable reasons for these actions, should be performed?

A. No action required, RWP-1 and RWP-2B are not affected.

B. Trip the reactor and initiate EFIC due to the loss of CW cooling to the condenser.

C. Trip the reactor due to low PZR level.

✓D. Trip the reactor due to the loss of SW RW flow.

Reasons:

A. This failure will render RWP-1 and RWP-2B inoperable. The reactor should be tripped due to the loss of SW RW flow.
B. CW cooling is not affected by this failure.
C. During a plant startup or shutdown PZR level is allowed to be < 100" without tripping the reactor.
D. CORRECT: The reactor should be tripped due to the loss of SW RW flow. AI-505 memory item.

OPSA1.BNK (5-14 001) 2002 NRC exam KEH 10/11/01
NRCN; ROTs O - T13 K/A # G2.4.1 4.6/4.6

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
7		0760402003	075K1.01	2.5	2.5	33-[2/3]	RW

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

41. 4-59 001/ 4,5,7/ / 1150402011/ 059AK2.01/ 2.7/ 2.8/ 33 [2/3]/ RWL
During a liquid release, the control board operator receives an RM-L2 trip on a valid high radiation condition.

Which of the following combinations of actions must be performed by operations?

A. The auxiliary building operator must be notified to ensure that the release isolation valve (SDV-90) has automatically closed; the same liquid radwaste release permit will apply when the release is restarted.

B. The auxiliary building operator must be notified to ensure that the release isolation valves (WDV-891/892) have automatically closed; the same liquid radwaste release permit will apply when the release is restarted.

C. The auxiliary building operator must be notified to ensure that the release isolation valve (SDV-90) has automatically closed; the liquid radwaste release permit will be closed out.

✓D. The auxiliary building operator must be notified to ensure that the release isolation valves (WDV-891/892) have automatically closed; the liquid radwaste release permit will be closed out.

A. Valve (secondary release) and the release permit must be regenerated.
B. Release permit must be regenerated.
C. Valve (secondary release).
D. CORRECT; isolate release, and must start the release process over.

INPO bank : KEH NRC exam 2002 9/25/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4,5,7		1150402011	059AK2.01	2.7	2.8	33 [2/3]	RWL

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

42. 4-60 001/ 7/ / 0020402003/ 004K3.04/ 3.7/ 3.9/ 33 [2/3]/ RCP
Given the following plant conditions:

100% power.
MUV-16 (RCP seal flow control valve) fails closed.
Service water flow to the RCPs is maintained.

Which of the following action(s) is correct with regard to the RCPs?

A. Trip all RCPs within 2 minutes.

B. Trip all RCPs within 5 minutes.

C. Trip all RCPs within 30 minutes.

✓D. No action is required.

A. This is the action if loss of both Seal injection and SW both.
B. This is the action if loss of SW to the RCPs.
C. This is the action if loss of SW to the RCPs if in an EOP.
D. CORRECT: as long as SW is available you can operate without seal injection.

NEW 2002 NRC KEH/MKG 8/9/01 No references required these are L&Ps in OP-302 and 402.

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
7		0020402003	004K3.04	3.7	3.9	33 [2/3]	RCP

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

43. 4-62 001/ 3/ 2-30/ 0260502004/ 027G2.1.28/ 3.2/ 3.3/ 33-[1]/
Which one of the following parameters is controlled to limit the amount of iodine in the RB atmosphere following a LOCA?

A. The volume of galvanized metal inside containment.

B. The volume of aluminum inside containment.

✓C. The pH of the RB sump.

D. The temperature of the RB atmosphere.

Reasons:

A. This parameter is limited to reduce the amount of post-LOCA hydrogen and does not affect iodine in the RB atmosphere.

B. This parameter is limited to reduce the amount of post-LOCA hydrogen and does not affect iodine in the RB atmosphere.

C. Correct Answer. TSP baskets inside containment adjust the pH of the RB sump to between 7.0 and 11.0. This range of pH creates non-volatle iodine and limits the amount of iodine in the RB atmosphere.

D. RB spray limits containment pressure by spraying liquid into the steam atmosphere but any reduction of RB temperature is a byproduct of this pressure reduction and not intended to limit iodine in the RB atmosphere.

New Question written for Sept. 2000 RO and SRO exam. (3-6-00 CMC)
Additional Task numbers; 1150502007, 1150402016
REPEAT

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3	2-30	0260502004	027G2.1.28	3.2	3.3	33-[1]	

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

44. 4-63 001/ 4/ / 1030402002/ 103A1.01/ 3.7/ 4.1/ 33 [2/3]/ RB VENT
Given the following plant conditions:

Small RCS leak.
Containment temperature 150°F.
AHF-1A is running in slow speed (AHF-1A/B are ES selected).
ES actuates.

Which of the following is the final containment cooling fan configuration?

✓A. AHF-1A remains running in slow speed, AHF-1B is off.

B. AHF-1A remains running in slow speed, AHF-1B starts in slow speed.

C. AHF-1A trips, AHF-1B starts in slow speed.

D. AHF-1A trips, AHF-1A starts in slow speed.

A. CORRECT: AHF-1A will continue to run in slow speed.
B. AHF-1B will not start even though it is ES selected.
C. AHF-1A will not trip, nor will AHF-1B start.
D. AHF-1A will not trip.

NEW CR-3 (MODIFIED INPO BANK) KEH 2002 NRC 8/21/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		1030402002	103A1.01	3.7	4.1	33 [2/3]	RB VENT

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

45. 4-63 002/ 3/ / 0620402007/ 022K2.01/ 3.0/ 3.1/ 33-[1]/
An electrical fault has resulted in ES MCC 3AB being de-energized.

Which of the following components will be unavailable as a result of this malfunction?

✓A. Reactor Building Air Handling Fan 1C (AHF-1C)

B. Nuclear Services Raw Water Pump 1C (RWP-1C)

C. Inverter 1C (VBIT-1C)

D. Make-up Pump 1C Main Lube Oil Pump (MUP-2C)

Reasons:

A. Correct Answer: AHF-1C is powered from ES MCC 3AB and would be lost if this component is de-energized.

B. RWP-1C is a 4160V load not powered from ES MCC 3AB..

C. Inverter 1C is not dependent on a single power supply and does not receive power from ES MCC 3AB.

D. MUP-2C is not powered from ES MCC 3AB.

New question written for Sept. 2000 RO and SRO exam. (6-20-00 CMC)
Additional Task # 0620402010
REPEAT

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3		0620402007	022K2.01	3.0	3.1	33-[1]	

ANSWERS: Single Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

46. 4-63 003/ 5,7/ / 0880102014/ G2.3.9/ 2.5/ 3.4/ 33-[2/3]/
Given the following plant conditions:

- Plant in MODE 5
- Containment purge in operation
- Outside ambient air temperature is 64°F
- Both CFTs are being depressurized for maintenance and are currently at 100 psig.
- Rosemont pressure transmitters associated with RCS Pressure are being calibrated by a team of I&C technicians in the RB.

A failure of all purge heaters has resulted in the following RB conditions:

- 95' RB Air Temperature is 65°F
- 119' RB Air Temperature is 66°F

Which of the following statements describe action required for these conditions and the basis of those actions?

A. Depressurize both Core Flood Tanks to less than or equal to 40 psig to prevent possible brittle fracture.

B. Fully depressurize and drain both Core Flood Tanks to prevent boron stratification and rocking up of core flood system piping.

✓C. Suspend Rosemont transmitter calibration until RB Air Temperature is at or above 70°F to ensure design input data is within analyzed conditions.

D. Verify I&C calibration is temperature corrected to ensure base line data meets the new RB temperature conditions.

.

46. 4-63 003/ 5,7/ / 0880102014/ G2.3.9/ 2.5/ 3.4/ 33-[2/3]/
Reasons:

A. CFTs are already below the 140 psig brittle fracture value associated with RB temperatures below 70°F. No requirement exists to further depressurize the tanks to 40 psig.

B. Temperatures below 70°F pose a brittle fracture concern if CFTs are pressurized above 140 psig but no requirement exists to depressurize and drain a CFT that is below this temperature. Normal CFT boron concentrations would not lead to boron coming out of solution at ambient temperatures of 68°F or 69°F.

C. Correct Answer. Per the Limits and Precautions of OP-417, Containment Operating Procedure, the crew must maintain RB air temperature at or above 70°F during instrument calibration. The basis of the L&P states that this is to ensure design inputs utilized and specified by design calculation are maintained in order to keep the plant within analyzed conditions.

D. No temperature correction of calibration base line data is required. Further calibration should not occur until RB air temperature is at or above 70°F.

New Question Written for Sept. 2000 RO and SRO exam. (3-29-00 CMC)
Additional Task # 1150402016
REPEAT

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5,7		0880102014	G2.3.9	2.5	3.4	33-[2/3]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

47. 4-68 001/ 3,4/ / 0590102009/ 039A4.03/ 2.8/ 2.8/ 33 [1]/ MFW
Which of the following is available on the main control board (ICS section) for the main feedwater turbine?

✓A. Control valve position.

B. First stage pressure.

C. Steam pressure (chest).

D. Turbine rotor position.

A. CORRECT: The control valve position on scale 0 - 100 % just above rpm meter.
B. Main Turbine indication in control room, NOT MFW turbine.
C. Main Turbine indication in control room, NOT MFW turbine.
D. Main Turbine indication in control room, NOT MFW turbine.

NEW NRC exam 2002 KEH 10/1/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3,4		0590102009	039A4.03	2.8	2.8	33 [1]	MFW

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

48. 4-69 001/ 4/ / 0590402001/ 056K1.03/ 2.6/ 2.6/ 33-[1]/
Which of the following describes the direct signal that decreases condensate flow demand on a loss of one MFW pump at 80% power?

A. A signal that compares existing CD pump speed with FW flow and hotwell level.

B. A signal that compares existing CD pump speed with FW flow and deaerator level.

C. A signal that compares existing CD flow with FW flow and hotwell level.

✓D. A signal that compares existing CD flow with FW flow and deaerator level.

Reasons:

A. FW flow and CD pump speed do not modifiy condensate demand.

B. FW flow and CD pump speed do not modifiy condensate demand.

C. FW flow and CD flow are compared to modifiy condensate demand. Hotwell level will increase but this will only modify the position of CDV-88, not actual CD demand.

D. FW flow and CD flow are compared to modifiy condensate demand. Deaerator level is another part of the comparison.

This question also addressed K/A #'s 056K6.03 2.1/2.4, 059K1.01 2.3/2.3; Unmodified repeat question from LOI 99-01 program; NRCN
BANK

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		0590402001	056K1.03	2.6	2.6	33-[1]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

49. 4-90 001/ 3,4,9/ / 1150502011/ 055EA1.06/ 4.1/ 4.5/ 33 [2/3]/ ELEC DIST
Given the following plant conditions:

Recovering from a station blackout condition.
No offsite power available.
Only the "A" EDG operable.

Which of the following is correct?

A. The EDG output breaker handle must be momentarily held in the "close" position to override the ES bus undervoltage relay.

✓B. The EDG output breaker will automatically close once the EDG has started and all other feeder breakers to it's respective bus are open.

C. The EDG output breaker will automatically close once the EDG has started and 2 minutes have elapsed from the engine ready light being energized.

D. The EDG should be used to backfeed the "B" 480 VAC ES bus to restore essential loads.

A. This is for a feeder breaker from offsite power source, with no EDG running.
B. CORRECT: Cross tie blocking has all feeders open then the EDG breaker will auto close.
C. The 2 minutes is if the EDG had tripped then the SDR has a 2 minute timer.
D. This would cross tie the ES busses, no train separation.

NEW 2002 NRC exam KEH 10/1/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3,4,9		1150502011	055EA1.06	4.1	4.5	33 [2/3]	ELEC DIST

ANSWERS: Single Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices
Scramble Range: A - D

50. 4-90 002/ 3,4,7/ / 0640402001/ 064K3.02/ 4.2/ 4.4/ 33-[1]/ EDG
Given the following plant conditions:

A High Pressure Injection (HPI) actuation has started the "A" Emergency Diesel Generator (EDG-1A).

Undervoltage on the "A" ES bus occurs

Which of the following would prevent EDG-1A automatic breaker (3209) closure?

A. EDG-1A is operating at 61 Hz and 4200 volts.

B. EDG-1B is running with its output breaker (3210) closed.

✓C. The under-voltage relays are tripped and the normal feeder breaker is still closed.

D. The synchronizing check relays sense an out of phase condition.

Reasons:

A. These conditions would not prevent breaker closure.
B. This is not a cross-tie blocking situation.
C. CORRECT: With the UV condition and the feeder still closed this is in the close circuit for 3209, a "b" contact for the feeder breaker.
D. The sync. check relays are not in the automatic breaker closure circuit.

OPSA1.BNK 2002 NRC exam KEH 10/12/01 [064A4.06 3.9/3.9]
NRC 6-97; ROTs M - T6A; ROTs N - T4 & T4A; ROTs O - T14

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3,4,7		0640402001	064K3.02	4.2	4.4	33-[1]	EDG

ANSWERS: Single

Points 1

Version Answers:

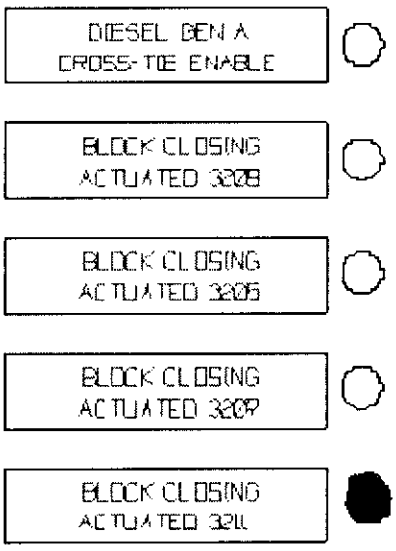
0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

51. 4-90 003/ 4/ / 0640202001/ A05AK2.1/ 4.0/ 3.8/ 33-[2/3]/
The following light indications are present on the main control board.

Startup	3203	3204
BEST	3205	3206
Unit Aux	3207	3208
EDG	3209	3210
OPT	3211	3212



A plant startup is in progress with reactor power at 10%. Which of the following sets of conditions will cause the above indication? Assume sufficient time for automatic actions to have occurred.

A. The offsite power transformer is OOS (tagged out) for oil leak repair.
SP-354A is in progress with Breaker 3209 closed.
A spurious 'A' train ES actuation has just occurred.

B. SP-354A is in progress with Breaker 3209 closed.
The Startup Transformer is OOS (tagged out) for oil leak repair.
A loss of Off-Site power has just occurred, Bkr 3211 has failed to open.

✓C. SP-354B is in progress with Breaker 3210 closed.
The Startup Transformer is OOS (tagged out) for oil leak repair.
A loss of Off-Site power has just occurred, Bkr 3212 has failed to open.

D. The offsite power transformer is OOS (tagged out) for oil leak repair.
SP-354B is in progress with Breaker 3210 closed.
A spurious 'B' train ES actuation has just occurred.

51. 4-90 003/ 4/ / 0640202001/ A05AK2.1/ 4.0/ 3.8/ 33-[2/3]/
CHECK ENABLE LIGHT-should be on

Reasons:

A. These conditions have 3205, 3206 and 3209 closed. 3210 will be blocked.

B. These conditions have 3209, 3211 and 3212 closed. 3210 will be blocked.

D. These conditions have 3205, 3206 and 3210 closed. 3209 will be blocked.

NRCM; ROTs O - T13
Additional K/A A05AK3.1 3.2/3.4

BANK QUESTION 2002 NRC EXAM 5/10/2001 KEH

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		0640202001	A05AK2.1	4.0	3.8	33-[2/3]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

52. 4-91 001/ 3,5/ / 0620102001/ 062A3.04/ 2.7/ 2.9/ 33 [1]/ AC DIST
While starting an inverter (A,B,C,D) in accordance with OP-703 section 4.7 you must "DEPRESS and HOLD" the precharge pushbutton.

Which of the following is the reason for this action?

A. This will auto close the battery input breaker (DC) to the inverter once the inverter output voltage reaches 120VAC.

✓B. This bypasses the battery input breaker (DC) to the inverter to minimize in rush current.

C. This charges the 85 second time delay relays to prevent unnecessary shifting of inverters between the input supplies.

D. This energizes the output auctioneer initially to select the AC input and maintain the DC input in standby.

A. There is no auto closure of any input breakers on the inverters.
B. CORRECT: This will allow the DC side to charge and minimize the current rush.
C. The 85 second time delay relays are there but they do not need any charging.
D. The auctioneer is set to select the AC input as the preferred source.

NEW 2002 NRC exam KEH 10/1/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3,5		0620102001	062A3.04	2.7	2.9	33 [1]	AC DIST

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

53. 4-91 002/ 6/ / 0620402017/ 057AK3.01/ 4.1/ 4.4/ 33-[2/3]/

With the plant at 100% power a catastrophic failure of VBIT-1C rendered it inoperable and caused both of the VBXSs that it feeds to fail "as is" (no transfer to their alternate power supply).

Which of the following describes the EOP/AP action(s), if any, that should be taken?

A. AP-581, Loss of NNI-X, should be entered.

B. AP-582, Loss of NNI-Y, should be entered.

✓C. AP-430, Loss of Control Room Alarms, should be entered.

D. Trip both MFW pumps and the reactor due to the loss of ICS power. EOP-2, Vital System Status Verification, and Rule 3, EFW Control, should be entered.

Reasons:

A. The ABT for NNI-X should transfer to VBDP-1 on a loss of VBDP-5.

B. Neither VBDP-5 or 9 feed NNI-Y therefore no loss of power should occur.

C. Correct, VBDP-5 powers the annunciator monitor and typer.

D. This would be the correct response for a loss of ICS power however neither VBDP-5 or 9 feed ICS therefore no loss of power should occur.

NRCM; ROTs O - T13; Bank question (4-91 1) used for LOI-99-01 SRO and RO Audit exam (8-8-2000 mg)
BANK

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
6		0620402017	057AK3.01	4.1	4.4	33-[2/3]	

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

54. 4-93 001/ 4, 7, 9/ / 0780402006/ 055K3.01/ 2.5/ 2.7/ 33-[2/3]/
The following plant conditions exist:

- The plant is at 50% power, 437 MWe.
- The "A" Condenser Air Removal pump, ARP-1A is in normal-after-start and running.
- There is a small condenser air leak.
- Condenser vacuum has decreased to 6 inches Hg absolute and is stable at that value.

If no actions are taken by operations personnel to mitigate these conditions, which of the following describes the condition of the ARPs ?

A. ARP-1A is running in the holding mode with the air ejector in service and the Main Control Board low vacuum white lights are lit.

✓B. ARP-1A and ARP-1B are running in the holding mode with their air ejectors in service and the Main Control Board low vacuum white lights are OFF.

C. ARP-1A is running in the hogging mode with the air ejector bypassed and the Main Control Board low vacuum white lights are lit.

D. ARP-1A and ARP-1B are running in the hogging mode with the air ejector bypassed and the Main Control Board low vacuum white lights are OFF.

Reasons:

A. ARP-1A is already running and the light should be OFF.

B. Correct, both ARPs should be running at 4" and the vacuum lights turn OFF at 4". However this condition is at 6".

C. ARP-1A is running, hogging mode starts at 7" and the vacuum lights turn OFF at 4".

D. Hogging mode starts at 7".

New question written for LOI-99-01 SRO and RO Audit exam (8-4-2000 kh)
BANK

54. 4-93 001/ 4, 7, 9/ / 0780402006/ 055K3.01/ 2.5/ 2.7/ 33-[2/3]/

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4, 7, 9		0780402006	055K3.01	2.5	2.7	33-[2/3]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

55. 4-93 002/ 5,6,8/ / 0450402005/ 051AA2.02/ 3.9/ 4.1/ 11-[1]/
The following plant conditions exist:

- The plant is at 50% power.
- Condenser vacuum is 25 in-Hg and steady.
- Low pressure turbine exhaust temperature is 258° F.

Based on these conditions which of the following action(s) should be taken?

A. Restore vacuum to > 26.5 in-Hg within five minutes or trip the turbine.

B. Immediately reduce power to < 30% and trip the main turbine within five minutes.

✓C. Trip the main turbine immediately.

D. Increase hood spray flow.

Reasons:

A. If reactor power was less than 30% then this would be the correct action to take, based on vacuum only.

B. If vacuum was < 24.5 in-Hg then this would be the correct action to take, based on vacuum only.

C. CORRECT. Vacuum is adequate for this power level however with low pressure turbine exhaust temperature > 250° F OP-607 requires the main turbine to be tripped immediately.

D. Vacuum is adequate for this power level however with low pressure turbine exhaust temperature > 250° F OP-607 requires the main turbine to be tripped immediately. Hood spray is a fixed value. Flow cannot be increased.

OPS 4-93 Section 1-8.A; OP-607 Steps 3.2.4 & 4.5.8; AR-603 EP 1634; KA #'s G2.1.32 3.4/3.8, G2.2.22 3.4/4.1

NRCM
BANK

55. 4-93 002/ 5,6,8/ / 0450402005/ 051AA2.02/ 3.9/ 4.1/ 11-[1]/

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5,6,8		0450402005	051AA2.02	3.9	4.1	11-[1]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

56. 4-93 003/ 6, 8/ / 0550402001/ 2.4.48/ 3.5/ 3.8/ [1]/
Given the following plant conditions:

The plant is performing a power increase and just completed passing through the Main Feedwater Block valves.

The Turbine Vacuum Pre-Trip alarm (O-3-3) has actuated.

Main Condenser Vacuum (CD-007-PIR) indicates 5.5" Hg Absolute.

Which of the following parameter(s) can you check from the control room to identify a possible cause of this low vacuum condition?

A. Deaerator Level

B. Gland Water pressure

✓C. Hotwell Level

D. Feedwater Pump Gland Seal Pressure

A,Monitored on the Main Control Board but should not affect vacuum

B,& D- Indication in the Turbine Bldg., not monitored in the Main Control Room

C- CORRECT on MCB, low or high level in hotwell can result in a Low vacuum.

NEW question for 2002 NRC exam 5/1/2001 KEH

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
6, 8		0550402001	2.4.48	3.5	3.8	[1]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

57. 5-01 001/ 4/ / 1190302001/ 076AA2.02/ 2.8/ 3.4/ 11 [2/3]/ RCS ACT
Given the following plant conditions:

0600 Plant at 100% power
0700 Plant at 80% power
1030 Chemistry sampled the RCS
1230 Chemistry analysis indicates:
Dose equivalent I-131 concentration is 1.5uCi/gm
RCS specific activity is 50 uCi/gm
Gross specific activity is < 100/E(bar)

Which of the following Tech Spec actions if any would be required?

A. Reduce RCS activity to less than the Tech Spec limit immediately or be in MODE 3 within 6 hours.

B. Reduce RCS activity to less than the Tech Spec limit within 4 hours or be in MODE 3 within 6 hours.

✓C. Reduce RCS activity to less than the Tech Spec limit within 48 hours or be in MODE 3 within 6 hours.

D. No action required, chemistry results are within the Technical Specification limits.

A. Actions are required but not immediately
B. Actions are required but more than 4 hours is allowed
C. CORRECT; See T.S. 3.4.15 condition A and B 48 hours or MODE 3 W/I 6 hours
D. Activity is outside of the TS limits

NEW 7/9/2001 KEH (Provide T.S. 3.4.15)

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
4		1190302001	076AA2.02	2.8	3.4	11 [2/3]	RCS ACT

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

58. 5-100 001/ 5/ / 1150502008/ 056AK3.02/ 4.4/ 4.7/ 33 [1]/ EOP-12
Given the following plant conditions:

Loss of the 230 KV switchyard
Both ES busses are de-energized
Reactor tripped
Loss of SCM has occurred
"B" OTSG MSSV sticks open
"B" OTSG is dry

Which of the following procedures contains the appropriate actions for these conditions?

A. EOP-03, Inadequate Subcooling Margin.

B. EOP-04, Inadequate Heat Transfer.

C. EOP-09, Natural Circulation Cooldown.

✓D. EOP-12, Station Blackout.

A. EOP-03 ISCM is next priority behind EOP-12 for station blackout.
B. EOP-04 IHT has a lower priority
C. EOP-09 will not apply until NOT in any other EOP (entry condition)
D. CORRECT: per step 3.17 with a station blackout even with a loss of SCM remain in this procedure

NEW 2002 NRC exam KEH 10/4/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5		1150502008	056AK3.02	4.4	4.7	33 [1]	EOP-12

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

59. 5-101 001/ 1/ / 1150502005/ EPP2.4.2/ 3.9/ 4.1/ 33 [2/3]/ EOP-06
Given the following plant conditions:

100% power
RCS pressure 2155 psig
RCS temperature 579°F
RCS makeup flow has increased from 60 to 65 gpm
Pressurizer level is slowly decreasing
RM-A2, (Auxiliary Building Ventilation Exhaust Duct) is in alarm
RM-A12, (Condenser Vacuum Pump Off Gas Exhaust) is in alarm

Which of the following entry condtions has been met?

A. A small break LOCA is in progress, enter EOP-02, Vital System Status Verification.

B. A small break LOCA is in progress, enter EOP-03, Inadequate Subcooling Margin.

C. A tube leak is in progress, enter EOP-02, Vital System Status Verification.

✓D. A tube leak is in progress, enter EOP-06, Steam Generator Tube Rupture.

A. The Rad Monitors make this a specific tube leak, and must enter EOP-06.
B. The Rad Monitors make this a specific tube leak, and must enter EOP-06.
C. The Rad Monitors make this a specific tube leak, and must enter EOP-06, this leak has not caused a Rx trip.
D. CORRECT: The Rad Monitors make this a specific tube leak, and must enter EOP-06.

BANK 2002 NRC exam KEH 10/2/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
1		1150502005	EPP2.4.2	3.9	4.1	33 [2/3]	EOP-06

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

60. 5-102 001/ 5/ / 1150502003/ EO4EK2.1/ 3.8/ 4.2/ 11 [2/3]/ EOP-4

Given the following plant conditions:

- Time is 5 minutes after a reactor trip due to loss of both Main Feedwater Pumps.
- No Emergency/Auxiliary Feedwater Pumps are operating.
- Tincore is 590°F and increasing.
- RCS pressure is 2325 psig and increasing.
- All 4 RCPs are running.
- "A" OTSG level is 30 inches.
- "A" OTSG pressure is 1010 psig and stable.
- "B" OTSG level is 0 inches.
- "B" OTSG pressure is 800 psig and decreasing.
- RCS heat up rate is +30°F / Hr.

Which of the following action(s) is required concerning operation of the RCPs?

✓A. Stop 1 RCP per loop.

B. Stop 3 RCPs.

C. Stop all 4 RCPs.

D. Continue to run all 4 RCPs.

A. CORRECT; Step 3.9 of EOP-4 reduces the running RCPs to 1 per loop.
B. Misconception that leave 1 RCP for spray flow.
C. Do not place plant in NC with no other heat removal sources (OTSG), also have not increased T incore 50° since the trip.
D. Running 4 RCPS just adds more heat to the RCS.

NEW 2002 KEH (7/12/01) Provide EOP-04.

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5		1150502003	EO4EK2.1	3.8	4.2	11 [2/3]	EOP-4

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices

Scramble Range: A - D

61. 5-106 001/ 10/ / 0050102012/ 005K5.02/ 3.4/ 3.5/ 33 [2/3]/ PZR
Given the following plant conditions:

- RCS pressure is 255 psig
- RCS temperature is 260°F
- PZR level is 180 inches
- DHP-1A is running for RCS cooldown
- DHV-91 (Auxiliary Spray Isolation Valve) is open

As the operator throttles Auxiliary Spray valve RCV-53 it fails open causing a rapid outsurge from the PZR.

Which of the following is a probable outcome of this event?

A. Shutdown margin decreases to less than 1% deltaK/K.

✓B. A steam bubble forms in the hot leg.

C. The RCS cooldown rate would be > 50°F/hr.

D. The RCS pressure drops so low that DHP-1A starts to cavitate.

A. RCS/PZR boron is to be within 20 ppm, therefore this would not change SDM to less than 1%.
B. CORRECT; the outsurge would be water at about 402°F which would create a steam bubble in the hot leg. Saturation temperature for 260°F RCS is about 40psig.
C. The outsurge is hot water, no cooldown would be seen.
D. The pressure drop would not cavitate a DHP with a suction from the RCS at something less than 255 psig.

NEW CR-3 (INPO BANK) KEH 2002 NRC 8/21/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
10		0050102012	005K5.02	3.4	3.5	33 [2/3]	PZR

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

62. 5-14 001/ 11/ 4-56 4/ 0080402010/ 076A2.01/ 3.5/ 3.7/ 11-[2/3]/
Given the following plant conditions:

- The plant is at 86% power.
- The Nuclear Services Closed Cycle Cooling surge tank (SWT-1) level is 1.8 feet.
- Temperatures for components cooled by SW are rising.
- The Secondary Plant Operator (SPO) reports large amounts of sea grass at the intake.
- The Primary Plant Operator (PPO) reports a large SW leak on the SWP suction header.

Which of the following actions should be taken immediately?

A. Start a plant shutdown.

B. Start filling SWT-1.

C. Place the standby SW heat exchanger in service.

✓D. Trip the reactor.

Reasons:

A., B., and C. All these actions are good ideas and proceduralized in AP-330, but with SWT-1 at < 2.0 feet the reactor needs to be tripped.

D. Correct, AI-505 and AP-330 have the operator trip the reactor when SWT-1 is < 2.0 feet.

Provide AP-330; New question written for LOI-99-01 SRO and RO Audit exam (7-19-2000 js) BANK

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
11	4-56 4	0080402010	076A2.01	3.5	3.7	11-[2/3]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

63. 5-34 001/ 8/ / 1150402005/ EPP2.4.12/ 3.4/ 3.9/ 33 [1]/ E-PLAN
Given the following plant conditions:

100% power.
A tube rupture occurs that results in an ES actuation on low RCS pressure.
An ALERT is declared based on the Fission Product Barrier Matrix.

Which of the following identifies the notification requirements for the CR-3 NRC resident, plant personnel, and State Warning Point Tallahassee (SWPT)?

A. Notify the CR-3 NRC resident and plant personnel within 15 minutes; notify State Warning Point Tallahassee as soon as possible.

B. Notify the CR-3 NRC resident and plant personnel in less than one (1) hour; notify State Warning Point Tallahassee within 15 minutes.

✓C. Notify the CR-3 NRC resident and plant personnel as soon as possible; notify State Warning Point Tallahassee within 15 minutes.

D. Notify the CR-3 NRC resident and plant personnel within 15 minutes; notify State Warning Point Tallahassee in less than one (1) hour.

A. Personnel as soon as possible, SWPT w/i 15 minutes.
B. Personnel as soon as possible, SWPT w/i 15 minutes.
C. CORRECT: Personnel as soon as possible, SWPT w/i 15 minutes.
D. Personnel as soon as possible, SWPT w/i 15 minutes.

NEW 2002 NRC exam KEH 10/2/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
8		1150402005	EPP2.4.12	3.4	3.9	33 [1]	E-PLAN

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

64. 5-61 001/ 7/ 4-56/ 0080402012/ 026AA2.01/ 2.9/ 3.5/ 33-[2/3]/

The following plant conditions exist:

- The nuclear services surge tank level is slowly decreasing.
- SWV-277 (SW Surge Tank fill valve) is full open.
- The RO has estimated the SW leak rate to be in excess of 80 gpm.
- The reactor building and auxiliary building sump levels are not increasing.
- All nuclear services heat exchangers have been rotated into operation with no change in conditions.
- RCS makeup, letdown and MUT level are steady.
- There are no reactor building system leak annunciators in alarm.

Where is the location of the SW leak?

A. The reactor coolant drain tank.

✓B. The industrial cooling system.

C. The primary sample cooler.

D. The in-service reactor coolant pump seal return cooler.

Reasons:

A. No leak annunciators in alarm will rule this tank out. SW Tank level lowering with the fill valve open indicates a leak greater than the 50 gpm differential required to cause the leak annunciators to be in alarm. The ROs leak rate estimate confirms the leak rate is greater than 50 gpm.

B. This system is the only location for this leak for these conditions.

C. The SW would not leak out of this cooler; RCS will leak into the SW System.

D. MUT level would increase or the auxiliary building sump level would increase.

64. 5-61 001/ 7/ 4-56/ 0080402012/ 026AA2.01/ 2.9/ 3.5/ 33-[2/3]/
AP-330 Step 3.7; Stem modified (SWV-277 and RO leak estimate info added) to remove multiple correct answers otherwise this is an unmodified repeat question from LOI 99-01 program; NRCN
BANK

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
7	4-56	0080402012	026AA2.01	2.9	3.5	33-[2/3]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

65. 5-69 001/ 6/ / 1150402010/ EPP2.4.25/ 2.9/ 3.4/ 33 [1]/ FIRE
Given the following plant conditions:

A fire in the Intermediate Building
Step 3.3 of AP-880 States "Ensure fans in affected areas are secured."
The operator secures AHF-29 A/B and AHF-24 A/B

Which of the following is the reason for this action?

A. Prevent the spread of fire to radiological areas.

B. Prevent the spread of fire to the turbine building.

C. Ensure sprinkler system work effectively.

✓D. Ensure fire dampers operate properly.

A. These area are identified in AP-880 but it is not the reason for securing the fans.
B. The fans will not prevent the spread to the turbine building.
C. The sprinkler systems will not be affected by the fans.
D. CORRECT: NOTE in AP-880 states securing the fans is to ensure proper operation of fire dampers.

NEW 2002 NRC exam KEH 10/2/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
6		1150402010	EPP2.4.25	2.9	3.4	33 [1]	FIRE

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

66. 5-84 001/ 6/ / 1150402012/ 065AK3.08/ 3.7/ 3.9/ 33 [2/3]/ IA

Given the following plant conditions:

RCS is at 140°F.
"A" DHR loop is in service.
A total loss of Instrument Air occurs.

Which of the following will be the flow capabilities (position) of the DHR cooler valves?

DCV-17 (A DH COOLER BYPASS CONTROL)
DCV-177 (A DH COOLER OUTLET CONTROL)

A. DCV-17 full flow.
DCV-177 minimum flow.

B. DCV-17 full flow.
DCV-177 full flow.

C. DCV-17 minimum flow.
DCV-177 minimum flow.

✓D. DCV-17 minimum flow.
DCV-177 full flow.

A/B/C. The valve will fail to the ES position of no air for control, which is with the bypass closed and the outlet open for maximum cooling.
D. CORRECT: The bypass flow limited, and the outlet full flow for max cooling.
These valves have throttle positions, therefore they are NOT just closed or open.

NEW 2002 NRC KEH 8/9/01No references.

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
6		1150402012	065AK3.08	3.7	3.9	33 [2/3]	IA

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

67. 5-95 001/ 5/ / 0040502007/ 011EK2.02/ 2.6/ 2.7/ 33 [2/3]/ EOP-8
In EOP-8, when is HPI flow terminated if LPI flow is > 1400 gpm in any line per follow-up step 3.6 (large break path) ?

A. When ECCS suction is transferred to the RB sump.

B. When CFT isolation valves are closed.

C. When RB spray is secured.

✓D. When TSC provides direction.

A. This is based on adequate suction to ECCS pumps.
B. This isolation is to prevent excessive N2 in RCS.
C. This stops RB spray based on RB conditions.
D. CORRECT: Large break requires flow until direction from TSC step 3.114.

MIB : NRC exam 2002 KEH 9/25/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
5		0040502007	011EK2.02	2.6	2.7	33 [2/3]	EOP-8

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
D	A	B	C	D	A	B	C	D	A

☒ Scramble Choices

Scramble Range: A - D

68. 5-95 002/ 3/ / 1150502007/ E082.1.28/ 3.2/ 3.3/ 33-[1]/
A LOCA cooldown is being accomplished in accordance with the guidance of EOP-08, LOCA Cooldown.

- The leak rate is approximately 300 gpm
- Normal cooldown rates are being used.
- All 4 RCPs are running.

The crew reaches a step in EOP-8 which states "IF 4 RCPs are running, THEN stop RCP-1D". Which of the following statements describes the reason RCP-1D is specified in this step?

A. RCP-1D is specified to reduce RCS leakage if the leak is located on the Make-up and Purification system letdown line which taps off of "D" cold leg.

B. RCP-1D is specified because it produces the greatest flow of the 4 RCPs. Stopping this pump provides the maximum margin for core lift concerns.

✓C. RCP-1D is specified because it is in the opposite loop from RCP-1B, which provides pressurizer spray. Later guidance will reduce RCPs to a 2/0 combination.

D. RCP-1D is specified because it provides the greatest heat input to the RCS. Stopping this pump will provide maximum heat reduction while maintaining 3 pumps in operation.

Reasons:

A. Letdown does tap off of the D cold leg but this was not the reason for selecting RCP-1D to be shutdown.

B. The reason for reducing to 3 RCPs is core lift concerns but the selection of RCP-1D was not random. A pump in the loop opposite RCP-1B is selected to ensure maximum spray capability is maintained during RCP operation. Spray is required to avoid delays in RCS depressurization and cooldown.

C. Correct Answer. A pump in the loop opposite RCP-1B is selected to ensure maximum spray capability is maintained during RCP operation. Spray is required to avoid delays in RCS depressurization and cooldown.

D. The heat input from RCP-1D is not markedly different from the other RCPs. This was not the basis of choosing RCP-1D.

68. 5-95 002/ 3/ / 1150502007/ E082.1.28/ 3.2/ 3.3/ 33-[1]/
New question written for Sept. 2000 RO and SRO exam. (2-27-00 CMC)
REPEAT

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
3		1150502007	E082.1.28	3.2	3.3	33-[1]	

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

69. 5-96 001/ 6/ / 0120402006/ 029EK1.03/ 3.6/ 3.8/ 33 [2/3]/ EOP-2
Given the following plant conditions:

An ATWAS has occurred.
Performing EOP-2 Immediate Actions.
NI's DO NOT indicate the Reactor Shutdown.

EOP-2 contingency actions ensure which of the following:

A. Core cooling is maintained.

✓B. Addition of negative reactivity.

C. Main steam to the turbine is terminated.

D. Reactivity worth of the inserted rods is maximized.

A. This requires emergency boration, the core is cooled.
B. CORRECT: Emergency boration is directed and that ensure negative reactivity to shutdown the reactor and this is a hold step until it is accomplished.
C. Steam will not be secured until the reactor is shutdown.
D. The rods that have inserted are not going to be any more effective, more negative reactivity is necessary to shutdown the reactor.

NEW NRC 2002 KEH 9/25/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
6		0120402006	029EK1.03	3.6	3.8	33 [2/3]	EOP-2

ANSWERS: Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
B	C	D	A	B	C	D	A	B	C

☒ Scramble Choices

Scramble Range: A - D

70. GT-001 001/ 17/ GET-001/ N/A/ 067AK1.01/ 2.9/ 3.9/ 33 [1]/ FIRE
Which of the following areas contain material which would be limited to a Class "B" fire?

A. Document control storage vault.

B. "A" ES 4160V switch gear room.

✓C. 95' TB at lube oil purifier skid.

D. I&C calibration lab in maintenance facility.

A. Paper Class "A".
B. Electical equipment Class "C".
C. CORRECT: Oil Class "B"
D. No fire hazard for Class "B"

NEW NRC exam 2002 KEH 9/25/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
17	GET-001	N/A	067AK1.01	2.9	3.9	33 [1]	FIRE

ANSWERS:

Single

Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
C	D	A	B	C	D	A	B	C	D

☒ Scramble Choices

Scramble Range: A - D

NEW NRC exam 2002 KEH 10/5/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System

71. GT-001 002/ 53/ GET-001/ N/A/ 034A2.02/ 3.4/ 3.9/ 33 [1]/ FH
Given the following plant conditions:

Bringing new fuel storage cask into the spent fuel building.
While lifting the shipping cask off the truck, the rigging breaks, the cask drops onto the truck. The first cask knocks another cask off the truck and both cask are laying on the ground. Both cask are severely dented

Health Physics takes gamma radiation readings:
15 mrem/hr on contact with the dropped casks.
3 mrem/hr at 1 meter from each cask.
2 mrem/hr general background reading.

Which of the following would be the proper posting for this general area?

✓A. Radiation Controlled Area.

B. Radiation Area.

C. High Radiation Area.

D. Locked High Radiation Area.

A. CORRECT: General area for radiological protection for all workers, requires an RWP and dosimetry.
B. Dose rate is less than 5 mr/hr at 30 cm.
C. Dose rate is less than 100 mr/hr at 30 cm.
D. Dose rate is less than 1000 mr/hr at 30 cm.

NEW NRC exam 2002 KEH 10/5/01

KEY WORDS:

Objective	Lesson Pla	Task Numbe	K/A	RO Import.	SRO Import	Initial/Re	System
53	GET-001	N/A	034A2.02	3.4	3.9	33 [1]	FH

ANSWERS: Single Points 1

Version Answers:

0	1	2	3	4	5	6	7	8	9
A	B	C	D	A	B	C	D	A	B

☒ Scramble Choices
Scramble Range: A - D