

QUESTIONS REPORT
for RO-SRO Combined Questions Surry 2012

1. 001 K2.03 001/2/2/CNTRL ROD DRIVE/L/NEW/SR 2012-301/RO/JAT/PGC
Which ONE of the following states the normal and alternate control power supplies to the Unit 1 Rod Control logic cabinets?

- A. Normal – Directly from the output of the rod drive MG sets
Alternate – MCC 1C1-2 via a step-down transformer
- B✓ Normal – From the output of the rod drive MG sets via a step-down transformer
Alternate – MCC 1C1-2 via a step-down transformer
- C. Normal – MCC 1C1-2 via a step-down transformer
Alternate – Directly from the output of the rod drive MG sets
- D. Normal – MCC 1C1-2 via a step-down transformer
Alternate – From the output of the rod drive MG sets via a step-down transformer

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: B C D D A B D C D A	Scramble Range: A - D
Tier:	2		Group:	2
K/A Keywords:	CNTRL ROD DRIVE		Cog Level (H/L):	L
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	JAT/PGC

2. 003 A3.03 001/2/1/RCP/H/NEW/SR 2012-301/RO/DB/PGC
Which one of the following provides indications of #2 seal failure on 1B RCP (1-RC-P-1B)?

REFERENCE PROVIDED

- A. P1 (1-RC-PI-1402) = 1200 psig, P2 (1-CH-PI-1155) = 800 psig, Seal Leakage = 1.75 gpm
- B✓ P1 (1-RC-PI-1402) = 2200 psig, P2 (1-CH-PI-1155) = 1100 psig, Seal Leakage = 3.00 gpm
- C. P1 (1-RC-PI-1402) = 2200 psig, P2 (1-CH-PI-1155) = 1100 psig, Seal Leakage = 0.00 gpm
- D. P1 (1-RC-PI-1402) = 1200 psig, P2 (1-CH-PI-1155) = 1200 psig, Seal Leakage = 2.20 gpm

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: B B D A A B C C D C	Scramble Range: A - D
Tier:	2		Group:	1
K/A Keywords:	RCP		Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	DB/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

3. 003 AK3.07 001/1/2/DROPPED CTRL ROD/H/NEW/SR 2012-301/RO/DB/PGC

Unit 1 Current Conditions:

- One Control Rod has dropped (Rod Bottom Light lit).
- The Rod Control System is in Manual.
- Tave is 532 degrees F and decreasing.

Based on the Current Conditions, which one of the following correctly completes the statements listed below?

The earliest a Reactor trip will be required is if Tave decreases below (1) degrees F.

And

That Reactor trip will be required by (2).

- A. (1) 522
(2) the Technical Specification Minimum Temperature for Criticality
- B. (1) 530
(2) the Technical Specification Minimum Temperature for Criticality
- C✓ (1) 530
(2) 0-AP-1.00 (ROD CONTROL SYSTEM MALFUNCTION)
- D. (1) 522
(2) 0-AP-1.00 (ROD CONTROL SYSTEM MALFUNCTION)

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: C B C D B C C D A A	Scramble Range: A - D
Tier:	1		Group:	2
K/A Keywords:	DROPPED CTRL ROD		Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	DB/PGC

4. 003 K6.02 001/2/1/RCP/H/MODIFIED/SR 2012-301/RO/DRL/PGC

The seal leakoff valve is inadvertently isolated for 1-RC-P-1B (1-CH-HCV-1303B).

Which ONE of the following states the seal package response?

- A. The #1 seal assumes full RCS delta-P.
- B. The #2 seal assumes full RCS delta-P.
- C✓ The #3 seal assumes full RCS delta-P.
- D. The #2 and #3 seals share the RCS delta-P.

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

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for RO-SRO Combined Questions Surry 2012

Tier:	2	Group:	I
K/A Keywords:	RCP	Cog Level (H/L):	H
Source (New/Bnk/Mod):	MODIFIED	Exam:	SR 2012-301
Test (RO/SRO):	RO	Author/Reviewer:	DRL/PGC

5. 004 A2.01 001/2/1/CVCS/H/NEW/SR 2012-301/SRO/JAT/PGC

Initial Conditions

- 1-GOP-2.5, "Unit Cooldown 351°F to Less Than 205°F" is complete.
- All safety systems are aligned IAW 1-OSP-ZZ-004, "Unit 1 Safety Systems Status List for Cold Shutdown/Refueling Conditions".
- 1-CH-PCV-1145, LTDN LINE PRESS CNTRL is in AUTO and set to 300 psig.
- 1-RC-PI-1458, RCS PRESS NAR RANGE, indicates 305 psig.
- 1-RC-LI-1462, PRZR LEVEL START UP indicates 83%.
- Charging flow has been adjusted to increase PRZR level to SOLID IAW step 5.2.19.e.3 of 1-GOP-2.6.

Current Conditions

- The PRZR is solid.
- 1-RC-PCV-1456 and 1-RC-PCV-1455C, PRZR PORVs, have cycled.
- Annunciator 1D-B6, PRZR NDTT HI PRESS is alarming.

Which ONE of the following describes the required actions?

Per ARP 1D-B6, the most effective method to lower RCS pressure is by ____ (1) _____. In accordance with Technical Specification 6.6.C, "Special Reports", this event ____ (2) ____ required to be reported to the NRC.

- A. ✓ (1) lowering charging flow
(2) is
- B. (1) lowering charging flow
(2) is not
- C. (1) securing PRZR heaters while maintaining spray flow
(2) is
- D. (1) securing PRZR heaters while maintaining spray flow
(2) is not

MCS	Time:	1	Points:	1.00	Version:	0 1 2 3 4 5 6 7 8 9	
					Answer:	A C B D C C B B D D	Scramble Range: A - D
Tier:		2			Group:		I
K/A Keywords:		CVCS			Cog Level (H/L):		H
Source (New/Bnk/Mod):		NEW			Exam:		SR 2012-301
Test (RO/SRO):		SRO			Author/Reviewer:		JAT/PGC

QUESTIONS REPORT
for RO-SRO Combined Questions Surry 2012

6. 004 A2.13 001/2/1/CVCS/L/NEW/SR 2012-301/RO/

Unit 1 Initial Conditions at 0100:

- A Large Break LOCA has occurred from 100% power.
- 1-E-1 (LOSS OF REACTOR OR SECONDARY COOLANT) is in progress.

Unit 1 Current Conditions at 0500:

- Annunciator 1A-A7 (RWST LO LVL) is in alarm.

Which ONE of the following correctly completes the statements listed below?

High Head Safety Injection Pump suctions should automatically shift from the RWST to the discharge of the Low Head Safety Injection Pumps at an RWST level of ____ (1) ____.

And

Transfer to ____ (2) ____ leg recirculation is required at this time.

- A. (1) 20%
(2) cold
- B. (1) 20%
(2) hot
- C. (1) 13.5%
(2) hot
- D✓ (1) 13.5%
(2) cold

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: D D B A B A C C B A	Scramble Range: A - D
Tier:	2		Group:	1
K/A Keywords:	CVCS		Cog Level (H/L):	L
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

7. 004 G2.4.2 001/2/1/CVCS/H/NEW/SR 2012-301/RO/JAT/PGC

Initial Conditions:

- Unit 1 is at 90%.
- Charging Pump "A" is RUNNING in AUTO on its NORMAL bus.
- Charging Pump "B" is OFF in AUTO on its NORMAL bus.
- Charging Pump "C" is OFF in AUTO on its NORMAL bus.
- 1-CC-FT-140A, Flow Transmitter for 1CC-TV-140A (RCP Thermal Barrier CC Outlet Flow Outside Trip Valve) has failed high.
- Annunciator 1C-D2, "RCP Thermal Barrier Return Header HI Flow" is alarming.

Current Conditions:

- Charging Pump "B" is locked out.
- Bus H is deenergized.
- Bus J is energized.
- Unit 1 remains at 90% power.
- No operator actions have occurred.

Which ONE of the following describes the operational implications of the current conditions and the correct action to take?

RCP Seal cooling ____ (1) ____ been lost.

An IMMEDIATE Reactor Trip ____ (2) ____ required.

A. ✓ (1) has
(2) is

B. (1) has
(2) is NOT

C. (1) has NOT
(2) is

D. (1) has NOT
(2) is NOT

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

Answer: A D C A B B B C D

Scramble Range: A - D

Tier: 2

Group: 1

K/A Keywords: CVCS

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: JAT/PGC

QUESTIONS REPORT
for RO-SRO Combined Questions Surry 2012

8. 005 G2.2.42 001/2/1/RHR/L/NEW/SR 2012-301/RO/JAT/PGC

Current Conditions

- Unit 1 is in REFUELING OPERATIONS.
- RHR loop "A" is in service.
- RHR loop "B" is operable and has been out of service for 30 minutes for a reactor vessel surveillance inspection. RHR loop "B" is expected to be returned to service within 15 minutes.
- Cavity level is 24 feet above the top of the reactor pressure vessel flange. No core alterations are in progress.

Which ONE of the following states the EARLIEST time (if any) RHR loop "A" may be removed from service for a 15-minute Reactor vessel surveillance inspection according to Tech Spec LCO 3.10.A (REFUELING)?

- A. ☒ RHR loop "A" may be removed from service immediately.
- B. RHR loop "A" may be removed from service immediately after RHR loop "B" is placed in service.
- C. RHR loop "A" may be removed from service (for up to 1 hour) 8 hours after RHR loop "B" is placed in service.
- D. RHR loop "A" may NOT be removed from service.

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

Answer: A A B A A C C D B A

Scramble Range: A - D

Tier: 2

Group: 1

K/A Keywords: RHR

Cog Level (H/L): L

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: JAT/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

9. 005 K5.02 001/2/1/RHR/L/BANK/SR 2012-301/RO/JAT/PGC

The following Unit 1 conditions exist:

- A loss of decay heat removal has occurred and 1-AP-27.00, Loss of Decay Heat Removal Capability, has been entered.
- The RHR system has just been made available.
- Inadequate time to completely vent the RHR system exists prior to boiling in the core.

Which ONE of the following correctly states guidance in 1-AP-27.00 with respect to sweeping air from the RHR lines?

If adequate time to completely vent the RHR system is not available, air can be swept out of the RHR lines by filling the RCS to a MINIMUM of ____ (1) ____ feet on 1-RC-LI-100A, checking a minimum subcooling of 10F, and running an RHR pump at a flow rate of ____ (2) ____ gpm.

- | | (1) | (2) |
|----|------|-----------|
| A. | 12.1 | >2950 gpm |
| B. | 12.1 | <2600 gpm |
| C✓ | 13.5 | >2950 gpm |
| D. | 13.5 | <2600 gpm |

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

Answer: C D D D D A D C D D

Scramble Range: A - D

Tier: 2

Group: 1

K/A Keywords: RHR

Cog Level (H/L): L

Source (New/Bnk/Mod): BANK

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: JAT/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

10. 006 A2.05 001/2/1/ECC/H/NEW/SR 2012-301/SRO/AG/PGC

Initial Conditions

- Unit 2 is operating at 100% power.

Current Conditions:

- Rx Trip due to load rejection and subsequent loss of offsite power.
- In 1-E-0 in progress.
- AC Emergency Bus H has no power.
- SI has initiated.
- RCS temperature trending to 547 F.
- PRZR PORV 1-RC-PCV-1455B stuck open.
- PRZR PORV Block valve 1-RC-MOV-1536 will not close.
- 1-CH-P-1B Charging pump white lights lit, green light off.
- 1-CH-P-1B Charging pump indicating 5 amps on the control panel.
- RCS subcooling 17 F decreasing.

Based on the current conditions, which ONE of the following describes (1) the procedure that FIRST gives guidance for RCP operation and (2) what direction it gives?

- A. (1) 1-E-1
(2) Stop all RCPs
- B. (1) 1-E-0
(2) Stop all RCPs
- C✓ (1) 1-E-1
(2) Do NOT stop RCPs
- D. (1) 1-E-0
(2) Do NOT stop RCPs

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: C C C A D A A A C A	Scramble Range: A - D
Tier:	2		Group:	1
K/A Keywords:	ECC		Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	SRO		Author/Reviewer:	AG/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

11. 006 A4.10 001/2/1/ECC/H/NEW/SR 2012-301/RO/JAT/PGC

Unit 1 Conditions:

- A Medium-Break LOCA has occurred.
- The crew is performing the actions of 1-E-1, "Loss of Reactor or Secondary Coolant".
- All RCPs are running.
- 5 minutes ago, Charging Pump A was placed in PTL IAW Step 19.b of 1-E-1 ("ESTABLISH CHG PUMP REDUNDANT FLOW PATHS"). No valve manipulations have occurred.
- The following information was displayed on the SPDS at the times indicated:

Parameter	10 minutes ago	5 minutes ago	Current	
"CONTAINMENT CONDITIONS" PAGE				
"CONTAINMENT PRESSURE – IR"	19.6	19.5	19.4	PSIA
"RCS INTEGRITY" PAGE				
"HIGH HEAD SAFETY INJECTION FLOW" "LOOP A"	176.2	119.2	120.7	GPM
"HIGH HEAD SAFETY INJECTION FLOW" "LOOP B"	176.5	119.2	121.1	GPM
"HIGH HEAD SAFETY INJECTION FLOW" "LOOP C"	176.3	119.1	120.9	GPM
"RCS PRESSURE"	1900	1887	1875	PSIG
"PRESSURIZER LEVEL"	22.9	21.5	19.1	PCT
"CORE HEAT REMOVAL" PAGE				
"PEAK CORE EXIT TEMPERATURE"	595.5	595.7	594.9	DEGF

Which ONE of the following describes appropriate actions IAW 1-E-1?

REFERENCE PROVIDED

- A✓ SI is required to be reinitiated by starting A Charging Pump.
- B. SI is required to be reinitiated by placing A Charging Pump in AUTO and depressing the SI pushbuttons.
- C. SI is not required to be reinitiated. Establish charging pump redundant flow paths with B Charging Pump supplying the normal SI HDR and C Charging Pump supplying the alternate SI HDR.
- D. SI is not required to be reinitiated. Establish charging pump redundant flow paths with C Charging Pump supplying the normal SI HDR and B Charging Pump supplying the alternate SI HDR.

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

Answer: A A D B C B B D C D

Scramble Range: A - D

QUESTIONS REPORT for RO-SRO Combined Questions Surry 2012

Tier:	2	Group:	1
K/A Keywords:	ECC	Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW	Exam:	SR 2012-301
Test (RO/SRO):	RO	Author/Reviewer:	JAT/PGC

12. 007 A3.01 001/2/1/PRT/H/MODIFIED/SR 2012-301/RO/AG/PGC

Unit 1 is operating in Mode 1 at 100% power.

- Annunciator 1C-G7, PRZR RELIEF TK HI LVL actuates.
- Annunciator 1C-E7, PRZR RELIEF TK HI TEMP actuates.
- No other Annunciators have actuated
- A review of parameters shows the following:

Time	1300	1400
PRT Level	73%	84%
PRT Temperature	108 F	126 F
PRT Pressure	3 psig	4 psig

Which ONE of the following is the source of leakage into the PRT?

A. ☒ Regenerative Heat Exchanger Relief Valve, 1CH-RV-1203

B. RCP Seal Water Return Line Relief Valve, 1CH-RV-1382A

C. RHR Heat Exchanger Relief, 1-RH-RV-1721

D. SI Accumulator Relief Valve, 1-SI-RV-1859

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: A B C A D A C A C C	Scramble Range: A - D
Tier:	2		Group:	1
K/A Keywords:	PRT		Cog Level (H/L):	H
Source (New/Bnk/Mod):	MODIFIED		Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	AG/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

13. 007 EK2.02 001/1/1/REACTOR TRIP/L/BANK/RO/SR 2012-301/JAT/PGC

Initial conditions:

- Unit 1 is at 90% power.
- Reactor protection testing is in progress on Train A.
- Reactor Trip Breaker "B" is closed.
- Reactor Trip Breaker "A" is open.
- Reactor Trip Bypass Breaker "A" is racked in and closed.

Current Conditions:

- Reactor Trip Bypass Breaker "B" is racked in and closed.
- No other breaker manipulations have been performed.

Which ONE of the following describes what will happen to the reactor trip breaker "B" and the reactor trip bypass breakers when Reactor Trip Bypass Breaker "B" is racked in?

- A. Reactor Trip Bypass Breakers "A" and "B" will trip open.
Reactor Trip Breaker "B" will trip open.
- B✓ Reactor Trip Bypass Breakers "A" and "B" will trip open.
Reactor Trip Breaker "B" will remain closed.
- C. Reactor Trip Bypass Breaker "B" will trip open. Reactor Trip Bypass Breaker "A" will remain closed.
Reactor Trip Breaker "B" will remain closed.
- D. Reactor Trip Bypass Breakers "A" and "B" will remain closed.
Reactor Trip Breaker "B" will remain closed.

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

Answer: B D D D A C C C D B

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: REACTOR TRIP

Cog Level (H/L): L

Source (New/Bnk/Mod): BANK

Exam: RO

Test (RO/SRO): SR 2012-301

Author/Reviewer: JAT/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

14. 007 K4.01 001/2/1/PRT/L/NEW/SR 2012-301/RO/JAT/PGC

Current Conditions

- Unit 1 is at 100% power when annunciator C-E-7, "PRZR RELIEF TK HI TEMP", is received.
- The OATC confirms the alarm is valid, and notes that PRT level, pressure, and temperature have been slowly increasing since assuming the watch.
- The OATC is directed to lower tank temperature IAW 1-OP-RC-011.

Which ONE of the following describes how temperature will be lowered IAW 1-OP-RC-011, "Pressurizer Relief Tank Operations"?

The PRT is filled by opening 1-RC-TV-1519A and 1-RC-TV-1519B to discharge Primary Grade Water ____ (1) ____ the water level in the PRT, and the PRT is subsequently drained to maintain the PRT in the normal level band of ____ (2) ____.

- A. ✓ (1) above
(2) 60 – 80 %
- B. (1) above
(2) 59 – 83 %
- C. (1) below
(2) 60 – 80 %
- D. (1) below
(2) 59 – 83 %

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: A B C C B D C B B C	Scramble Range: A - D
Tier:	2		Group:	1
K/A Keywords:	PRT		Cog Level (H/L):	L
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	JAT/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

15. 008 A2.04 001/2/1/CCW/H/BANK/SR 2012-301/RO/AG/PGC

Unit 1 plant conditions:

- Reactor power = 100%
- Charging flow = 100 gpm increasing
- 1-CC-RI-105 (CC Heat Exchanger A/B Outlet Radiation Monitor) alarms HIGH
- CC surge tank level = 64% increasing
- 1-AP-16.00 (EXCESSIVE RCS LEAKAGE) is initiated

Based on the above conditions, which ONE of the following describes where the excess volume in the CC system will go and (2) what actions is directed first by 1-AP-16.00 to attempt to isolate the leak?

- A. (1) The process vent system
(2) Isolate letdown
- B. (1) The process vent system
(2) Isolate thermal barrier on suspected RCP
- C✓ (1) The auxiliary building sump
(2) Isolate letdown
- D. (1) The auxiliary building sump
(2) Isolate thermal barrier on suspected RCP

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

Answer: C C B A A A A C B D

Scramble Range: A - D

Tier: 2

Group: 1

K/A Keywords: CCW

Cog Level (H/L): H

Source (New/Bnk/Mod): BANK

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: AG/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

16. 008 AK1.01 001/1/1/PRZR VAPR SPC ACC/H/MODIFIED/SR 2012-301/RO/JAT/PGC

Initial Conditions

- Unit 1 is at 100% and 2250 psig.
- The PRT is at 3 psig.

Current Conditions

- Annunciator 1D-H4, "PRZR SFTY VV / PWR RELIEF VV OPEN" is alarming.
- The PRT is 10 psig and increasing.
- Reactor Pressure is 2210 psig and decreasing.
- There is a report that the local acoustic monitor indicates a valve partially open.

Which ONE of the following describes the appropriate actions IAW ARP 1D-H4?

The leaking valve is confirmed by the associated downstream temperature reading approximately ____ (1) ____, and the crew is required to ____ (2) ____.

- A. (1) the saturation pressure of the Pressurizer
(2) initiate 1-E-0, "Reactor Trip or Safety Injection"
- B. (1) the saturation pressure of the Pressurizer
(2) close the associated PORV block valve
- C✓ (1) the saturation pressure of the PRT
(2) initiate 1-E-0, "Reactor Trip or Safety Injection"
- D. (1) the saturation pressure of the PRT
(2) close the associated PORV block valve

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

Answer: C A C A C C B B A D

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: PRZR VAPR SPC ACC

Cog Level (H/L): H

Source (New/Bnk/Mod): MODIFIED

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: JAT/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

17. 009 G2.1.19 001/1/1/SB LOCA/H/MODIFIED/SR 2012-301/SRO/JAT/PGC

Unit 1 Current Conditions:

- A small break LOCA has occurred.
- Conditions for RC Loop C are given in the reference provided. RC Loops A and B have similar conditions.
- RCPs are NOT running and will not be restarted.
- 1-ES-1.2, Post-LOCA Cooldown and Depressurization, Step 22, "CHECK NATURAL CIRCULATION" is being performed.
- Wide Range T-Hot and T-Cold indications are slowly decreasing.
- CETCs are stable.
- SG Narrow Range Levels are slowly decreasing.
- SG Pressures are stable.
- "Containment Pressure – IR" as read on the "Containment Conditions" page of SPDS is 16.1 psia.
- Containment Radiation Levels are: 5.0×10^5 R/hr.
- Loss of Subcooling Monitors are NOT available.
- PRZR level is above the minimum recommended by the STA.

Based on the current conditions, which ONE of the following describes the status of Natural Circulation and when RCS Depressurization per step 23 of 1-ES-1.2 (DEPRESSURIZE RCS TO MINIMIZE RCS SUBCOOLING) may commence?

Natural circulation criteria ____ (1) ____ met. RCS Depressurization per step 23 of 1-ES-1.2 may commence ____ (2) ____.

REFERENCE PROVIDED

- A. (1) are
(2) IMMEDIATELY
- B. (1) are
(2) when subcooling is a MINIMUM of 40F
- C. (1) are NOT
(2) when subcooling is a MINIMUM of 85F
- D✓ (1) are NOT
(2) when subcooling is a MINIMUM of 95F

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

Answer: D B D C A A D C D D

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: SB LOCA

Cog Level (H/L): H

Source (New/Bnk/Mod): MODIFIED

Exam: SR 2012-301

Test (RO/SRO): SRO

Author/Reviewer: JAT/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

18. 010 A1.04 001/2/1/PRZR PRESS CONTROL/L/MODIFIED/SR 2012-301/RO/AG/PGC

Unit 1 plant conditions:

- Cold Shutdown, RCS heat up to 190-195 F is in progress.
- PRZR is solid.
- RCP A is running.

If in manual control, which ONE of the following valves would require adjustment to control RCS pressure?

A✓ LTDN LINE PRESS CNTRL PCV (1-CH-PCV-1145)

B. RHR HXS FLOW (1-RH-HCV-1758)

C. PRZR SPRAY FROM LOOP A (1-RC-PCV-455A)

D. CHG FLOW CNTRL (1-CH-FCV-1122)

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

Answer: A C C A B D B A B B

Scramble Range: A - D

Tier: 2

Group: 1

K/A Keywords: PRZR PRESS CONTROL

Cog Level (H/L): L

Source (New/Bnk/Mod): MODIFIED

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: AG/PGC

19. 010 K2.02 001/2/1/PRZR PRESS CONTROL/L/BANK/SR 2012-301/RO/AG/PGC

Unit 1 plant conditions:

- 1C-B1, RCP 1B CC RETURN LO FLOW alarm annunciator lit
- Pressurizer Pressure Master Controller is in AUTO-HOLD
- Pressurizer Level Controller is in AUTO-HOLD
- Both Pressurizer Spray Valve Controllers are in AUTO-LOW

Based on the above conditions, which ONE of the following identifies the Vital Bus that has been lost?

A. Vital Bus I

B✓ Vital Bus II

C. Vital Bus III

D. Vital Bus IV

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

Answer: B C C C D B C B D C

Scramble Range: A - D

Tier: 2

Group: 1

K/A Keywords: PRZR PRESS CONTROL

Cog Level (H/L): L

Source (New/Bnk/Mod): BANK

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: AG/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

20. 011 EA1.09 001/1/1/LB LOCA/H/NEW/SR 2012-301/RO/JAT/PGC

The following conditions exist:

- Unit 1 has tripped from 100% power due to a Large Break Loss of Coolant Accident (LBLOCA).
- The operating crew has transitioned to 1-E-1, "LOSS OF REACTOR OR SECONDARY COOLANT", step 22, "Check if SI accumulators should be isolated".
- RCS hot leg temperatures are:
 - Loop 1 Th = 394 F.
 - Loop 2 Th = 393 F.
 - Loop 3 Th = 396 F.
- Power is available to all Accumulator discharge isolation valves.
- Both trains of SI have been reset.

Which ONE of the following completes the statement:

1-E-1 directs isolation of ____ (1) ____, and the MOVs for the accumulators to be isolated can be closed with the ACC Interlock in ____ (2) ____.

- A. (1) Loop 1, Loop 2 and Loop 3 Accumulators
(2) NORMAL
- B. (1) Loop 1 and Loop 2 Accumulators, but not Loop 3 Accumulator
(2) NORMAL
- C✓ (1) Loop 1, Loop 2 and Loop 3 Accumulators
(2) DEFEAT
- D. (1) Loop 1 and Loop 2 Accumulators, but not Loop 3 Accumulator
(2) DEFEAT

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

Answer: C A D D C B D A C C

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: LB LOCA

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: JAT/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

21. 011 K3.01 001/2/2/PRZR LVL CONTROL/H/MODIFIED/SR 2012-301/RO/JAT/PGC

Initial conditions:

- Unit 1 is at 100% power.
- All systems are in automatic.

Current conditions:

- The lower control channel for Pressurizer Level Control has failed off-scale low.

Which ONE of the following describes the immediate effect of this malfunction on the CVCS?

- A. LCV-1460A closes. There is no change in charging flow.
- B✓ LCV-1460B closes. There is no change in charging flow.
- C. LCV-1460A closes. 1-CH-FCV-1122 throttles open to establish approximately 115 gpm charging flow.
- D. LCV-1460B closes. 1-CH-FCV-1122 throttles open to establish approximately 115 gpm charging flow.

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: B B B B C B A B B C	Scramble Range: A - D
Tier:	2		Group:	2
K/A Keywords:	PRZR LVL CONTROL		Cog Level (H/L):	H
Source (New/Bnk/Mod):	MODIFIED		Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	JAT/PGC

22. 012 G2.2.38 001/2/1/REACTOR PROTECT/H/NEW/SR 2012-301/SRO/DRL/PGC

A reactor startup is in progress. Power is currently at 9% and holding for turbine issues. An Intermediate Range Instrument fails high.

Which ONE of the following is acceptable by Technical Specification 3.7 (Instrumentation Systems)?

- A. Reduce power to below P-6 within 48 hours.
- B✓ Raise power to greater than 11% within 24 hours.
- C. Power operation may continue without restriction.
- D. Current power can be maintained indefinitely. Return the instrument to OPERABLE status prior to raising power.

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: B B C D A C C D B D	Scramble Range: A - D
Tier:	2		Group:	1
K/A Keywords:	REACTOR PROTECT		Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	SRO		Author/Reviewer:	DRL/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

23. 012 K6.03 001/2/1/REACTOR PROTECT/F/NEW/SR 2012-301/RO/AG/PGC

Unit 1 Initial Conditions:

- Time = 1400.
- Power = 100%.
- No equipment out of service.
- Steam Generator "A" (S/G "A") Level channel 1-FW-LT-474 (S/G "A" Level Transmitter CH 1) unexpectedly fails low.

Current conditions:

- Time = 1430 (same day). All required bistables for 1-FW-LT-474 failure have been placed in the TRIP condition.

Based on the current conditions, which ONE of the following identifies the Reactor Protection System actuation logic coincidence required from the remaining in-service "Low Low S/G" protection channels and "Steam Flow – Feed Flow Mismatch Coincidence With Low S/G Level" protection channels for S/G "A" only, to initiate an automatic Reactor Trip at time 1431?

- | | Low Low S/G | Feed Flow – Steam Flow Mismatch With Low S/G Level |
|----|-------------|--|
| A. | 1/1 | 1/2 level with 1/2 flow mismatch |
| B. | 1/2 | 1/2 level with 1/2 flow mismatch |
| C. | 1/1 | 1/2 flow mismatch only |
| D✓ | 1/2 | 1/2 flow mismatch only |

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

Answer: D B D D A D D C B B

Scramble Range: A - D

Tier: 2

Group: 1

K/A Keywords: REACTOR PROTECT

Cog Level (H/L): F

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: AG/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

24. 013 K1.12 001/2/1/ESFAS/H/MODIFIED/SR 2012-301/RO/DRL/PGC

Initial Conditions:

- Unit 2=100% power.
- #2 EDG is out of service.
- Safety Injection actuated on Unit 1 five (5) minutes ago.
- Unit 1 emergency buses remain powered from off-site sources.

Current conditions:

- All power is lost to the Unit 2 'H' AND 'J' buses.

Based on the current conditions, which ONE of the following is correct concerning the #3 EDG, in accordance with 1-ECA-0.0?

#3 EDG will automatically start and _____ .

- A. will automatically energize the Unit 2 'J' bus.
- B. operator action is required to manually close the #3 EDG output breaker for the Unit 2 'J' bus. No operator actions are required for the #3 EDG bypass switch on Unit 1.
- C. will automatically parallel on to the Unit 1 'J' bus. Operator actions are required to realign the #3 EDG to the Unit 2 'J' bus.
- D✓ operator action is required to place the #3 EDG bypass switch on Unit 1 in "Bypass" and then manually close the #3 EDG output breaker for the Unit 2 'J' bus.

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: D A B B B B C C D C	Scramble Range: A - D
Tier:	2		Group:	1
K/A Keywords:	ESFAS		Cog Level (H/L):	H
Source (New/Bnk/Mod):	MODIFIED		Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	DRL/PGC

25. 013 K5.02 001/2/1/ESFAS/H/BANK/SR 2012-301/RO/DRL/PGC

Given the following plant conditions:

- A complete loss of vital bus 1-III occurred with the unit at 100% power.
- Repairs will require at least one hour before the bus can be re-energized.
- CC flow to the "A" RCP could not be restored and the team tripped the unit.
- Five minutes after the trip, RCS average temperature decreased to 538°F in the idle RCS loop.

Based on the given conditions, which ONE of the following **automatic** actuations will occur (if any)?

	<u>High Steam Flow Safety Injection</u>	<u>Steam Line Isolation</u>
A.	NOT Actuated	Actuated
B✓	Actuated	Actuated
C.	Actuated	NOT Actuated
D.	NOT Actuated	NOT Actuated

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

QUESTIONS REPORT
for RO-SRO Combined Questions Surry 2012

Tier:	2	Group:	1
K/A Keywords:	ESFAS	Cog Level (H/L):	H
Source (New/Bnk/Mod):	BANK	Exam:	SR 2012-301
Test (RO/SRO):	RO	Author/Reviewer:	DRL/PGC

26. 015 A2.04 001/2/2/NUCLEAR INSTRUMENT/H/MODIFIED/SR 2012-301/SRO/DRL/PGC

Current Conditions

- Unit 2 is stable at the POAH with physics testing in progress.
- PR Channel N-44 is still in trip because the reactivity recorder is installed.
- The National Hurricane Center just issued a Hurricane Warning for Surry County.
- Both units have just been directed to shut down due to hurricane force winds expected onsite within the next 24 hours.
- A fault occurs in the 2B1 UPS that causes the loss of Vital Bus II and IIA.
- The reactor is tripped as required by 2-AP-10.02, Loss of Vital Bus II.

Which ONE of the following describes:

(1) How many SR indications are available on Unit 2 after tripping the unit?

AND

(2) What RCS temperature should be maintained?

A. (1) 0

(2) 200°F to 345°F per 0-AP-37.01, Abnormal Environmental Conditions.

B. (1) 1

(2) 200°F to 345°F per 0-AP-37.01, Abnormal Environmental Conditions

C. (1) 0

(2) > 530°F per 1-AP-4.0, Nuclear Instrumentation Malfunction.

D. (1) 1

(2) > 530°F per 1-AP-4.0, Nuclear Instrumentation Malfunction.

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

Answer: A C B A D A B A A A

Scramble Range: A - D

Tier:	2	Group:	2
K/A Keywords:	NUCLEAR INSTRUMENT	Cog Level (H/L):	H
Source (New/Bnk/Mod):	MODIFIED	Exam:	SR 2012-301
Test (RO/SRO):	SRO	Author/Reviewer:	DRL/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

27. 015 AA2.08 001/1/1/RCP MALFUNCTIONS///SR 2012-301/SRO/AG/PGC

0800: Unit 1 is at 100% steady-state power. PCS is out of service.

0810: The following annunciator is received:

- 1C-F2 RCP BRG HI TEMP

0812: The plant operator reports RCP 1C Upper Radial Bearing Temperature is 199 degrees F and 1C RCP Lower Radial Bearing Temperature is 192 degrees F.

Based on the above conditions, at 0812 which ONE of the following (1) are the actions required by procedure, AND (2) is the Technical Specification basis for prohibiting power operation with less than 3 RCP in service?

- A✓ (1) The Reactor must be shutdown and 1C RCP stopped.
(2) The design limit for departure from nucleate boiling ratio (DNBR).
- B. (1) Continued operation is allowed, increase monitoring of 1C RCP.
(2) The design limit for fuel peak centerline temperature (PCT).
- C. (1) Continued operation is allowed, increase monitoring of 1C RCP.
(2) The design limit for departure from nucleate boiling ratio (DNBR).
- D. (1) The Reactor must be shutdown and 1C RCP stopped.
(2) The design limit for fuel peak centerline temperature (PCT).

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

Answer: A B B C B B D B C B

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: RCP MALFUNCTIONS

Cog Level (H/L):

Source (New/Bnk/Mod):

Exam: SR 2012-301

Test (RO/SRO): SRO

Author/Reviewer: AG/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

28. 017 K6.01 001/2/2/INCORE TEMP MON/H/NEW/SR 2012-301/RO/AG/PGC

A LOCA has occurred on Unit 1.

The operators are performing actions of E-1, "Loss of Reactor or Secondary Coolant."

The following plant conditions exist:

- Core Exit Thermocouples (CET) are all reading between 750 and 950 °F, except for three that are greater than 1200 °F.
- No RCPs are running.
- RVLMS is reading 55% level in the plenum.

The STA declares a RED PATH on the CORE COOLING and states that FR-C.1, "Response to Inadequate Core Cooling," must be implemented.

Based on the above conditions, which ONE of the following describes your response to the STA's declaration and why?

- A. Agree with the STA; three CETs indicating above 1200 °F warrants the RED PATH.
- B✓ Disagree with the STA; at least five CETs must indicate greater than 1200 °F to warrant a RED PATH.
- C. Agree with the STA; with no RCPs running and CETs indicating greater than 700 °F warrants the RED PATH.
- D. Disagree with the STA; RVLMS level indicates that sufficient subcooling exists for the core conditions.

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

Answer: B C C B D C D D C A

Scramble Range: A - D

Tier: 2

Group: 2

K/A Keywords: INCORE TEMP MON

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: AG/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

29. 022 AA2.02 001/1/1/LOSS RCS MAKEUP/H/MODIFIED/SR 2012-301/RO/JAT/PGC

Initial conditions:

- Unit 1 is at 100% power.
- Pressurizer (PRZR) is at program level.
- Charging Pump "A" is running.
- Charging Pumps "B" and "C" normal breakers are racked in, and their switches in the Control Room are in AUTO.

Current conditions:

- Charging flow and discharge pressure is erratic.
- Charging pump amps are erratic on all running pumps.
- Seal injection is oscillating between 4 and 5 gpm.
- PRZR level is at 19% and lowering. Charging flow has not been restored.
- 1-AP-8.00, "Loss of Normal Charging Flow" has been entered.

Which ONE of the following describes the appropriate actions to take IAW 1-AP-8.00?

- A. Trip Unit 1 ONLY. THEN isolate letdown and place all charging pumps in PTL.
- B. Trip BOTH Units. THEN isolate letdown and place all charging pumps in PTL.
- C. Isolate letdown and place all charging pumps in PTL. THEN Trip Unit 1 ONLY.
- D✓ Isolate letdown and place all charging pumps in PTL. THEN Trip BOTH Units.

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

Answer: D C D A C C D B A A

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: LOSS RCS MAKEUP

Cog Level (H/L): H

Source (New/Bnk/Mod): MODIFIED

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: JAT/PGC

30. 022 K4.05 001/2/1/CTMT COOLING/H/NEW/SR 2012-301/RO/DRL/PGC

Unit 2 was operating at 100% power when a LOCA occurred. Containment pressure has risen to 8.4 psig.

Which ONE of the following accurately describes the current containment cooling configuration?

- A. A, B, and C recirculation fans are all providing cooling.
- B. A and B recirculation fans are providing cooling. C recirculation fan is NOT providing cooling.
- C✓ C recirculation fan is providing cooling. A and B recirculation fans are NOT providing cooling.
- D. A, B, and C recirculation fans are NOT providing cooling.

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: C B A C D A D C B C Scramble Range: A - D
Tier: 2 Group: 1
K/A Keywords: CTMT COOLING Cog Level (H/L): H
Source (New/Bnk/Mod): NEW Exam: SR 2012-301
Test (RO/SRO): RO Author/Reviewer: DRL/PGC

31. 024 AK2.03 001/1/2/EMERG BORATION/L/NEW/SR 2012-301/RO/DB/PGC

Which ONE of the following correctly completes the statements listed below?

When performing an emergency boration per 1-AP-3.00 (EMERGENCY BORATION), the in-service BATP ____ (1) ____ automatically be shifted to FAST.

If CH-MOV-1350 (emergency borate valve) is initially closed and the control switch is positioned to OPEN and then is immediately placed to CLOSE and released prior to the valve fully opening, the final position of the emergency borate valve will be ____ (2) ____.

A✓ (1) will NOT
(2) Open

B. (1) will NOT
(2) Open

C. (1) will
(2) Closed

D. (1) will
(2) Closed

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: A A D C B B B C C C Scramble Range: A - D
Tier: 1 Group: 2
K/A Keywords: EMERG BORATION Cog Level (H/L): L
Source (New/Bnk/Mod): NEW Exam: SR 2012-301
Test (RO/SRO): RO Author/Reviewer: DB/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

32. 025 G2.4.31 001/1/1/LOSS OF RHR SYSTEM/H/NEW/SR 2012-301/RO/AG/PGC

Unit 1 Plant Conditions:

- Shutdown with the RHR System aligned for normal operation.
- RCS level is at "mid-loop" 12.4 feet and stable as read on 1-RC-LI-100A.
- The "A" RHR pump is running.
- RHR System flow is oscillating from 1500 to 3000 gpm.
- "A" RHR pump amps are oscillating.
- RHR HX LO FLOW annunciator, 1B-G6 alarming.

Based on the above conditions, which ONE of the following identifies the first correct action to mitigate the event as directed by 1-AP-27.00 (LOSS OF DECAY HEAT REMOVAL CAPABILITY)?

- A. Raise RCS level.
- B✓ Reduce RHR flow.
- C. Stop the "A" RHR pump.
- D. Start the "B" RHR pump.

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

Answer: B D A A A B A A D C

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: LOSS OF RHR SYSTEM

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: AG/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

33. 026 AA2.01 001/1/1/LOSS OF CCW/H/MODIFIED/SR 2012-301/RO/AG/PGC

Unit 1 Initial Conditions:

- 75% Power at Middle-of-Life (MOL) conditions.
- Excess Letdown is in service in preparation for removing Normal Letdown from service.

Current conditions:

- Component Cooling (CC) surge tank level is slowly DECREASING at 1% every 5 minutes.
- VCT level is slowly increasing.
- No operator actions have been taken.

Which ONE of the following completes the statement below?

The above conditions are consistent with a tube leak in the ____ (1) ____, which will cause reactor power to ____ (2) ____.

- A. ✓ (1) RCP Seal Return Heat Exchanger
(2) increase
- B. (1) RCP Seal Return Heat Exchanger
(2) decrease
- C. (1) Excess Letdown Heat Exchanger
(2) increase
- D. (1) Excess Letdown Heat Exchanger
(2) decrease

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

Answer: A B C C D A B B A B

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: LOSS OF CCW

Cog Level (H/L): H

Source (New/Bnk/Mod): MODIFIED

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: AG/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

34. 026 K3.02 001/2/1/CTMT SPRAY/H/NEW/SR 2012-301/RO/DRL/PGC

A large break LOCA has occurred on Unit 1. Containment pressure has reached the HI-HI CLS setpoint. The 1A Containment Spray Pump failed to start and cannot be started manually. RWST level is 40% and lowering.

Which ONE of the following describes the direction provided by 1-FR-Z.1, "Response to Containment High Pressure"?

- A. Monitor the 2A Outside Recirc Pump for cavitation. Throttle pump discharge valve if cavitation observed.
- B✓ Monitor the 2A Outside Recirc Pump for cavitation. Place in PTL if cavitation observed.
- C. Monitor the 1A Inside Recirc Pump for cavitation. Throttle pump discharge valve if cavitation observed.
- D. Monitor the 1A Inside Recirc Pump for cavitation. Place in PTL if cavitation observed.

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: B B C C A B B B A A	Scramble Range: A - D
Tier:	2		Group:	1
K/A Keywords:	CTMT SPRAY		Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	DRL/PGC

35. 027 AK2.03 001/1/1/PRZR PCS MALF///SR 2012-301/RO/AG/PGC

Unit 1 plant conditions:

- Rx startup is in progress
- RCS pressure is 1900 psig

Which ONE of the following is the response of the pressurizer PORVs if pressurizer pressure transmitter PT-1444 fails high?

- A. Only PORV-1455C will open.
- B. Only PORV-1456 will open.
- C. Both PORV-1455C and PORV-1456 will open.
- D✓ Neither PORV-1455C nor PORV- 1456 will open.

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: D C C D B C A C C A	Scramble Range: A - D
Tier:	1		Group:	1
K/A Keywords:	PRZR PCS MALF		Cog Level (H/L):	
Source (New/Bnk/Mod):			Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	AG/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

36. 027 G2.1.23 001/1/1/PRZR PCS MALF/H/NEW/SR 2012-301/SRO/DRL/PGC

A plant shutdown is in progress. RCS temperature is 358 F and slowly being lowered per GOP-2.4, Unit Cooldown, HSD to 351 F. Both PORVs have failed their setpoint adjustment post maintenance tests and have been declared inoperable. I&C states that it will take 8 hours to repair the instruments and restore the valves to operable.

The cooldown can continue if pressurizer level is maintained less than ____ (1) _____. This Technical Specification basis for this allowance is that the pressurizer ____ (2) _____.

- A. (1) 33%
(2) steam bubble will mitigate any pressure transients for at least 5 minutes to allow for operator action
- B✓ (1) 33%
(2) level allows approximately 10 minutes for operator action to mitigate any pressure transient events
- C. (1) 50%
(2) level allows approximately 10 minutes for operator action to mitigate any pressure transient events
- D. (1) 50%
(2) steam bubble will mitigate any pressure transients for at least 5 minutes to allow for operator action

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: B D D A B A B A B B	Scramble Range: A - D
Tier:	1		Group:	1
K/A Keywords:	PRZR PCS MALF		Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	SRO		Author/Reviewer:	DRL/PGC

37. 027 K1.01 001/2/2/CTMT IODINE RMVL/L/NEW/SR 2012-301/RO/AG/PGC

Which ONE of the following describes (1) how NaOH solution is added to the Reactor Building during a design based accident, and (2) why?

- A. (1) Gravity-fed to the suction of the Outside Recirculation Spray pumps.
(2) To aid in the prevention of hydrogen formation.
- B. (1) Gravity-fed to the suction of the Outside Recirculation Spray pumps.
(2) To aid in the removal of radioactive iodine.
- C. (1) Pumped to the suction of the Containment Spray pumps.
(2) To aid in the prevention of hydrogen formation.
- D✓ (1) Pumped to the suction of the Containment Spray pumps.
(2) To aid in the removal of radioactive iodine.

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

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

Tier:	2	Group:	2
K/A Keywords:	CTMT IODINE RMVL	Cog Level (H/L):	L
Source (New/Bnk/Mod):	NEW	Exam:	SR 2012-301
Test (RO/SRO):	RO	Author/Reviewer:	AG/PGC

38. 028 AK2.02 001/1/2/PRZR LVL MALF/H/BANK/SR 2012-301/RO/JAT/PGC

Initial conditions:

- Unit 1 is at 100% steady state power
- All systems are in Automatic
- The Pressurizer Level Control Selector Switch is in position I/III.

Current conditions:

- The bellows inside the differential pressure cell for pressurizer level transmitter 1-RC-LT-1461 completely ruptures.
- No operator action occurs.

Which ONE of the following describes the immediate initial response of the pressurizer level control system?

- A. Charging flow decreases.
Annunciator 1C-C8, "PRZR HI LVL HTRS ON" alarms.
- B. Charging flow increases.
Annunciators 1C-E8, "PRZR LO LVL HTRS OFF & LETDOWN ISOL" and 1C-D8, "PRZR LO LVL" alarm.
- C. Charging flow remains constant.
Annunciator 1C-E8, "PRZR LO LVL HTRS OFF & LETDOWN ISOL" alarms.
- D✓ Charging flow remains constant.
No annunciators alarm.

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: D B C D A A D D C C	Scramble Range: A - D
Tier:	1		Group:	2
K/A Keywords:	PRZR LVL MALF		Cog Level (H/L):	H
Source (New/Bnk/Mod):	BANK		Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	JAT/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

39. 028 G2.1.28 001/2/2/H RECOMB & PURGE CTL/H/NEW/SR 2012-301/RO/DRL/PGC
Which ONE of the following describes

(1) How hydrogen concentration is reduced

AND

(2) The design basis of the Hydrogen Recombiner

- A. (1) Flow is directed over a catalytic plate that recombines hydrogen and oxygen
(2) Prevent hydrogen concentration from exceeding explosive limits (6%) following a LOCA.
- B. (1) Hydrogen is directed over electronic device that dissipates hydrogen via small combustions
(2) Prevent hydrogen concentration from exceeding explosive limits (6%) following a LOCA
- C✓ (1) Flow is directed over a catalytic plate that recombines hydrogen and oxygen
(2) Reduce hydrogen concentration from 4 percent to 0.5 percent at a flow rate of 50 SCFM
- D. (1) Hydrogen is directed over electronic device that dissipates hydrogen via small combustions
(2) Reduce hydrogen concentration from 4 percent to 0.5 percent at a flow rate of 50 SCFM

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

Answer: C A B C B B A D B B

Scramble Range: A - D

Tier: 2

Group: 2

K/A Keywords: H RECOMB & PURGE CTL Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DRL/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

40. 029 EA1.03 001/1/1/ATWS/H/NEW/SR 2012-301/RO/AG/PGC

Unit 1 has experienced an Anticipated Transient Without Trip (ATWT).

- Operators have transitioned out of 1-E-0 to 1-FR-S.1
- SI has NOT been initiated.
- Charging Flow is 80 gpm.
- The BATP has been placed in FAST
- 1CH-MOV-1350 (Emergency Borate Valve) will not open from the Control Room.

Based on the above conditions, which ONE of the following choices identifies the required procedure actions for getting boron into the reactor per 1-FR-S.1?

- A. Start a second Charging pump and fully open 1-FCV-1122 (Charging Flow Control Valve).
- B. Locally open 1-CH-MOV 1350, after 21 minutes close 1-CH-MOV 1350.
- C✓ Open 1-CH-MOV-1115B and D (CHG pump suction from RWST) and Close 1-CH-MOV-1115C and E (CHG PUMP SUCTION FROM VCT).
- D. Manually open 1-CH-FCV-1113A (BORON TO BLENDER FLOW CONTROL), then dispatch an operator to establish Manual Emergency Boration by opening 1-CH-228 (MANUAL EMERGENCY BORATE STOP)

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

Answer: C C D C B A C B A C

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: ATWS

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: AG/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

41. 032 AA2.02 001/1/2/LOSS OF SRNI/H/NEW/SR 2012-301/RO/DRL/PGC

The Unit is in Hot Shutdown with the following conditions:

- T_{avg} is 547 °F.
- Pressurizer pressure is 2235 psig.
- RCS boron is at the ECP value of 920 ppm.
- Initial Source Range counts are 45 cps.
- All Control Rods are inserted.
- Shutdown 7 days ago

The shutdown banks are withdrawn in accordance with procedure GOP-1.4

Unit Startup, HSD To 2% Reactor Power

When the shutdown banks are fully withdrawn, the following Source Range data is recorded:

N-31 counts are 82 cps

N-32 counts are 202 cps

In accordance with GOP-1.4 which ONE of the following actions is required?

A. Verify operability of N31 due to low count rate.

B✓ Verify operability of N32 due to high count rate.

C. Conditions are within normal bounds, continue to withdraw rods.

D. Change boron concentration to the Cold Shutdown concentration.

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

Answer: B B C D D D A C C D

Scramble Range: A - D

Tier: 1

Group: 2

K/A Keywords: LOSS OF SRNI

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DRL/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

42. 033 AK1.01 001/1/2/LOSS OF IR NI/L/BANK/SR 2012-301/RO/JAT/PGC

Initial Conditions

- A Unit 1 Reactor Trip occurs from 60% power.

Conditions 25 minutes post-trip

- N-35 indicates 4×10^{-10} amps, SUR of 0 DPM.
- N-36 indicates 1×10^{-11} amps, SUR of 0 DPM.

Which ONE of the following describes the current conditions?

- A✓ N-35 is undercompensated.
N-31 and N-32 must be manually energized.
- B. N-35 is undercompensated.
N-31 and N-32 energized automatically.
- C. N-35 is overcompensated.
N-31 and N-32 must be manually energized.
- D. N-35 is overcompensated.
N-31 and N-32 energized automatically.

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

Answer: A A B B A B A A A C

Scramble Range: A - D

Tier: 1

Group: 2

K/A Keywords: LOSS OF IR NI

Cog Level (H/L): L

Source (New/Bnk/Mod): BANK

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: JAT/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

43. 034 K4.03 001/2/2/FUEL HANDLING EQUIP/H/NEW/SR 2012-301/SRO/JAT/PGC

Which ONE of the following completes the statement regarding the Manipulator Crane Lifting Hoist Overload Interlock?

The OVERLOAD interlock ____ (1) ____ be bypassed, and the reason for this interlock, in accordance with the basis for Technical Specification 3.10 (REFUELING), is ____ (2) ____.

- A. (1) can
(2) to prevent movement of a disengaged fuel assembly that is hung up on the gripper
- B. (1) can NOT
(2) to prevent movement of a disengaged fuel assembly that is hung up on the gripper
- C✓ (1) can
(2) to prevent movement of more than one fuel assembly at a time
- D. (1) can NOT
(2) to prevent movement of more than one fuel assembly at a time

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: C A A C A A D B A C	Scramble Range: A - D
Tier:	2		Group:	2
K/A Keywords:	FUEL HANDLING EQUIP		Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	SRO		Author/Reviewer:	JAT/PGC

44. 035 A3.01 001/2/2/STM GENERATOR/H//SR 2012-301/RO/MPL/PGC

Unit 1 Conditions

- The plant is at 50% rated thermal power.
- 1-MS-PT-447, the selected P_{imp} channel, fails low.

Assuming no operator action, which ONE of the following represents the correct response of SG water level?

- A. SG water level control will be maintained at program level.
- B. SG water level will increase to 44%.
- C. SG water level will increase 75%, resulting in FW isolation at SG Hi-Hi level.
- D✓ SG water level will decrease to 33%.

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: D B A D D A B C B A	Scramble Range: A - D
Tier:	2		Group:	2
K/A Keywords:	STM GENERATOR		Cog Level (H/L):	H
Source (New/Bnk/Mod):			Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	MPL/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

45. 038 EK3.01 001/1/1/STM GEN TUBE RUPT///SR 2012-301/RO/

The following plant conditions exist:

- Tube Rupture on "A" SG.
- The operating team has cooled the RCS to 485 °F.
- The ruptured SG pressure is 935 psig.
- Pressurizer level is 65%.
- Ruptured SG level is 45% NR and decreasing.

Which ONE of the following (1) describes the actions required by E-3, and (2) the basis for this action?

- A. (1) Turn ON pressurizer heaters to raise RCS pressure.
(2) This will minimize RCS volume loss.
- B✓ (1) Turn ON pressurizer heaters to raise RCS pressure.
(2) This will lead to a reduction in pressurizer level.
- C. (1) Use main or auxiliary spray to lower RCS pressure.
(2) This will minimize RCS volume loss.
- D. (1) Use main or auxiliary spray to lower RCS pressure.
(2) This will lead to a reduction in pressurizer level.

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

Answer: B B A A D A C A A D

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: STM GEN TUBE RUPT

Cog Level (H/L):

Source (New/Bnk/Mod):

Exam:

SR 2012-301

Test (RO/SRO): RO

Author/Reviewer:

46. 039 A4.04 001/2/1/MAIN AND REHEAT STM/L/NEW/SR 2012-301/RO/DRL/PGC

AFW was automatically actuated from a valid AMSAC signal. SG levels are now all greater than 50% NR.

Which ONE of the following describes the minimum actions that the Operator must take to secure the TDAFW Pump?

- A. 1) RESET AMSAC.
2) Close PCV-MV-102A and B by taking their switches to CLOSED.
- B✓ 1) RESET AMSAC.
2) Close PCV-MV-102A and B by taking their switches to OPEN then CLOSED.
- C. 1) RESET AMSAC AND place AMSAC BYPASS switch in BYPASS.
2) Close PCV-MV-102A and B by taking their switches to CLOSED.
- D. 1) RESET AMSAC AND place AMSAC BYPASS switch in BYPASS.
2) Close PCV-MV-102A and B by taking their switches to OPEN then CLOSED.

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

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

Answer: B B D B C B A C C A

Scramble Range: A - D

Tier: 2

Group: 1

K/A Keywords: MAIN AND REHEAT STM Cog Level (H/L): L

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DRL/PGC

47. 040 WE12 EA2.2 001/1/1/STM LINE RUPTURE/H/NEW/SR 2012-301/SRO/DRL/PGC

At 09:50, a steam line rupture in the turbine building occurred on Unit 1 with the following plant parameter timeline:

At 10:00

- All SG NR levels at 5%, stable
- All SG pressures 650 psig, lowering uncontrollably
- Containment Pressure 1.3 psig, stable
- Pressurizer level 10%
- Steam Safety Rad Monitors:
 - MS-RM-24 reading 2 mr/hr, stable
 - MS-RM-25 reading 4 mr/hr, stable
 - MS-RM-26 reading 2 mr/hr, stable

10:15

- All SG NR levels at 7%, rising slowly
- SG#1 and SG#2 pressures 500 psig, lowering uncontrollably
- SG#3 pressure 700 psig, rising
- Containment Pressure 1.3 psig, stable
- RCS Pressure 1900 psig; cool down rate >1 00 °F/hr
- Pressurizer level 15%
- Steam Safety Rad Monitors:
 - MS-RM-24 reading 2 mr/hr, stable
 - MS-RM-25 reading 4 mr/hr, stable
 - MS-RM-26 reading 2 mr/hr, stable

AT 10:15, which ONE of the following identifies (1) the required procedure, and (2) whether an emergency classification is REQUIRED in accordance with Emergency Action Level Matrix? (Exclude SEM judgment classifications)

REFERENCE PROVIDED

- A. (1) Remain in ECA-2.1
(2) No emergency classification is required.
- B✓ (1) Exit ECA-2.1 and transition to E-2
(2) No emergency classification is required.
- C. (1) Remain in ECA-2.1,
(2) An emergency classification is required.
- D. (1) Exit ECA-2.1 and transition to E-2
(2) An emergency classification is required.

QUESTIONS REPORT
for RO-SRO Combined Questions Surry 2012

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	Answer: B D C B D D A D D C	Scramble Range: A - D
Tier:	1			Group: 1	
K/A Keywords:	STM LINE RUPTURE			Cog Level (H/L): H	
Source (New/Bnk/Mod):	NEW			Exam: SR 2012-301	
Test (RO/SRO):	SRO			Author/Reviewer: DRL/PGC	

48. 040 WE12 EK2.1 001/1/1/STM LINE RUPTURE/H/NEW/SR 2012-301/RO/DRL/PGC

Reactor power was noted to be 101% and rapidly rising. The crew tripped the reactor and entered E-0, Reactor Trip or Safety Injection.

There is a reported a significant break on the supply to the TDAPFW. All personnel have been evacuated from the area due to the unsafe conditions.

The crew has transitioned to ECA-2.1, Uncontrolled Depressurization of All Steam Generators.

Given the following:

- All Narrow Range Cold leg Temperature indications have lowered 18 °F in the last 5 minutes.
- Feedflow to each Steam Generator has been adjusted to 60 gpm.
- A Steam Generator level is 11% NR
- B Steam Generator level is 8% NR
- C Steam Generator level is 10% NR
- All Steam Dumps are closed.

Which ONE of the following describes the required actions IAW ECA-2.1?

A. Lower feeding each steam generator to 25 gpm.

B. Stop feeding all Steam Generators.

C. Stop feeding only the A and C Steam Generators.

D✓ Continue feeding all Steam generators at the current flow rates.

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	Answer: D A D C C D D C A D	Scramble Range: A - D
Tier:	1			Group: 1	
K/A Keywords:	STM LINE RUPTURE			Cog Level (H/L): H	
Source (New/Bnk/Mod):	NEW			Exam: SR 2012-301	
Test (RO/SRO):	RO			Author/Reviewer: DRL/PGC	

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

49. 041 A4.02 001/2/2/CTMT PURGE/L/BANK/SR 2012-301/RO/DRL/PGC

During operation of the Steam Dump System, which ONE of the following describes how the steam pressure arming signal is cleared?

The operator must _____.

- A. shift the Steam Header Pressure Controller to manual and decreasing signal demand to zero.
- B✓ take the Steam Dump Mode Selector Switch to the Tavg Mode.
- C. take the Steam Dump Control Switch to Off/Reset and return the switch to the ON position.
- D. take the Steam Dump Control Switch to the By-pass Interlock position.

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

Answer: B A A A C C B C C B

Scramble Range: A - D

Tier: 2

Group: 2

K/A Keywords: CTMT PURGE

Cog Level (H/L): L

Source (New/Bnk/Mod): BANK

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DRL/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

50. 045 G2.1.23 001/2/2/MAIN TURBINE GEN/H/NEW/SR 2012-301/SRO/JAT/PGC

Unit 1 Initial Conditions

- A startup is in progress IAW 1-GOP-1.5, "UNIT STARTUP, 2% REACTOR POWER TO MAX ALLOWABLE POWER".
- One Turbine Balance Shot has been performed IAW Attachment 5 (TURBINE BALANCE SHOT WITH REACTOR POWER GREATER THAN POAH) of 1-OP-TM-001, "TURBINE – GENERATOR STARTUP TO 20% - 25% TURBINE POWER"
- The Main Turbine is latched and loaded at 15% turbine power.

Unit 1 Current Conditions

- The Main Turbine has been shutdown to perform an additional balance shot, and has just been placed on the Turning Gear.
- Reactor power is 2%.

Based on the current conditions, which ONE of the following describes how the Balance Shot may be performed?

The Turning Gear Balance Shot may be performed by ____ (1) ____.

and

If weight adjustments are to be performed immediately, 180-degree turbine rotations every 30 minutes ____ (2) ____ required.

A✓ (1) initiating EITHER Attachment 1 (TURBINE BALANCE SHOT WITH REACTOR POWER LESS THAN POAH) OR Attachment 5.
(2) are

B. (1) initiating EITHER Attachment 1 (TURBINE BALANCE SHOT WITH REACTOR POWER LESS THAN POAH) OR Attachment 5.
(2) are NOT

C. (1) initiating Attachment 1 (TURBINE BALANCE SHOT WITH REACTOR POWER LESS THAN POAH). Attachment 5 may NOT be reperformed.
(2) are

D. (1) initiating Attachment 1 (TURBINE BALANCE SHOT WITH REACTOR POWER LESS THAN POAH). Attachment 5 may NOT be reperformed.
(2) are NOT

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

Answer: A C C C A C D A B A

Scramble Range: A - D

Tier: 2

Group: 2

K/A Keywords: MAIN TURBINE GEN

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): SRO

Author/Reviewer: JAT/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

51. 055 EK1.02 001/1/1/STATION BLACKOUT/H/NEW/SR 2012-301/RO/DRL/PGC

The AAC Diesel Generator is removed from service for scheduled maintenance. A sustained loss of offsite power has led to a reactor and turbine trip. The #1 and #3 EDG fail to start.

Five (5) minutes after the trip, the following conditions exist:

- RCS Pressure is 2107 psia and slowly lowering.
- Highest CETC is 575 °F and slowly rising.
- T_C is 509 °F and slowly lowering.
- T is 64 °F and slowly rising.
- SG pressure is 720 psig and lowering.

Which ONE of the following describes the status of RCS heat removal?

- A. Reflux Cooling has developed.
- B✓ No RCS cooling is occurring.
- C. Single phase natural circulation is fully developed.
- D. Natural circulation is developing.

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

Answer: B D B C A C B A D C

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: STATION BLACKOUT

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DRL/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

52. 055 G2.4.9 001/1/1/STATION BLACKOUT/H/NEW/SR 2012-301/SRO/DB/PGC

Unit 1 Initial Conditions:

- Lowest indicated T_C is 250° F.
- Wide Range RCS Pressure is 320 psig.
- Cooldown is in progress per 1-GOP-2.5 (UNIT COOLDOWN, 351°F TO LESS THAN 205°F).
- RHR is in service.
- Pressurizer level is decreasing at a rate that cannot be accounted for due to the cooldown.
- Makeup flow is maximized and with pressurizer level still decreasing.

Unit 1 Current Conditions:

- A Station Blackout has occurred.
- Both AC Emergency Buses are DEENERGIZED.

Based on the current conditions, which ONE of the following will correctly complete the statements listed below?

___(1)___ must be initiated to address the loss of both Emergency Buses.

And

___(2)___ must be initiated to mitigate the loss of reactor coolant.

- A. (1) 1-AP-10.07 (LOSS OF UNIT 1 POWER)
(2) 1-AP-16.01 (SHUTDOWN LOCA)
- B. (1) 1-AP-10.07 (LOSS OF UNIT 1 POWER)
(2) 1-AP-16.00 (EXCESSIVE RCS LEAKAGE)
- C✓ (1) 1-ECA-0.0 (LOSS OF ALL AC POWER)
(2) 1-AP-16.01 (SHUTDOWN LOCA)
- D. (1) 1-ECA-0.0 (LOSS OF ALL AC POWER)
(2) 1-AP-16.00 (EXCESSIVE RCS LEAKAGE)

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

Answer: C A C A B C C C B D

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: STATION BLACKOUT

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): SRO

Author/Reviewer: DB/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

53. 056 A2.04 001/2/2/CONDENSATE/L/BANK/SR 2012-301/RO/GWL/PGC

Both units are being fed by the Reserve Station Service Transformer

Which ONE of the following pairs of condensate pumps will be automatically tripped by the actuation of a load shed?

A. 2A and 1C

B. 1B and 2C

C✓ 1A and 2C

D. 2B and 1C

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

Answer: C A B D D D B A D C

Scramble Range: A - D

Tier: 2

Group: 2

K/A Keywords: CONDENSATE

Cog Level (H/L): L

Source (New/Bnk/Mod): BANK

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: GWL/PGC

54. 057 AK3.01 001/1/1/LOSS VITAL AC INST/H/NEW/SR 2012-301/RO/DRL/PGC

A loss of Vital Bus III has just occurred.

Which ONE of the following describes the reason that AP-10.03, Loss of Vital Bus III, requires the operators to trip the reactor?

Losing the vital bus causes a loss of _____.

A. CC to the RCP thermal barriers.

B. Pressurizer pressure control.

C✓ CC to the A RCP lube oil cooler.

D. Main and bypass Feed Regulating Valve Control.

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

Answer: C C C C B C A C D B

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: LOSS VITAL AC INST

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DRL/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

55. 058 AA1.01 001/1/1/LOSS DC POWER/H/NEW/SR 2012-301/RO/JAT/PGC

Unit 1 Initial Conditions:

- Unit 1 is at 100%.
- Unit 1 experiences a complete loss of power to DC Bus 1B.
- The Reactor has tripped.

Unit 1 Current Conditions:

- Unit 1 has just entered HOT SHUTDOWN.
- DC Bus 1B is energized.
- Annunciator 1K-A6, "BATT BUS 1A/1B TIE BKR CLOSED" is in alarm.
- The battery bank for DC Bus 1B is expected to be returned to service in 48 hours.

Which ONE of the following describes (A) the status of the Main Generator output breakers following the loss of DC Bus 1B, and (B) the appropriate mode of Reactor Operation IAW ARP 1K-A6?

Immediately following the Reactor Trip, the Main Generator output breakers ____ (1) ____ required to be opened manually. The unit ____ (2) ____.

- A. (1) were
(2) may remain in HOT SHUTDOWN until the battery bank is returned to service
- B. (1) were NOT
(2) may remain in HOT SHUTDOWN until the battery bank is returned to service
- C✓ (1) were must
(2) must be in COLD SHUTDOWN within 30 hours
- D. (1) was NOT
(2) must be in COLD SHUTDOWN within 30 hours

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

Answer: C D C D A C A D C A

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: LOSS DC POWER

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: JAT/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

56. 059 K1.02 001/2/1/MAIN FEEDWATER/H/NEW/SR 2012-301/RO/KDS/PGC

Unit 1 conditions at 0800:

- Reactor power = 50%
- The operating Reactor Feedwater Pump discharge valve inadvertently closes
- The operating Reactor Feedwater Pump Recirc valve fails to open

Unit 1 conditions at 0805:

- A S/G NR level = 23% decreasing
- B S/G NR level = 19% decreasing
- C S/G NR level = 15% decreasing

Based on the above plant conditions, at 0800 ____ (1) ____ will start and at 0805 ____ (2) ____ will be operating.

- A. (1) 1-FW-P-2 ONLY
(2) 1-FW-P-2 ONLY
- B. (1) 1-FW-P-2 ONLY
(2) 1-FW-P-2, 1-FW-3A AND 1-FW-3B
- C✓ (1) 1-FW-3A AND 1-FW-3B ONLY
(2) 1-FW-3A AND 1-FW-3B ONLY
- D. (1) 1-FW-3A AND 1-FW-3B ONLY
(2) 1-FW-P-2, 1-FW-3A AND 1-FW-3B

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: C B D A A D C B D C	Scramble Range: A - D
Tier:	2		Group:	1
K/A Keywords:	MAIN FEEDWATER		Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	KDS/PGC

57. 060 AA2.01 001/1/2/ACC GAS RADWST RLS/H/NEW/SR 2012-301/SRO/KDS/PGC

- A.
B.
C.
D.

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer:	Scramble Range: A - D
Tier:	1		Group:	2
K/A Keywords:	ACC GAS RADWST RLS		Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	SRO		Author/Reviewer:	KDS/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

58. 061 K2.01 001/2/1/AUX FEEDWATER/H/NEW/SR 2012-301/RO/PGC

Given the following plant conditions:

- Unit 1 tripped from 100% power with all systems functioning in automatic.
- 480 Volt Bus 1H1 source breaker tripped open.

Based on the above conditions, which ONE of the following AFW pumps will be able to feed the steam generator (if any)?

A. 1-FW-P-2 ONLY

B. 1-FW-3A ONLY

C. 1-FW-3B ONLY

D✓ None

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

Answer: D A B D C D A B A B

Scramble Range: A - D

Tier: 2

Group: 1

K/A Keywords: AUX FEEDWATER

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: PGC

59. 061 K5.02 001/2/1/AUX FEEDWATER/L/MODIFIED/SR 2012-301/RO/JAT/PGC

Unit 1 Conditions:

- Unit 1 has been shutdown for 400 hours.
- The crew is performing 1-AP-27.00, "Loss of Decay Heat Removal Capability".
- Attachment 5, "Reflux Boiling Heat Removal", of 1-AP-27.00 has been initiated.

Which ONE of the following describes the appropriate control of SG narrow range level IAW Step 5 of Attachment 5 of 1-AP-27.00?

Control SG narrow range level in a minimum of ____ (1) ____ SGs using "A" ____ (2) ____ "B" AFW headers.

A. (1) 2
(2) OR

B. (1) 2
(2) AND

C. (1) 1
(2) OR

D✓ (1) 1
(2) AND

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

Answer: D B C A A B D A D C

Scramble Range: A - D

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

Tier:	2	Group:	1
K/A Keywords:	AUX FEEDWATER	Cog Level (H/L):	L
Source (New/Bnk/Mod):	MODIFIED	Exam:	SR 2012-301
Test (RO/SRO):	RO	Author/Reviewer:	JAT/PGC

60. 062 AA2.01 001/1/1/LOSS NUC SRV WATER/H/NEW/SR 2012-301/RO/MJR/PGC

Unit 1 initial conditions:

- 100% power.
- 'A' Charging Pump is in service.
- The following alarms received in the Main Control Room:
 - 1D-G5, SW or CC Pps Disch to Chg Pps Lo Press
 - 0-VSP-M4, Flood Cont Pnl Trbl
- Flood Panel light LS-DA-115A-1, Unit #1 ESGR is illuminated.

Which ONE of the following completes the statement below?

The above conditions are consistent with a rupture of the supply piping from the Charging Pump ____ (1) ____ system. If left uncorrected, 'A' Charging Pump ____ (2) ____ could be damaged.

A. (1) Component Cooling
(2) seals

B. (1) Component Cooling
(2) bearings

C. (1) Service Water
(2) seals

D✓ (1) Service Water
(2) bearings

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

Answer: D B D A B C D B D B

Scramble Range: A - D

Tier:	1	Group:	1
K/A Keywords:	LOSS NUC SRV WATER	Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW	Exam:	SR 2012-301
Test (RO/SRO):	RO	Author/Reviewer:	MJR/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

61. 063 A1.01 001/2/1/DC ELEC DIST/L/NEW/SR 2012-301/RO/DB/PGC

Unit 1 Initial Conditions:

- 1A and 1B 125 VDC Station Batteries are carrying equal loads at the same state of discharge and all related parameters are identical
- There are no battery chargers supplying power to either Station Battery

Unit 1 Current Conditions:

- Discharge rate is increased on 1A 125 VDC Station Battery

Which ONE of the following correctly completes the statements listed below?

The total amount of ampere-hours that the 1A 125 VDC Station Battery will be able to supply will be (1) the 1B 125 VDC Station Battery.

And

The voltage indicated on vertical board 2 for the 1A 125 VDC Station Battery will be (2) that for the 1B 125 VDC Station Battery.

A. (1) less than
(2) equal to

B✓ (1) less than
(2) less than

C. (1) equal to
(2) equal to

D. (1) equal to
(2) less than

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

Answer: B C A A B A D C A B

Scramble Range: A - D

Tier: 2

Group: 1

K/A Keywords: DC ELEC DIST

Cog Level (H/L): L

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DB/PGC

62. 063 K4.02 001/2/1/DC ELEC DIST/L/NEW/SR 2012-301/RO/GWL/PGC

Unit 1 is at full power. The UPS 1A1 Battery Charger fails.

Which ONE of the following sources will AUTOMATICALLY supply power to the loads on the 1A DC bus?

A. 1A battery.

B. 1A2 UPS.

C✓ 1B1 UPS.

D. 1B DC bus.

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

Answer: C A A B A B C C D C

Scramble Range: A - D

QUESTIONS REPORT
for RO-SRO Combined Questions Surry 2012

Tier:	2	Group:	1
K/A Keywords:	DC ELEC DIST	Cog Level (H/L):	L
Source (New/Bnk/Mod):	NEW	Exam:	SR 2012-301
Test (RO/SRO):	RO	Author/Reviewer:	GWL/PGC

63. 064 K6.07 001/2/1/EDG/H/NEW/SR 2012-301/RO/DB/PGC

Unit 1 Current Conditions:

- Annunciator 1C-F6 (EDG 1 TRBL) is in alarm
- EDG 1 Left Air Bank Pressure is 150 psig.
- EDG 1 Right Air Bank Pressure is 155 psig.
- There is no electrical power available to EDG 1 Air Compressor #1
- There is no electrical power available to EDG 1 Air Compressor #2

Based on the current conditions, which ONE of the following correctly completes the statements listed below?

The EDG 1 Air Start System (1) capable of providing three start attempts.

And

If necessary, EDG 1 Right and Left Air Bank pressures may be increased using the EDG 1 (2) Air Compressor.

- A. (1) is
 (2) #2
- B✓ (1) is NOT
 (2) #2
- C. (1) is
 (2) #1
- D. (1) is NOT
 (2) #1

MCS	Time:	1	Points:	1.00	Version:	0 1 2 3 4 5 6 7 8 9	
					Answer:	B A C A A A C D A B	Scramble Range: A - D
Tier:		2			Group:		1
K/A Keywords:		EDG			Cog Level (H/L):		H
Source (New/Bnk/Mod):		NEW			Exam:		SR 2012-301
Test (RO/SRO):		RO			Author/Reviewer:		DB/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

64. 065 G2.1.31 001/1/1/LOSS INST AIR/H/NEW/SR 2012-301/RO/MJR/PGC

Unit 1 initial conditions:

- A SBLOCA has occurred.
- Containment pressure reached 18.3 psia

Current conditions:

- Containment pressure has stabilized at 16.5 psia.

Which ONE of the following completes the description of control room indications on the Containment Instrument Air system?

IA-PT-106, Containment Instrument Air pressure, indicates ____ (1) ____, and

IA-TV-101A/B, Normal Compressor Suction Valves, are ____ (2) ____.

- A. (1) pressurized
(2) OPEN
- B✓ (1) pressurized
(2) CLOSED
- C. (1) depressurized
(2) OPEN
- D. (1) depressurized
(2) CLOSED

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

Answer: B D C C C B B A C A

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: LOSS INST AIR

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: MJR/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

65. 067 G2.4.11 001/1/2/PLT FIRE ONSITE/H/NEW/SR 2012-301/SRO/DRL/PGC

Unit 1 is operating at full power when a fire is reported in the Unit 1 Emergency Switchgear Room at 2210. The brigade leader reports that there is smoke billowing from the 480V breaker Cabinet 14H3, A LHSI pump.

The Control Room has completed the applicable portions of AP-48.00, Fire Protection – Operations Response.

Which ONE of the following describes:

(1) The procedure the crew should transition to IAW AP-48.00, Attachment 3, Appendix R Safe Shutdown Functions,
and

(2) The correct Emergency Classification if the Fire Brigade responds and reports that the fire is out at 2230?

Reference Provided

- A. (1) 1-FS-FP-107, Unit 1 Emergency Switchgear Room Elevation 9 FT, 6 IN
(2) Unusual Event
- B. (1) 1-FCA-4.00, Limiting ESGR Number 1 Fire
(2) Alert
- C. (1) 1-FS-FP-107, Unit 1 Emergency Switchgear Room Elevation 9 FT, 6 IN
(2) Unusual Event
- D✓ (1) 1-FCA-4.00, Limiting ESGR Number 1 Fire
(2) Alert

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

Answer: D A A B A B A C C D

Scramble Range: A - D

Tier: 1

Group: 2

K/A Keywords: PLT FIRE ONSITE

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): SRO

Author/Reviewer: DRL/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

66. 069 WE14 EK3.4 001/1/2/LOSS OF CTMT INTG/H/NEW/SR 2012-301/RO/AG/PGC

Unit 1 Initial Conditions:

- LOCA inside containment.
- 1-E.1 "Loss Of Reactor Or Secondary Coolant" in progress
- Both Train A and Train B of cold leg recirculation are NOT available.

Current Conditions:

- Unit Supervisor directs transition to 1-ECA-1.1, "Loss of Emergency Coolant Recirculation"
- A RED path exists for Containment
- RWST level is 5%

Which ONE of the following correctly states which procedure should be used for operation of the Containment Spray Pumps, AND whether or not CS Pumps are required to be placed in Pull to Lock (PTL) based on the Current Conditions?

CS Pumps operation is directed by ____ (1) ____, AND CS Pumps ____ (2) ____ required to be placed in PTL in accordance to the selected procedure.

A. (1) ECA-1.1
(2) are

B✓ (1) ECA-1.1
(2) are NOT

C. (1) FR-Z.1
(2) are

D. (1) FR-Z.1
(2) are NOT

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

Answer: B C B D D C D D B D

Scramble Range: A - D

Tier: 1

Group: 2

K/A Keywords: LOSS OF CTMT INTG

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: AG/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

67. 071 A1.06 001/2/2/WASTE GAS DISPOSAL/H/NEW/SR 2012-301/RO/DB/PGC

Unit 1 Current Conditions:

- WGDТ 1B release is in progress.
- WGDТ 1B Hydrogen concentration is 3%.

Based on the current conditions, which ONE of the following correctly completes the statements listed below?

Flow indicated on 1-GW-FI-101 (WGDТ EFFLUENT FLOW) will be __ (1) __ the actual flow.

And

When 1-GW-FCV-101 (PROCESS VENT WGDТ EFFLUENT FLOW CONTROL) is throttled closed to terminate the release, total Process Vent flow will __ (2) __.

- A. (1) less than
(2) decrease
- B. (1) greater than
(2) decrease
- C. (1) less than
(2) remain the same
- D✓ (1) greater than
(2) remain the same

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

Answer: D A D C C D A A C D

Scramble Range: A - D

Tier: 2 Group: 2

K/A Keywords: WASTE GAS DISPOSAL Cog Level (H/L): H

Source (New/Bnk/Mod): NEW Exam: SR 2012-301

Test (RO/SRO): RO Author/Reviewer: DB/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

68. 072 K5.01 001/2/2/AREA RAD MONITOR/L/NEW/SR 2012-301/RO/DB/PGC

Which ONE of the following correctly completes the statements listed below?

A (1) scintillation detector is used in the Containment Gas Monitor (1-RM-RI-160).

And

The units indicated on the Containment Gas Monitor (1-RM-RI-160) meter are (2).

A✓ (1) beta

(2) cpm

B. (1) beta

(2) mR/hr

C. (1) gamma

(2) cpm

D. (1) gamma

(2) mR/hr

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

Answer: A C C C B C B C A D

Scramble Range: A - D

Tier: 2

Group: 2

K/A Keywords: AREA RAD MONITOR

Cog Level (H/L): L

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DB/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

69. 073 A2.01 001/2/1/PROCESS RAD MON/H/NEW/SR 2012-301/RO/DB/PGC

Current Conditions:

- PROCESS VENT RAD MON TRBL (0-RMA-C5) alarms.
- The Green Operate light on the Remote Display Unit (RDU) for 1-GW-RM-130A (Rad Monitor Process Vent Particulate Detector) is off.

Which ONE of the following correctly completes the statements listed below?

Per the 0-RMA-C5 Annunciator Response Procedure, the operator must always take action to _____ (1) _____.

And

Following a loss and restoration of power, 1-GW-RM-130A will restart in the _____ (2) _____ mode.

- A. ✓ (1) place the CTMT Vacuum Pumps in OFF
(2) accident
- B. (1) place the CTMT Vacuum Pumps in OFF
(2) normal
- C. (1) close the CTMT Vacuum Pump Discharge Isolation Valves (1-GW-FCV-160/260)
(2) accident
- D. (1) close the CTMT Vacuum Pump Discharge Isolation Valves (1-GW-FCV-160/260)
(2) normal

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

Answer: A C C D D C C C A B

Scramble Range: A - D

Tier: 2

Group: 1

K/A Keywords: PROCESS RAD MON

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DB/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

70. 073 A2.03 001/2/1/PROCESS RAD MON/H/MODIFIED/SR 2012-301/SRO/JAT/PGC

Current Conditions:

- Unit 1 is operating at 100% power.
- 1-CC-RM-105 radiation levels have remained stable over the last 3 hours.
- 1-CC-RM-106 radiation levels have shown a lowering trend over the last 3 hours.
- An instrumentation technician reports that the cause of the lowering trend on 1-CC-RM-106 is calibration drift in the detector.
- HCV-CC-100, CC Surge Tank Vent Valve is OPEN.

Based on the current conditions, which ONE of the following describes (A) the effect of the calibration drift on the CC system (if any), and (B) the requirements of Technical Specification (TS) 3.13, "Component Cooling System"?

HCV-CC-100, CC Surge Tank Vent Valve, ____ (1) ____ have the ability to close automatically and ____ (2) ____.

A. (1) does
(2) may remain OPEN.

B✓ (1) does
(2) must be SHUT.

C. (1) does not
(2) may remain OPEN.

D. (1) does not
(2) must be SHUT.

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

Answer: B A A C C D B C A A

Scramble Range: A - D

Tier: 2

Group: 1

K/A Keywords: PROCESS RAD MON

Cog Level (H/L): H

Source (New/Bnk/Mod): MODIFIED

Exam: SR 2012-301

Test (RO/SRO): SRO

Author/Reviewer: JAT/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

71. 076 A1.02 001/2/1/SERVICE WATER/L/NEW/SR 2012-301/RO/DB/PGC

Unit 1 Initial Conditions:

A Stop Log is installed in the 1A Screenwell.

Unit 1 Current Conditions:

A Stop Log is inadvertently installed in the 1C Screenwell.

Based on current conditions, which ONE of the following will indicate an increase in temperature?

- A. Main Control Room Chillers
- B. Charging Pump Lubricating Oil
- C✓ Bearing Cooling Water cooled components
- D. Component Cooling Water cooled components

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

Answer: C C B B D C B B C A

Scramble Range: A - D

Tier: 2

Group: 1

K/A Keywords: SERVICE WATER

Cog Level (H/L): L

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DB/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

72. 077 AA2.05 001/1/1/GEN VOLT DISTURBANCE/H/MODIFIED/SR 2012-301/SRO/JAT/PGC

Unit 1 conditions at 0900:

- 100% Power
- 230 KV system voltage is 225 KV.
- #1 EDG was declared INOPERABLE. The failure is not a common-cause failure.
- The Generator Voltage Regulator is in AUTO.

Unit 1 conditions at 1000:

- 230 KV system voltage is 218 KV
- The crew is attempting to increase voltage IAW 1-OP-26.5, "230 KV Switchyard Voltage", Section 5.1, "Corrective Actions to be Taken in the Event 230 KV Voltage is Sagging Below the Scheduled Voltage".
- The crew has entered 0-AP-10.18, "Response to Grid Instability".

Which ONE of the following states (A) how the crew is attempting to increase voltage IAW 1-OP-26.5 section 5.1, and (B) based on the current conditions, the requirements of Technical Specification (TS) 3.16, "Emergency Power System?"

The Voltage Regulator ____ (1) ____ when operating the EXCITATION LEVEL control switch in the RAISE direct. IAW TS 3.16, the unit ____ (2) ____.

REFERENCE PROVIDED

- A. (1) must be placed in MANUAL
(2) is required to be in HOT SHUTDOWN by 1600.
- B. (1) must be placed in MANUAL
(2) may operate as-is for 7 days.
- C✓ (1) may remain in AUTO
(2) is required to be in HOT SHUTDOWN by 1600.
- D. (1) may remain in AUTO
(2) may operate as-is for 7 days.

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

Answer: C B B D B C A C A A

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: GEN VOLT DISTURBANCE Cog Level (H/L): H

Source (New/Bnk/Mod): MODIFIED

Exam: SR 2012-301

Test (RO/SRO): SRO

Author/Reviewer: JAT/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

73. 078 G2.1.7 001/2/1/INSTRUMENT AIR/H/NEW/SR 2012-301/SRO/DB/PGC

Unit 1 Initial Conditions at 0800:

- Unit 1 is at 100% power.
- 1B-F6 (CTMT INST AIR HDR LO PRESS) is in alarm.
- 1D-C6 (PRZR PWR RELIEF VV LO AIR PRESS) is in alarm.
- PORV 455C Air Bottle pressures are 975 psig each with two bottles in service.
- PORV 455C backup air regulator downstream pressure is 85 psig.
- Normal CTMT IA pressure (PI-IA-101) is 85 psig.
- Power is available to PORV 455C.

Unit 1 Current Conditions at 0915:

- Conditions are same as above.

Based on the current conditions, which ONE of the following correctly completes the statement listed below?

PORV 455C is _____.

- A. OPERABLE
- B. INOPERABLE and associated Block Valve closure is not required.
- C. INOPERABLE and associated Block Valve must be closed with power removed.
- D✓ INOPERABLE and associated Block Valve must be closed with power maintained.

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: D D B A D C A A C A	Scramble Range: A - D
Tier:	2		Group:	1
K/A Keywords:	INSTRUMENT AIR		Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	SRO		Author/Reviewer:	DB/PGC

74. 078 K3.02 001/2/1/INSTRUMENT AIR/L/NEW/SR 2012-301/RO/DRL/PGC

The Unit is in Mode 6. Refueling operations are in progress. Annunciator B-E6, IA LO HDR PRESS/IA COMPR 1 TRBL, alarms. IA-PS-100, Instrument Air Header Pressure, indicates 0 psig.

Which ONE of the following is an expected plant change without operator actions?

- A. Normal Letdown has isolated.
- B✓ RHR cooling is no longer occurring.
- C. Fuel Transfer Canal Door seal will be deflating.
- D. The standby Containment Instrument Air Compressor has started.

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

QUESTIONS REPORT
for RO-SRO Combined Questions Surry 2012

Tier:	2	Group:	1
K/A Keywords:	INSTRUMENT AIR	Cog Level (H/L):	L
Source (New/Bnk/Mod):	NEW	Exam:	SR 2012-301
Test (RO/SRO):	RO	Author/Reviewer:	DRL/PGC

75. 103 A3.01 001/2/1/CTMT/H/NEW/SR 2012-301/RO/DB/PGC

Unit 1 Initial Conditions:

- 100% Power

Current Conditions:

- Unit 1 has experienced a LOCA.
- LM-PT-100A (Containment Pressure) = 22 psia.
- LM-PT-100B (Containment Pressure) = 24 psia.
- LM-PT-100C (Containment Pressure) = 24 psia.
- LM-PT-100D (Containment Pressure) = 22 psia.

Based on the current conditions, which ONE of the following correctly completes the statements listed below?

1-CC-TV-140A (CCW from RCP Thermal Barrier) should be __ (1) __.

And

1-CS-MOV-101A ('A' CS Pump Discharge to Spray Ring) should be __ (2) __.

- A. (1) open
(2) open
- B✓ (1) open
(2) closed
- C. (1) closed
(2) open
- D. (1) closed
(2) closed

MCS	Time:	1	Points:	1.00	Version:	0 1 2 3 4 5 6 7 8 9	
					Answer:	B A C C D D D D C A	Scramble Range: A - D
Tier:		2			Group:		1
K/A Keywords:		CTMT			Cog Level (H/L):		H
Source (New/Bnk/Mod):		NEW			Exam:		SR 2012-301
Test (RO/SRO):		RO			Author/Reviewer:		DB/PGC