EXAMINATION ANSWER KEY

CCNPP 2008 NRC SRO Exam

1 **ID: Q50399** **Points: 1.00**

Which of the indications listed below is the **ONLY** indication we will **ALWAYS** get for a reactor trip (other than DSS) when all systems are functioning normally?

A. Matrix relay status lights - out.

B. Protection Channel Trip Alarm .

C. Red Trip light on one trip unit.

D. CEDS NO CONTR VOLT

Answer: A

Answer Explanation:

For any RPS Trip the Matrix relay status lights must be out, as this is how the TCB UV coils are denergized and the SHunt trip energized.

A protection Channel Trip Alarm will be in for most automatic trips , but if a manual trip is inserted using the PB on 1C05 or 1C15 below 14%, you will not have a protection channel trip alarm

Red Trip Light on one trip unit, only if you have had a trip signal for that unit's sensors. For manual trip this will not occur , subject to discussion above about protection channel trip alarm.

CEDS NO CONTR VOL alarm is in when you loose DC voltage for CED control movement, not trip path related

Question 1 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50399
User-Defined ID:	Q50399
Cross Reference Number:	LOI-059-1
Topic:	What response will we always get if RPS functions properly?
RO Importance:	3.4
SRO Importance:	3.9
KA Number:	41007EA205
Comments:	Bank Question Q18653 References, ALM Manual for 1c05- Page 9-10, page 73, also RPS lesson plans LOI-058-1-2 (Part 1) slides 39, 50, 62-67, 69, 71

2 **ID: Q50402** **Points: 1.00**

Unit-1 is in Mode 5. The Service water system is aligned for reduced load. 11 Service water Pump has been returned from maintenance. A breaker operability check has been performed, but no STP has been completed. 12 Service Pump handswitch is in Pull-To-Lock.
Which pump(s) can be credited for the Minimum Essential Equipment List (MEEL)?

A. Both 11 and 12 Service Water Pumps

B. 11 Service Water Pump only

C. 12 Service Water Pump only

D. Neither pump can be credited.

Answer: A

Answer Explanation:

Per NO-1-103 definition of available - IF the SSC can be placed in service in a functional or operable state by manual or automatic actuation it is available, or if it can be made ready for use within a short enough time to meet the intended use even if is not operable per technical specifications. SO both 11 & 12 Service water pumps can be made ready for use within a short period of time

Question 2 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	3.00
System ID:	50402
User-Defined ID:	Q50402
Cross Reference Number:	LOR-204-1-05 Q37769
Topic:	functional/available
RO Importance:	2.3
SRO Importance:	3.5
KA Number:	2.2.21
Comments:	Modified from LOR Q37769 References: NO-1-103 page 7

3 ID: Q20393 Points: 1.00

A Unit-1 plant cooldown is in progress with the following conditions:
-Plant was shutdown 30 hours ago following an extended full power run
-Shutdown cooling is in service using 11LPSI pump
-RCS temperature is 180 °F
-RCS pressure is 120 PSIA with a bubble in the pressurizer
-A component cooling leak has developed which will render both SDC heat exchangers unavailable

Which of the following options should be taken to control RCS temperature?

A. Allow RCS to heat up, then control RCS temperature by bleeding steam from the Steam generators

B. Verify RCS pressure is less than 170 PSIG and align a Containment Spray pump for shutdown cooling

C. Start a HPSI pump and open the PORVs to provide core cooling via RCS blowdown to containment

D. Start a charging pump and open the PORVs to provide core cooling via RCS blowdown to containment

Answer: A

Answer Explanation:

Allow RCS to heat up, then control RCS temperature by bleeding steam from the Steam generators--correct, per AOP- 3B.

Verify RCS pressure is less than 170 PSIG and align a Containment Spray pump for shutdown cooling--incorrect, this alignment still relies on the SDC heat exchangers are required for heat removal.

Start a HPSI pump and open the PORVs to provide core cooling via RCS blowdown to containment--incorrect, this results in needless containment contamination when S/Gs are available.

Start a charging pump and open the PORVs to provide core cooling via RCS blowdown to containment--incorrect, in addition to contaminating containment, this will not provide adequate cooling until greater than 100 hours after shutdown.

Question 3 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50406
User-Defined ID:	Q20393
Cross Reference Number:	
Topic:	Given conditions, determine the response actions for a loss of SDC.
RO Importance:	3.3
SRO Importance:	3.9
KA Number:	249
Comments:	Bank question Q20393 Used 7/2002 NRC exam References: AOP-3B, pages 43-60

4 ID: Q50407 Points: 1.00

U-1 is operating at 100% power when a loss of #11 125 volt DC bus occurs. Which of the following sets of statments are correct for these conditions:

A. 11A and 11B RCP breakers are tripped locally, 12A and 12B are secured from the Control Room, No feedwater is available, RCS heat input must be reduced

B. 11A and 12A RCP breakers are tripped locally, 11B and 12B are secured from the Control Room, No feedwater is available, RCS heat input must be reduced

C. 11A and 11B RCP breakers are tripped locally, 12A and 12B are secured from the Control Room, to protect them from possible damage

D. 11A and 12A RCP breakers are tripped locally, 11B and 12B are secured from the Control Room, to protect them from possible damage

Answer: D

Answer Explanation:

D is correct per AOP-7J XI. A.1.c, d.--Unit-1 rev. 19, and basis.

Question 4 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	5
Difficulty:	1.00
System ID:	50407
User-Defined ID:	Q50407
Cross Reference Number:	AOP-7J-02
Topic:	loss of #11 125 volt DC -trip RCPs
RO Importance:	3.7
SRO Importance:	4.1
KA Number:	42058AA201
Comments:	Modified from Q 39067 Reference AOP-7J XI. page 59-61 and AOP7J Basis page page 18 OPERATOR ACTIONS FOR LOSS OF 120 VOLT DC BUS References: AOP-7J

5 **ID: Q50409** **Points: 1.00**

U-1 is operating at 100% power when an event occurs and the following Alarms are noted:

- CONDS PPS DISCH PRESS LO
- SGFP(S) SUCT PRESS LO
- CNDSR HOTWELL LVL

The appropriate AOP is entered and actions taken. A Reactor trip occurs and EOP-0 was entered and the proper Optimal recovery procedure is now being implemented when the following indications are noted:

- MOTOR SYS NO FLOW
- TURB SYS NO FLOW
- 11 S/G < -380 inches
- 12 S/G - 300 inches
- CET temperature 562 °F
- Tcold rises from 550°F to 558°F in 30 seconds

Which of the following is correct for the conditions given:

A. Initiate Once-through core cooling because 11 S/G is less than -350 inches

B. Initiate Once-through core cooling because both S/G are less than - 300 inches with NO main or aux feed

C. Initiate Once-through core cooling because CETs are greater than 560°F

D. Initiate Once-through core cooling because Tcold has risen 5°F uncontrollably

Answer: D

Answer Explanation:

A is incorrect because it is only one S/G. Both must be less that -350".
B is incorrect because level is greater than -350".
C is correct per Step J.2
C is incorrect because it is not a requirement for initiation of OTCC although it is best to initiate OTCC prior to this temperature to ensure its success in cooling the core.
D. Initiate Once-through core cooling because Tcold has risen 5°F uncontrollably - correct per step J.2 of EOP
Basis: OTCC

References: EOP-3 rev. 2 step J.2 Initiate OTCC if both S/Gs are less than -350" or Tcold rises uncontrollably 5 degrees F or greater.

Question 5 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50409
User-Defined ID:	Q50409
Cross Reference Number:	
Topic:	IDentify the proper [procedure for the conditions and alarms
RO Importance:	3.5
SRO Importance:	3.6
KA Number:	2446
Comments:	New References: EOP-3 pages 22 -24 and EOP-3 basis pages 31 -33

6 **ID: Q50493** **Points: 1.00**

Upon receiving a Gaseous Waste Discharge (O-RE-2191) high rad alarm,(1) what automatic action(s) occur, and (2) what immediate followup action is needed?

A. (1) Shuts waste gas discharge CVs, O-WGS-2191 and 2192; (2)manually shut waste gas discharge header flow control valve, O-WGS-2191-PCV.

B. (1) Shuts waste gas discharge CVs, O-WGS-2191 and 2192; (2) Monitor WGST for reduction in pressure.

C. (1) Shuts waste gas discharge header flow control valve, O-WGS-2191-PCV; (2) purge waste gas discharge header.

D. (1) Shuts waste gas discharge header flow control valve, O-WGS-2191-PCV;(2) manually shut waste gas discharge CVs, O-WGS-2191 and 2192.

Answer: A

Answer Explanation:

Per alarm actions for D-1.1 0-WGS-2191-PCV must be shut as soon as possible to prevent lifting the Waste Gas discharge header relief from going to the waste gas surge tank. (ALM Manual 1C-22 Window D-1,1)

Question 6 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50493
User-Defined ID:	Q50493
Cross Reference Number:	LOI-077-1
Topic:	Upon receiving a Gaseous Waste Discharge (O-RE-2191) high rad alarm, what automatic action occurs an
RO Importance:	2.6
SRO Importance:	3.4
KA Number:	42060AA204
Comments:	Modified from Bank question LOI-077-1 References: ALM manual for 1C22 pages 102-103 Basis: Gaseous Waste Discharge High Rad Alarm Automatic Action

7 **ID: Q50403** **Points: 1.00**

Each answer lists two activities. Choose the answer where **BOTH** of the activities would be considered a NO-1-103 HIGHER RISK EVOLUTION. (Fuel is in the vessel.) **Consider each activity separately.**

A. 1. RCP seal replacement requiring reduced inventory.
2. Steam generator replacement.

B. 1. RCP seal replacement requiring reduced inventory.
2. Refueling operations.

C. 1. S/G nozzle dam installation.
2. Performing LLRT on the common SDC suction piping containment penetration.

D. 1. MOV 651 maintenance requiring SDC to be secured.
2. Refueling operations.

Answer: C

Answer Explanation:

Higher risk is defined as a plant configuration or condition during shutdown where the plant is more susceptible to an event causing the loss of a key safety function. If a contingency plan cannot provide comparable equipment/measures to the original Defense-in-Depth then the evolution is a Higher Risk Evolution. Typically, our higher risk evolutions are anything which puts us in reduced inventory and anything which secures all of SDC (i.e. LLRT or common suction header maintenance).
A is incorrect because Steam Generator replacement is not higher risk
B is incorrect because refueling operations are not higher risk.
C is correct because nozzle dam installation requires reduced inventory and LLRT on the common SDC suction piping containment penetration requires securing all of SDC.
D is incorrect because refueling ins not higher risk

Question 7 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	0
Difficulty:	2.00
System ID:	50403
User-Defined ID:	Q50403
Cross Reference Number:	204-1-02
Topic:	Each answer lists two activities. Choose the answer where BOTH of the activities would be
RO Importance:	2.6
SRO Importance:	3.9
KA Number:	2218
Comments:	Bank question Q24993 References : NO1-103 pages 9, 17,18, 38

8 **ID: Q50496** **Points: 1.00**

Which one of the following conditions would require the implementation of EOP-8?

A. Reactivity Control safety function cannot be met in EOP-0 due to no power available to CEA indications.

B. Reactor trips on S/G low level, and the EOP-0 flowchart recommends EOP-6 implementation.

C. EOP-5 is implemented and the intermediate Safety Function Acceptance Criteria is not being met.

D. The EOP-0 flowchart recommends implementing both EOP-2 and EOP-6.

Answer: C

Answer Explanation:

Reactivity Control is incorrect, EOP-0 accepts this condition for not meeting Reactivity.
Trip on S/G Low level, but flowchart recommends EOP-6 is incorrect, a single event diagnosis is possible.
Intermediate acceptance criteria not being met is correct, EOP-8 would be implemented if the Intermediate Safety Function is not met.
Flow chart recommends 2 EOPs . Optimal recovery procedure for EOP-5 incudes the effec of a loss of Offsite power (EOP-2)

References EOP-8 basis , III Entry Conditions), EOP-5 basis

Question 8 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	3.00
System ID:	50496
User-Defined ID:	Q50496
Cross Reference Number:	LOI-201-8
Topic:	Which one of the following conditions would require the implementation of EOP-8?
RO Importance:	3.5
SRO Importance:	4.0
KA Number:	44E09EA22
Comments:	Modified from bank question 25083 References :EOP-5 page 7, EOP-0 pages 19-23. Lesson Plan LOI-201-8-8 Slides 23 -26

9 **ID: Q50432** **Points: 1.00**

Unit 2 is operating at 100% power when the following are noted:

- 22B RCP Seal TEMP HI PRESS Alarm
- RCP CBO Temp HI Alarm
- 22B Middle Seal Pressure = ~ 1050 PSIA
- 22B Upper Seal Pressure = ~ 1040 PSIA
- VCT Pressure = 50 PSIG
- 22B Seal Bleed-off temperature = 185°F
- 22B Seal bleed-off flow = Zero

Which of the following directions should be given to the CRO and RO?

A. Commence an expeditious plant shutdown per OP-3, when the Rx is shutdown secure 22B RCP

B. Implement AOP-2A , trend the remaining seals, contact the System Manager immediately

C. Trip Unit 2 Reactor, implement reactivity portion of EOP-0 plaque, secure 22B RCP, complete EOP actions

D. Trip Unit 2 Reactor, secure 22B RCP, complete EOP actions

Answer: B

Answer Explanation:

Implement AOP-2A , contact the System Manager immediately is correct per ALM manual

Trip the reactor is action for seal bleed off > 200°F

Expeditious shutdown is for 2 failed seals, the Alm manual does not count the vapor seal as one of the 2 seals, even though with zero flow it appears that the vapor seal has failed.

If a trip is required then, the rx is tripped, reactivity is performed then the pump is tripped

Reference Alarm Manual 2C06 - Window E-51

Question 9 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	4.00
System ID:	50432
User-Defined ID:	Q50432
Cross Reference Number:	
Topic:	SRO -Given conditions parameter values and/or indications associated with the RCP seals ,determine t
RO Importance:	3.5
SRO Importance:	3.9
KA Number:	34003A201
Comments:	NEW References: Alarm Manual 1C06 pages 96-99

10 **ID: Q50404** **Points: 1.00**

A large break LOCA has occurred on Unit-2 and all RCPs have been tripped. The RO is attempting to verify subcooled natural circulation and reports the following:

Pressurizer Pressure is 150 PSIA being maintained by HPSI & LPSI flow
RCS Subcooling based on CETs is 5°F

Which one of the following set of conditions is the **minimum** needed to ensure adequate core cooling?

A. HPSI and LPSI flow appropriate for current RCS pressure AND Thot ~ 425°F

B. HPSI and LPSI flow appropriate for current RCS pressure AND Thot ~ 405°F

C. HPSI and LPSI flow appropriate for current RCS pressure AND Thot ~ 388°F

D. HPSI and LPSI flow appropriate for current RCS pressure AND Thot ~ 360°F

Answer: B

Answer Explanation:

Need to recognize that with CETs at 5°F subcooling, subcooled natural circulation is not being met.
Per EOP-5 Block Step IV. N 2, for verifying subcooled natural circulation , if natural circulation subcooling is not being met, then need to ensure no more than 50° superheat to ensure adequate core cooling.
Since RCS pressure is 150 PSIA the **minimum** conditions for providing at less than 50°F superheat

HPSI and LPSI flow appropriate for current RCS pressure AND Thot ~ 405°F - Correct would give < 50°F superheat (Sat temp for 150 PSIA = 358.4°F)

360°F would provide < 50°F but the question asked the minimum conditions to give < 50° superheat
388°F would provide < 50°F but the question asked the minimum conditions to give < 50° superheat
425°F would not provide < 50°F

Question 10 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50404
User-Defined ID:	Q50404
Cross Reference Number:	LOR-02201O1O1
Topic:	A large beak LOCA has occurred on Unit-2 and subcooled natural circulation cannot be verified, which
RO Importance:	4.2
SRO Importance:	4.3
KA Number:	41011EA209
Comments:	Modified based on Based on Q19573 Reference: EOP-5, page 40 , EOP-5 basis pages 49-52

11 **ID: Q50450** **Points: 1.00**

Using provided reference(s):

U-1 is at power with PT-102B out of service, the affected RPS bistables were bypassed to remove the tripped condition. During the shift PT-102D began to act erratically resulting in its associated RPS bistables tripped. (a.)What is the effect on RPS immediately after PT-102D bistables tripped, and (b)what actions are required to continue operation at power ?

A. (a.) The RPS is in a 1 of 2 logic condition to trip . (b.) Within 48 hours of declaring PT-102D inoperable, restore either PT-102B or PT-102D to operable status and maintain the RPS functional bistables associated with the remaining PT out of service in a tripped condition.

B. (a.) The RPS is in a 2 of 3 logic condition to trip . (b.)Within 48 hours of declaring PT-102B inoperable, the affected RPS bistables applicable to PT-102B are tripped if unable to restore to operable status.

C. (a.) The RPS is in a 1 of 2 logic condition to trip . (b.) Within 48 hours of declaring PT-102D inoperable, bypass the affected RPS bistables associated with PT-102D and then remove the bypass keys from the functional RPS bistables affected by PT-102D to trip them.

D. (a) The RPS is in a 2 of 3 logic condition to trip . (b) Within 48 hours of declaring PT-102B inoperable, restore either PT-102B or PT-102D to operable status and maintain the RPS functional bistables associated with the remaining PT out of service in tripped condition.

Answer: A

Answer Explanation:

Need to understand that with trip units bypassed you are in 2 of three logic, and when the other channel fails you are in 1 of two logic condition

With one channel out of service, the RPS is in a two of three logic, when the second channel is tripped you are in a one of two logic to trip. Per technical specification 3.3.B 2 need restore to operable within 48 hours.

Question 11 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50450
User-Defined ID:	Q50450
Cross Reference Number:	
Topic:	PT-102D was declared inoperable
RO Importance:	3.4
SRO Importance:	3.7
KA Number:	37012A203
Comments:	Modified from Q14450 References : Technical Specification 3.3.1-1 through 3.3.1-5 Provide as reference all of T.S 3.3.1B.2

12 **ID: Q50451** **Points: 1.00**

U-1 is in Mode 5 for a maintenance outage. ESFAS sensor cabinet ZF (1C94) is to be shutdown for cleaning and inspection. (a) Whose permission is required to deenergize Sensor cabinet ZF (1C94), (b.) will any action statement entry be required?

A. (a) GS, Shift Operations, (b) No, ESFAS operability is not required.

B. (a) Shift Manager, (b) No, ESFAS operability is not required.

C. (a.) Shift Manager, (b.) Yes, one UNIT 1 EDG will be inoperable

D. (a) GS, Shift Operations, (b.)Yes, one Containment Radiation Sensor module is inoperable.

Answer: B

Answer Explanation:

Reference

Question 12 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50451
User-Defined ID:	Q50451
Cross Reference Number:	CRO-63-1-3-54
Topic:	U-1 is in Mode 5 for a maintenance outage. ESFAS sensor cabinet ZF (1
RO Importance:	2.3
SRO Importance:	3.5
KA Number:	2221
Comments:	Modified from Q17459 References: Tech Spec 3.3.4-1 through 3.3.4-4 And OI-34 Appendix A page 1

13 **ID: Q50453** **Points: 1.00**

Given a large steam rupture inside containment in each case, (a) which condition would result in the highest containment temperature? and (b.) which equipment would need to be started to mitigate this consequence?

A. (a.) failure of CIS Channel B to actuate, (b.) Open IA-2080-MOV

B. (a.) failure of SIAS Channel A to actuate, (b.) start one(1) Containment Spray pump

C. (a.) failure of CSAS Channel B to actuate, (b) Open one(1) Containmen Spray CV

D. (a.) failure of SGIS Channel A to actuate, (b.) Shut one(1) Main Feed Isolation Valve

Answer: B

Answer Explanation:

failure of SIAS Channel A to actuate--is correct. One train of containment coolers would fail to operate, and one train of containment spray would fail to operate (spray pump would not start).

Failure of CIS channel B would not appreciably change containment parameters unless an instrument air leak also existed.

Failure of CSAS channel B to actuate would result in only a spray train failure (one spray valve would remain shut) but all containment coolers would operate.

Failure of SGIS channel A to operate is incorrect, each channel operates all required equipment.

Question 13 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	5
Difficulty:	3.00
System ID:	50453
User-Defined ID:	Q50453
Cross Reference Number:	
Topic:	EVALUATE plant conditions and/or parameters and DETERMINE the following: a. ESFAS signal status
RO Importance:	4.3
SRO Importance:	4.7
KA Number:	32013K303
Comments:	Modified from Q 20347 Used on 7/2002 NRC exam, References:LD-58, EOp-5 basis page 32-35

14 **ID: Q50455** **Points: 1.00**

Unit 2 is operating at 100% power during the month of August. Conditions are as follows:

Outside Air Temperature (102°F)
Bay Temperature 82°F

Alarm "TURB BLDG SRW HDR PRESS LO" has been intermittently alarming. Which of the following is an appropriate action to take for this alarm?

A. Determine that the alarm be "Blue Dotted"

B. Determine that the alarm be "Black Dotted"

C. Determine that the alarm be "Yellow Dotted"

D. Determine that the alarm be "Red Dotted"

Answer: A

Answer Explanation:

Per CNG-OP-1.01 and ALM manua 1C-13 K22 possible cause, this alarm should be blue dotted.

Since the alarm is a nuisance alarm a blue dot would indicate that it is locked in.

Black dot would not be used since the there is no maintenance being performed that causes this alarm.
Red dot is for a tagging activity
Yellow dot is for one or more inputs out of service

Question 14 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50455
User-Defined ID:	Q50455
Cross Reference Number:	
Topic:	SRO - Given conditions, indications, and/or parameter values associated with inoperable SRW alarms,
RO Importance:	3.0
SRO Importance:	3.3
KA Number:	2243
Comments:	NEW Reference CNG-OP-1.01-2003 page 5 and Alarm Manual for 1C-13 page 39

15 **ID: Q50456** **Points: 1.00**

Using provided reference:

Unit 1 was operating at 100% power when a large Loss of Coolant Accident (LOCA) occured. EOP-5 has been implemented. Hydrogen concentration has risen to .5% and it is desired to start the Hydrogen Recombiners. The following conditions exist:

CNTMT TEMP Pre- accident = 90°F
A CSAS has just occured

Which of the following is the appropriate recombiner power?

A. 57 KW

B. 60 KW

C. 63 KW

D. 65 KW

Answer: B

Answer Explanation:

Per the graph of OI-41A with a Cntmt temp of 225°F assume saturation conditions = Press of 4 psig
which gives a KW of 60 KW

Question 15 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50456
User-Defined ID:	Q50456
Cross Reference Number:	
Topic:	SRO - Given Conditions, parameter values and/ror indications associated with the Hydrogen recombiner
RO Importance:	3.4
SRO Importance:	3.8
KA Number:	35028A201
Comments:	NEW Reference OI-41A page 5 and Figure 1

16 **ID: Q50458** **Points: 1.00**

GIven the following conditions:

Unit 1 is in Mode 6
Fuel Handling is in progress
Containment Purge is in operation

You are the OWC and a request has been made to do a functional test of the following Radiation Monitors one channel at a time. Which of the following should you **NOT** aprove**?**

A. Fuel Handling Area Monitor (RI-5420)

B. Wide Range Noble Gas Monitor (RIC-5415)

C. Containment Area Radiation Monitor (RI-5316)

D. Containment ICI Area Monitor (RI-7008)

Answer: C

Answer Explanation:

Since RI-5316 has an auto action to secure purge on two of 2 of 4 channels actuating, a conservative decision would be to not allow this testing even though he would be testing one channel at a time.

Question 16 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50458
User-Defined ID:	Q50458
Cross Reference Number:	CRO-134-1/4.1
Topic:	SRO - Apply appropriate conservative decision making practices for Area Radiation Monitoring
RO Importance:	3.6
SRO Importance:	4.3
KA Number:	2139
Comments:	Bank question References: Oi-35 pages 56-57, and Table 1 page 3

17 **ID: Q50459** **Points: 1.00**

Using provided reference(s):

A tornado on site results in a Loss of Offsite Power and damage to 11 CST. Both units were tripped at 1600 on 4/3. All other systems and equipment operated as expected.

Based on the following CST inventories taken at 1700, approximately how long can U-2 remain in Hot Standby?

11 CST - Punctured by tornado debris, no useable level
12 CST - 29'
21 CST - 21.5'

A. 0500 on 4/4

B. 1100 on 4/6

C. 0900 on 4/5

D. 2300 on 4/4

Answer: C

Question 17 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50459
User-Defined ID:	Q50459
Cross Reference Number:	SRO-201-2-1-10
Topic:	Time to remain in hotstandby, 12 CSTunavailable
RO Importance:	2.8
SRO Importance:	3.1
KA Number:	2125
Comments:	Modified from Q26566 Reference: are EOP attachment 9 (5 pages) The available CST volume available to U-2 is ~308,000 gallons once calculated using the EOP Attachment (9) for U-2. Looking at the graph for Makeup water required to maintain Hot Standby, a time of ~40 hours is determined, or 4/5 at 0900. Answer A is incorrect since it utilizes the same input parameters but uses the U-1 EOP Attachment (9) to perform the calculation rather than the U-2 Attachments, resulting in a 12 hour allowance. Answer C is incorrect if, during the calculation on the U-2 Attachment (9), the 12 CST volume is not divided by 2, yielding ~66 hours. Answer D is incorrect if, during the calculation on the U-1 Attachment (9), the 12 CST volume is not divided by 2, yielding ~30 hours.

18 **ID: Q50462** **Points: 1.00**

During movement of irradiated fuel, a 30 gpm leak in the refueling cavity hatch seal requires that fuel handling cease. The refueling machine operator has just removed a fuel assembly from the core and is indexed over the upender. The transfer carriage is in the refueling cavity and vertical. What actions should the FHS direct?

A. Immediately secure the refueling machine and evacuate containment.

B. Send the carriage to the spent fuel pool, return the fuel assembly to its previous core location.

C. Place the fuel assembly in the deep pocket, beside the upender and shut the transfer tube gate valve.

D. Place the fuel assembly in the upender carriage, send it to the spent fuel pool and shut the transfer tube gate valve.

Answer: D

Answer Explanation:

D is correct per AOP 6E

Question 18 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50462
User-Defined ID:	Q50462
Cross Reference Number:	
Topic:	Action for stopping core alterations
RO Importance:	3.0
SRO Importance:	4.1
KA Number:	2136
Comments:	Bank question Q14516 Reference AOP 6E pages 8-11

19 **ID: Q45548** **Points: 1.00**

Using Provided references:

An MO was generated to work a deficiency on 13 AFW pump. The deficiency is a clouded oil sight glass.The pump is still functional. It cannot be worked by FIN and must be planned and scheduled. Operations is concerned about the deficiency and it has operator compensatory actions associated to it, however it requires the13 AFW pump to be declared inoperable and removed from service to perform the work. What priority and schedule should this MO be?

A. 4 - White, Schedule as resources allow with the normal process

B. 2- Yellow, Schedule at earliest opportunity within T-3

C. 3 - Orange, schedule at next available system week with 13 week matrix

D. 1 - Red, Begin immediately and work around the clock

Answer: C

Answer Explanation:

Per CNG-MN-4.01 -1002, attachment 1, Online prioritization matirx, Since this is elective maintenance - 3 - Orange, schedule at next available system week with 13 week matrix is correct

Question 19 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50464
User-Defined ID:	Q45548
Cross Reference Number:	
Topic:	Explain the priority system and maintenance order worktypes, and how they are not related
RO Importance:	2.6
SRO Importance:	3.9
KA Number:	2218
Comments:	NEW Question Reference CNG-MN-4.01 attachment 1. Note: Attachment one should be provided

20 **ID: Q50469** **Points: 1.00**

During an outage on Unit one, it is necessary to perform a task in the Auxiliary Building. A point source in the Auxiliary Building is reading 500 mrem/hr at a distance of two (2) feet. Two options exist to complete the task near this radiation source.

Option 1: Operator A can perform the task in thirty (30) minutes working at a distance of four (4) feet from the point source.

Option 2: Operator B & C, who have been trained in the use of a special extension tool can perform the same task in seventy-five (75) minutes at a distance of eight (8) feet from the point source.

Which of the following options is preferable and consistent with CCNPP ALARA practices?

A. Option 1 since Operator A.s exposure is 62.50 mrem

B. Option 1 since operator A.s exposure is 31.25 mrem

C. Option 2 since the exposure is 78.12 mrem per person

D. Option 2 since the exposure is 31.25 mrem per person

Answer: A

Question 20 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50469
User-Defined ID:	Q50469
Cross Reference Number:	
Topic:	Procedures for minimizing dose hazards
RO Importance:	2.9
SRO Importance:	3.1
KA Number:	2218
Comments:	New Question Reference RP-1-10 page 45, Attachment 2 pages 1-4

21 **ID: Q25069** **Points: 1.00**

A reactor trip has occurred from full power on Unit-2. The following conditions exist:

-Reactivity Control is complete.
-Pressurizer level has stabilized at 120".
-No automatic ESFAS actuations have occurred.
-RCS pressure is 1710 psia and slowly decreasing.
-Both SG levels are -150" and decreasing.
-SG pressures are 785 psia
-Tcold is 516 degrees F and decreasing

Which of the following operator actions is required?

A. Manually initiate SIAS, trip 2 RCPs and shut the MSIVs.

B. Manually initiate SIAS, SGIS and trip all RCPs.

C. Manually initiate SIAS, CIS and AFAS.

D. Block SIAS, throttle AFW flow and shut the MSIVs.

Answer: A

Answer Explanation:

D is correct, SIAS should have been initiated by 1725 psia, per EOP-0, 2 RCPs are tripped after verifying SIAS.
A is incorrect, RCS pressure is high enough to support 2 RCPs running per Attachment 1 and SGIS is not required to initiate above 685 psia S/G pressure.
B is incorrect, AFAS setpoints are not challenged and there is no information to support initiating CIS.
C is incorrect, SIAS should not be blocked in EOP-0; although, not stated, it is it is inferred that the conditions are shortly after the trip. Also, with S/G levels dropping throttling AFW should not be accomplished at this point.
Basis: RX TRIP.

Question 21 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	0
Difficulty:	2.00
System ID:	25069
User-Defined ID:	Q25069
Cross Reference Number:	201-0-8-S-02
Topic:	A reactor trip has occurred from full power on Unit-2. The following conditions exist: (1)
RO Importance:	3.7
SRO Importance:	4.3
KA Number:	245
Comments:	Bank Q25069 References: EOP-0 pages 13 -16

Question 21 Table-Item Links

A / O Training Program

Licensed Operator Requal Training (LOR)

Operations Procedure References (from Nucleis)

EOP EOP-04-1 EXCESS STEAM DEMAND EVENT

System Designations

Emergency Operating Procedures (EOPs)

22 **ID: Q50470** **Points: 1.00**

A fault has occurred on P-13000-2, resulting in a U-2 reactor trip. During EOP-0, the 2B DG experienced a start failure. Given the following additional plant conditions, what Optimal Recovery Procedure should be implemented?

Boration in progress with no CEA indication
RCS pressure 1890 psia and lowering
Pzr Level 130 inches and slowly lowering
RCS Tcold 520°F and lowering
RCS Subcooling is 107 °F
21 SG Pressure 835 psia and steady
22 SG Pressure 705 psia and lowering
21 SG Level (-)105 inches and slowly rising
22 SG Level (-)180 inches and lowering
Containment Environment and Rad Levels External to Containment are met

A. EOP-6

B. EOP-2

C. EOP-4

D. EOP-5

Answer: C

Answer Explanation:

Based on EOP-0 diagnostic flow chart, Core and RCS Heat Removal would not be met, and subcooled would be high, along with 22 S/G pressure lowering and 22 S/G level lowering. This would lead to the conclusion that an excess steam demand event is in progress.

Question 22 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50470
User-Defined ID:	Q50470
Cross Reference Number:	
Topic:	Given conditions determine the optimal recovery procedure
RO Importance:	3.7
SRO Importance:	4.3
KA Number:	2421
Comments:	Modified from 245 References : EOP-0 pages 19-23 Provide diagnostic flow chart

23 **ID: Q50463** **Points: 1.00**

Unit 1 is operating at 50% power pending repairs on 11 Condensate Pump. 11 Condensate Pump repairs are complete and it is desired to return it to service. Which of the following describes the required sequence of operations when restoring 11 Condensate pump to service? Refer to the following :

1-CD-126, 11 COND PP VENT VLV
1-CD-104, 11 COND PP SUCTION VLV
1-CD-106, 11 COND PP DISCH VLV

A. Open 1-CD-126, Throttle Open 1-CD-104 , then fully open 1-CD-104, then fully open 1-CD-106, then start 11 Condensate pump

B. Open 1-CD-126, Throttle Open 1-CD-104 , then fully open 1-CD-104, then start 11 COND PP, then open 1-CD-106

C. Open 1-CD-126, then fully open 1-CD-104, then fully open 1-CD-106, then start 11 Condensate pump

D. Open 1-CD-126, then fully open 1-CD-104, then start 11 Condensate pump, then fully open 1-CD-106,

Answer: A

Answer Explanation:

1-CD-104 should be throttled open first to check for effects on the operating pumps then it is fully opened, the discharge valve is fully opened before the pump is started. REF OI-11A sect 6.20 restoring a condensate pump after maintenance.

Question 23 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	3.00
System ID:	50463
User-Defined ID:	Q50463
Cross Reference Number:	
Topic:	Actions for restoring a condensate pump to service
RO Importance:	2.1
SRO Importance:	3.0
KA Number:	2214
Comments:	New Reference:OI-11A pages 64-65

24 **ID: Q20602** **Points: 1.00**

Unit 2 is in Mode 6 with refueling in progress and Containment Purge in service. A momentary loss of power causes the operating Main Exhaust Fan to trip.
What is the most likely effect on containment parameters?

A. Containment refueling pool level changes

B. Containment pressure rises 1 to 2 PSIG

C. Containment area radiation monitors (RE-5316-A through -D) indicate higher

D. Containment temperature rises 5 to 10 degrees F

Answer: A

Answer Explanation:

Refueling pool level changes--correct per OI-36 general precaution F. The Main Exhaust Fan tripping would cause Containment Purge to secure. This would change conatinment pressure by several tenths PSIG, with the transfer tube gate valve open, pool level will change accordingly due to the differential pressure between the SFP area and containment.

Containment temperature rises 5 to 10 degrees--incorrect, depending on weather, and status of plant heating to Purge, temperature could fall.
Containment pressure rises 1 to 2 PSIG--incorrect, containment pressure will change, but experience indicates, the change will be less than .5 PSIG.

Area radiation monitors (RE-5316A-D) indicate higher--incorrect, the area monitors would not change in Purge is lost.

Question 24 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50497
User-Defined ID:	Q20602
Cross Reference Number:	CRO-134-1-5-44
Topic:	Containment parameter changes on loss of Purge
RO Importance:	2.8
SRO Importance:	3.7
KA Number:	2.1.41
Comments:	Bank Question Used 7/2002 NRC exam References: OI-36, page 5

25 **ID: Q50499** **Points: 1.00**

Unit 1 and 2 are operating at 100% power with the following complement of Licensed Operators and Senior Operators:

- SM (1) Senior Licensed Operator
- CRS(2) Senior Licensed Operators
- CRO(4) Licensed Operators
- STA /OWC(1) Senior Licensed Operator

At approximately 0000 one of the Licensed CROs becomes sick and must go home. Which of the following is required to meet the staffing requirements of NO-1-200?

A. Immediately get a relief within 2 hours.

B. Within 2 hours take action to obtain a relief within 4 hours.

C. OWC must assume the duties of the sick CRO to meet minimum staffing.

D. No action is required since we meet minimum staffing.

Answer: D

Answer Explanation:

Per NO-1-200 the shift manager can authorize operating at less than the table complement of NO-1-200 as long as we meet the minimum requirements of 10 CFR 50.54 which requires 3 LIcensed Operators

Question 25 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50499
User-Defined ID:	Q50499
Cross Reference Number:	
Topic:	Actions required to meet minimum staffing levels
RO Importance:	3.3
SRO Importance:	3.8
KA Number:	214
Comments:	New Question References for this question are; NO-1-200 section 5.1 Table page 24 a 10 CFR 50.54(m))2_)i) Technical Specifications pages 5.2.2 ,5.2-3 and 5.2-4

1 **ID: Q50230** **Points: 1.00**

Unit 1 was operating at 100% power MOC when an event occured. The appropriate AOP was entered, appropriate actions were taken and the reactor was manually tripped. No other actions have been taken. The following conditions now exists:

1. Pressurizer pressure is1724 PSIA and lowering
2. RCS Tcold is 530°F and steady
3. S/G Press is ~880 PSIG on both S/Gs
4. Pressurizer level is 185" and rising
5. All CHG pumps are operating
6. Letdown is isolated
7. CNTMT Pressure is 1.7 PSIG and slowly rising

Which of the following action and reasoning is correct for the conditions given:

A. TRIP 11A & 12B RCPs to minimize heat input into the RCS

B. TRIP 11B & 12B RCPs to minimize coolant inventory loss from the RCS

C. TRIP 11A & 12B RCPs to minimize coolant inventory loss from the RCS

D. TRIP 11B & 12A RCPs to minimize heat input into the RCS

Answer: C

Answer Explanation:

Choice C is correct based on EOP-5 Basis. The EOP basis says that the RCP trip strategy ensures RCPs are secured for a small break LOCA (the hot leg case being more restrictive), while at the same time allowing two or more RCPs to remain running in the event of a non- LOCA. The incentive for stopping all RCPs during a LOCA is to minimize coolant inventory loss from the RCS. Further, it states that if RCS pressure drops to 1725 PSIA, as a result of the event, then trip RCPs so that either of the following pairs of RCPs remain running : 11A and 12B (21A and 22B) RCPs, or 11B and 12A (21B and 22A) RCPs, and to trip all RCPs if CIS has actuated, Component Cooling flow can not be verified to the RCPs, or if RCS temperature and pressure are less than the minimum pump operating limits.
THe conditions given support the conclusion that the trip strategy should be implemented.
Distractor A is incorrect since it states an incorrect basis for the trip two leave two strategy, the strategy is not based on minimizing heat input into the reactor.
Distractor B is incorrect since it lists and incorrect pair of RCPs to trip
Distractor D is incorrect since it lists and incorrect Basis for the trip two leave two strategy

Question 1 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50230
User-Defined ID:	Q50230
Cross Reference Number:	
Topic:	Given a small break LOCA (Pressurizer steam space) and appropriate conditions and parameter values,
RO Importance:	4.2
SRO Importance:	4.6
KA Number:	42008AK304
Comments:	New Question Reference EOP-5 Basis page 27 & 28 (Basis for step IV.E EOP-5 Unit 1 page 11

2 **ID: Q50231** **Points: 1.00**

Unit 2 was operating at 100% power when the following conditions were noted:

1. Pressurizer level is 195" and slowly lowering
2. RCS Tavg is 570°F and steady
3. 21 & 22 CHG pumps are operating
4. Letdown is at minimum
5. Pressurizer pressure is 2100 PSIA and slowly lowering

The appropriate AOP was entered and a reactor trip was manually initiated and EOP-0 was entered. The appropriate optimal EOP has been entered and now the following conditions exists:

1. 21 SG Level is - 115"and steady
2. 22 S/G level is - 90" and steady
3. 23 AFW pump is operating feeding both S/G
4. Pressurizer pressure is 1340 PSIA and slowly lowering
5. 21 & 23 HPSI pumps are running
6. Tcold is 526°F and steady
7. No process Radiation Monitors are in alarm

Which of the following is correct based on the conditions listed above

A. Heat removal is adequate based on 22 S/G level only

B. Heat removal is adequate based on 21 or 22 S/G

C. Heat removal is inadequate based on 21 & 22 S/G levels

D. Heat removal is inadequate based on 21 S/G only

Answer: C

Answer Explanation:

Distractor A is incorrect since 22 S/G level is -90" which is below the top of the tube bundle (-72"). Per the EOP-5 basis fpr Step IV. L on page 45. the safety analyse for small break LOCA assumes the S?G tubes are covered during recovery to permit adequate HPSI flow..

Adequate RCS heat removal will be maintained as long as at least one S/G has feedwater capability so its level can be maintained and has steaming capability so energy can be removed from the S/G. The S/Gs are checked to ensure either main or auxiliary feedwater is maintaining adequate S/G water level.

Maintaining at least one S/G as a heat sink available for RCS heat removal and cooldown is especially important in the case of a small break LOCA where RCS coolant leaking from the rupture is insufficient to remove the decay heat being produced. The Safety Analysis for Small Break LOCA assumes that the S/G tubes are covered during recovery to permit adequate HPSI flow. In addition, maintaining S/G water level above the top of the U-tubes provides sufficient static pressure head to prevent migration of containment radioactivity to the S/G secondary side.

Question 2 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50231
User-Defined ID:	Q50231
Cross Reference Number:	
Topic:	Given indications of a SBLOCA, and parameters associated with the S/Gs, evaluate the conditions to d
RO Importance:	3.0
SRO Importance:	3.3
KA Number:	41009EK203
Comments:	New question Reference EOP-5 Basis EOP 5 basis block step IV.L for restoring S/G level

3 **ID: Q50232** **Points: 1.00**

Unit 1 has been in a Station Blackout for the last hour. Power has just been restored to 11 4KV Bus via high line 5051. The crew is evaluating restoring CCW and restarting 11A RCP. 11A RCP temperatures were hotter than 11B, 12A and 12B RCP temperatures by 5°F. Given 11A RCP lower seal temperature reached 284°F and Controlled Bleed-off (CBO) temperature of 260°F, which one of the following actions is acceptable?

A. CCW flow can be reestablished but must be throttled since 11 A RCP lower seal temperature was 284°F

B. CCW flow can be reestablished to the RCPs by simply opening the CNMNT isolation valves since CBO flow remained less than 280°F

C. After CCW flow has been reestablished, restart one of the other RCPs (all conditions met) since their CBO remained less than 260°F

D. After CCW flow has been reestablished, 11A RCP can be restarted (all conditions met) since CBO remained less than 280°F.

Answer: A

Answer Explanation:

B. is incorrect, since lower seal temperature reached 284°F, CCW must be throttled on reinitiation.
A. is correct per EOP-7.
C. & D. are incorrect because with CBO temperature exceeding 250°F, the seals must be rebuilt.
NO-1-200 recommends that if CCW can be restored it should, even though you may not be able to run RCPs

Based on AOp7C block step VI. E.4 on pg 30

Question 3 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50232
User-Defined ID:	Q50232
Cross Reference Number:	LOR-0201-001
Topic:	Unit 1 has been in a Station Blackout for the last hour. Power has just been restored to 11 4KV Bus
RO Importance:	2.6
SRO Importance:	2.6
KA Number:	42015AK208
Comments:	Reference AOP7C Block step VI.E.4 pg 30 Modified from bank question 201237S01

4 **ID: Q50250** **Points: 1.00**

Unit 1 is operating at 100% power with the following conditions:

- 12 Charging Pump is running.
- 11 & 13 Charging Pump hand switches are in NORMAL.
- Backup Charging Pump Selector Switch is in the 13-11 position.

11 KV Bus normal feeder breaker trips and 1A D/G starts, energizes 11 4KV Bus and successfully sequences its loads on the Bus. Shortly thereafter the following occurs:

- 12 Charging Pump trips and no operator actions are taken.

SELECT the statement that best describes the response of the Chemical and Volume Control System (CVCS) to this event.

A. Letdown flow will lower to and remain at ~30 GPM due to lowering pressurizer level.

B. Letdown flow will stabilize at a lower value until a backup charging pump is started, then return to the normal value.

C. Letdown flow will bypass the in-service CVCS ion exchanger due to high temperature downstream of the Letdown Heat Exchanger

D. Letdown will isolate due to high temperature downstream of the Regenerative Heat Exchanger

Answer: D

Question 4 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50250
User-Defined ID:	Q50250
Cross Reference Number:	
Topic:	Given a loss or malfunction of the CVCS system, identify the effects on pzr level and determine the
RO Importance:	3.0
SRO Importance:	3.4
KA Number:	42022AK103
Comments:	New Question Reference RCS Lesson Plan Alarm Manual for 1C07 F-01 (Pg 6), F-05 (Pg014), F-06 (Pg16)

5 **ID: Q20569** **Points: 1.00**

Which condition would cause a SDC loop to be inoperable?

A. Placing the standby LPSI pump handswitch in Pull-to-Lock

B. Shutting 11 LPSI pump Normal Suction Isolation, 1-SI-444

C. Shutting 11 Component Cooling Supply Header Isolation, 1-CC-162

D. Placing 13 CC pump handswitch in Pull-to-Lock

Answer: C

Question 5 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	20569
User-Defined ID:	Q20569
Cross Reference Number:	
Topic:	Which condition will cause a SDC loop to be inoperable?
RO Importance:	3.2
SRO Importance:	3.2
KA Number:	42025AK202
Comments:	Shutting 11 Component Cooling Supply Header Isolation, 1-CC-162--correct, this isolates 11 SDC heat exchanger. Placing the standby LPSI pump handswitch in Pull-to-Lock--incorrect, auto start of a LPSI is not required. Shutting 11LPSI pump Normal Suction Isolation, 1-SI-444--incorrect, this vavle is normally shut when aligned for SDC, it is the suction from the RWT. Placing 13 CC pump handswitch in Pull-to-Lock--incorrect, 13 CC pump being out of service does not render either train of CC out of service. Used 7/2002 NRC exam Loss of decay heat removal-54% contribution to CDF sequence References: Technical Specifications basis for 3.4.7 page 3.4.7-4, OI-3B pg 14-21

Question 5 Table-Item Links

System Designations

Containment Spray

Safety Injection System

6 **ID: Q15864** **Points: 1.00**

With the plant in a normal electrical lineup, a loss of offsite power occurs and the 1B DG fails to start. What will occur as the CRO attempts to start 13 CCW pump?

A. Pump fails to start due to its bus alignment

B. Pump starts as the breaker closes with power available to motor.

C. Pump fails to start due to loss of 125 VDC control power.

D. Pump starts when signal received from the shutdown sequencer step timing out.

Answer: A

Question 6 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	15864
User-Defined ID:	Q15864
Cross Reference Number:	
Topic:	normal power alignments for the CCW pmps
RO Importance:	2.9
SRO Importance:	3.6
KA Number:	42026AA202
Comments:	References CCW Lesson Plan Slide 20 Modified version of Q15864 Consider adding the alarms, CCW PPS SIAS AUTO STAFT BLOCKED CCW PP BRK LU Improper

Question 6 Table-Item Links

A / O Training Program

License Operator Initial Training (LOIT)

System Designations

Electrical 480V Motor Control Centers

Electrical 480V Transformers and Buses

7 ID: Q50251 Points: 1.00

Given the following conditions:

Unit-1 at 100% power
Pressurizer pressure is 2250 PSIA
PZR backup and proportional heater control is in AUTO
1-HS-100 (PZR pressure control) in the "Y" position
1-HS-100-3 (PZR htr cutoff) in the "X+Y" position
1-PT-100Y fails high

Select the expected PROPORTIONAL HEATER response. Assume no operator action

A. Proportional heaters will operate at approximately 1/3 higher power than before the failure

B. Proportional heaters will operate at approximately 1/3 lower power level than before the failure

C. Proportional heaters will be at minimum and the red lights will be illuminated

D. Proportional heaters will be at minimum and the green lights will be illuminated

Answer: C

Answer Explanation:

Proportional heaters will be at minimum and the red lights will be illuminated--correct, heaters will respond as if RCS pressure were high.

Proportional heaters will operate at approximately 1/3 higher power than before the failure--incorrect, power to the heaters lowers on high pressure.

Proportional heaters will operate at approximately 1/3 lower power level than before the failure--incorrect, pressure difference will be outside the control band, causing minimum power to be sent to the heaters.

Proportional heaters will be at minimum and the green lights will be illuminated--incorrect, green/red lights are function of breaker positions, supply breakers remain shut.

Used 7/2002 NRC exam

Question 7 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	2.00
System ID:	50251
User-Defined ID:	Q50251
Cross Reference Number:	
Topic:	Given conditions, parameter values and a malfunction of a PPCS input, predict the response of the PP
RO Importance:	4.0
SRO Importance:	3.9
KA Number:	42027AA101
Comments:	Bank question used on 2002 NRC Exam Reference RCS- Instrumentation Lesson LOI-064A2 Slides 69-77, 110 -116

8 **ID: Q44467** **Points: 1.00**

When a containment entry is required at power, what are Operations' responsibilities concerning lighting in containment?

A. Operations is responsible for manipulating all the required lighting breakers.

B. Operations is responsible for only the lighting breakers located inside the containment.

C. Operations is only responsible for opening/closing breaker 52-10511(52-20511).

D. Operations is responsible for none of the containment lighting breakers.

Answer: C

Answer Explanation:

Per NO-104, attachment Attachment 2, steps B. 3 and 5, and attachment 4, Health Physics is responsible for the lighting breakers other than the 69'. Per step A.13, (and attachment 4) the Control Room opens and closes the breakers for 69' lighting.

Question 8 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	5
Difficulty:	1.00
System ID:	50510
User-Defined ID:	Q44467
Cross Reference Number:	
Topic:	Ops responsibilities for containment lighting.
RO Importance:	3.2
SRO Importance:	3.7
KA Number:	2312
Comments:	Bank Question References Per NO-104, attachment Attachment 2, steps B. 3 and 5, and attachment 4,

9 **ID: Q50252** **Points: 1.00**

When responding to a SGTR which of the following set of parameters should be used to identify the most affected S/G:

A. Steam Flow-Feed Flow Mismatch, Main Steam Line RMS

B. S/G Level Trends, S/G blowdown RMS

C. Steam Flow-Feed Flow Mismatch, S/G blowdown RMS

D. S/G Level Trends, post trip bypass feed regulating valve position

Answer: A

Answer Explanation:

Choice A is correct per EOP-6 Basis
Choice B is incorrect since per EOP-5 basis the blowdown RMS cannot be used since it measures common RMS
Choice C is incorrect since it also uses S/G Blowdown monitor which is common
Choice D is incorrect since post trip the bypass valve goes to 56%

Question 9 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50252
User-Defined ID:	Q50252
Cross Reference Number:	
Topic:	Given conditions, parameter values associated with the Steam Flow indicators, determine that a SGTR
RO Importance:	3.7
SRO Importance:	3.6
KA Number:	41038EA113
Comments:	New Question References : EOP-6 basis for step IV.J on page 36, Main Steam and Blowdown LP Slide 86 , LOI-083-1

10 **ID: Q50253** **Points: 1.00**

A manual reactor trip from 100% power was initiated due to an event in progress. Upon entry into the appropriate optimal recovery procedure the following parameters are observed:

11 S/G level is -50 inches and lowering
12 S/G level is - 30 inches and lowering
CNTMT pressure is 4.25 psig and rising
All electrical busses are energized from their normal power supplies.
Pressurizer level is 160 inches and rising slowly
Pressurizer pressure is 2250 psia and rising slowly
Tavg is 545°F and rising slowly
RCS subcooling is 40°F and lowering slowly

Based on these conditions, which of the following has occured?

A. A steam line rupture on 11 S/G has occured

B. A steam line rupture on 12 S/G has occured

C. A condensate header rupture has occured

D. A feed line rupture has occurred

Answer: D

Answer Explanation:

Lowering levels is caused by loss of feedwater to the S/Gs

A steam header rupture would result in an excesive cooldown and Subcooling would be increasing. A condensate header rupture would not result in containment pressure increasing.

Question 10 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	2.00
System ID:	50253
User-Defined ID:	Q50253
Cross Reference Number:	
Topic:	Given plant conditions, and parameter values discriminate between the indications of a feed break an
RO Importance:	4.1
SRO Importance:	4.3
KA Number:	42054AK101
Comments:	New Question References EOP-4 basis page 9 & 10 AOP3G Basis page 3

11 **ID: Q50254** **Points: 1.00**

A station blackout has occurred on Unit 1. After the appropriate Optimal recovery procedure has been entered, AFW flow is established to 11 & 12 S/Gs and steaming has commenced via the ADVs. The CRS has directed you to verify natural circulation flow. Which of the following groups of parameters/indications indicates that natural circulation flow has been established:

A. Tcold 525 and constant
Thot 580 and constant
CET 585 and constant

B. Tcold 535 and constant
Thot 585 and constant
CET 580 and constant

C. Tcold 535 and lowering
Thot 580 and lowering
CET 585 and constant

D. Tcold 535 and constant
Thot 580 and constant
CET 585 and constant

Answer: D

Answer Explanation:

D is correct since per EOP-7 Basis CET should be consistent with TH , if TH is constant CET temperatatrue should be constant
A is incorrect since the delata t between Th and Tc is higher than 50°F
B is incorrect since CET is not consistent with Th it is lower
C is incorrect since CET is not consistent with Th

Question 11 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	3.00
System ID:	50254
User-Defined ID:	Q50254
Cross Reference Number:	
Topic:	Given conditions, parameter values indicative of a Station Blackout determine if Natural Circulation
RO Importance:	4.1
SRO Importance:	4.4
KA Number:	41055EK102
Comments:	New Question References : EOP-7 Step IV.K Page 26 EOP-7 Basis for IV.K. page 30 and 31

12 **ID: Q50255** **Points: 1.00**

Upon entry into EOP-2 for LOOP, #23 AFW pump is started due to problems with the steam AFW pumps to establish feedwater flow to #21 and #22 S/Gs with the following flow values:

-- #21 S/G 1-FIC-4525A indicates 290 GPM
-- #22 S/G 1-FIC-4535A indicates 300 GPM

Based on these flow values which statement below is the best operator response?

A. Maintain flow values ensuring that RCS cooldown rate is < 100°F per hour.

B. Reduce AFW flow as the common suction flow limit is exceeded.

C. Reduce AFW flow to 300 GPM to protect the 2B DG from overloading.

D. Maintain flow values ensuring as CST level lowers pump cavitation does not occur.

Answer: C

Answer Explanation:

A & B is incorrect because EOP-2 basis states to limit flow to 300 gpm when 23 AFW pp powered from DG to protect DG from overloading and 575 gpm all other times
D is incorrect because suction line limit of 1200 gpm is not being violated
C is correct because flow limited to 300 gpm when on DG

Question 12 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	2.00
System ID:	50255
User-Defined ID:	Q50255
Cross Reference Number:	
Topic:	Given conditions /parameter values indicative of a loss of offsite power, identify the basis for imp
RO Importance:	4.4
SRO Importance:	4.7
KA Number:	42056AK302
Comments:	New Question References EOP-2 pages 13 -15- Step IV G.2 EOP-2 page 24- Basis for IV.G.2

13 **ID: Q50256** **Points: 1.00**

Unit one is operating at 100% power when the following indications are noted:

Pressurizer pressure is 2250 PSIA
Pressurizer level is rising
All B/u Htrs are ON
AFAS Loss of Power Alarm
Actuation SYS loss of Power alarm
RAS Actuation Sys tripped alarm
SIAS Actuation Sys tripped alarm
CSAS Actuation Sys tripped alarm
11, 12, & 13 Charging pumps are operating
Letdown is at minimum

Based on these indications which of the following is correct:

A. 1Y01 has been lost

B. 1Y02 has been lost

C. 1Y03 has been lost

D. 1Y04 has been lost

Answer: A

Answer Explanation:

A is correct. Based on the indications listed in AOP -7J. All others are not consistent with the indications of AOP 7J

Question 13 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	1.00
System ID:	50256
User-Defined ID:	Q50256
Cross Reference Number:	
Topic:	Given conditions/parameter values and indications, determine if the indications are correct for the
RO Importance:	3.7
SRO Importance:	4.0
KA Number:	42057AA204
Comments:	New Question Reference AOP 7J Section V actions for a loss of 1Y01- Pages 12 -15

14 **ID: Q50474** **Points: 1.00**

Unit 1 is operating at 100% power with the following conditions:

- Outside Air Temperature = 100°F
- Bay Temperature = 80°F

The following are noted

- TURB BLDG SRW HDR PRESS LO - Alarm
- 11 SRW HDR PRESS LO- Alarm
- 12 SRW HDR PRESS LO- Alarm
- 11 SRW HEAD TK LVL- Alarm
- 12 SRW HEAD TK LVL- Alarm
- STEAM LINE DRAIN PANEL - Alarm

(a) Which of the following is the most likely cause of these indications? (b) What actions are required?

A. (a) A leak/rupture of the Service water header in the Turbine Building, (b) Shut the Turbine Building isolation valves, and ensure SRW pressure returns to > 80 psig

B. (a) A leak/rupture of the Service water header in the Turbine Building, (b) Shut the Turbine building isolation valves,
trip the reactor and implement EOP-0,

C. (a) A leak/rupture of 11 or 12 Service water header in the Auxiliary building (b) Shut the Turbine Building isolation valves and ensure that one header pressure restores to> 80 PSIG

D. (a) A leak/rupture of 11 or 12 Service water header in the Auxiliary building,(b) Shut the Turbine Building isolation valves,trip the reactor implement EOP-0,

Answer: B

Answer Explanation:

(a) A rupture of the Service water system in the Turbine Building, (b) Trip the reactor and turbine, shut the turbine building isolation valves is the correct answer per AOP-7B basis. The worst case leak scenario would be a leak/rupture in the turbine building which would empty the SRW system in a short time,. This would render both SRW subsystems inoperable and hinder the safe shutdown of the plant. This would be indicated by the decrease of all SRW header pressures and the lowering of both head tanks. THe proper operator response include the tripping of the reactor and turbine and shutting the turbine building isolation valves

Question 14 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	4.00
System ID:	50474
User-Defined ID:	Q50474
Cross Reference Number:	
Topic:	Given conditions, indications and/or parameter values indicative of SRW system loss, identify the mo
RO Importance:	2.9
SRO Importance:	3.6
KA Number:	42062AA202
Comments:	New Question References AOP 7B basis page 4 Alarm manual for 1C-13 pages 11, 16, 34 and 42. Alarm manual for 1C 03 page 93 Alarm manual for 1T22, page 8 and 9

15 **ID: Q50258** **Points: 1.00**

AOP 7D, "Loss of Instrument Air", requires a reactor trip if IA pressure lower to 50 PSIG in MODE 1. Which of the following is the reason for this:

A. Protect the turbine/generator from damage due to the loss of Service Water cooling

B. Protect the RCS from overfeeding effects due to S/G level control concerns

C. Protect the RCPs from damage due to CCWs failing shut.

D. Protect the SGFP from damage due to Miniflow valve potential failure

Answer: B

Answer Explanation:

Per the AOP 7D basis, B is the correct answer
A is incorrect since the SRW valves do not fail shut until a complete loss of IA occurs
C is incorrect since the Containment CCW valves are 50% open at 40 PSIG which supplies sufficient flow
D is not correct since the S/G miniflow valves fail open on loss of air.

Question 15 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	2.00
System ID:	50258
User-Defined ID:	Q50258
Cross Reference Number:	
Topic:	Given indications/conditions and/or parameter values of a loss of instrument air, identify the basis
RO Importance:	3.7
SRO Importance:	3.9
KA Number:	42065AK308
Comments:	New QUestion References : AOP7D Basis page 7

16 **ID: Q50259** **Points: 1.00**

Terrorist have launched an attack against CCNPP involving two planes that have crashed into the Switchyard and the Auxiliary Building severely damaging the Switchyard, Control Room and Switchgear Rooms. The appropriate portion of the Emergency Plan has been implemented. The CRS has contacted you by radio and directed you to locally determine 11 SG level. Which of the following describes how you will accomplish this task:

A. Obtain a multimeter from the locker in the operations study area and proceed to 27' West PEN room to determine 11 S/G Level.

B. Obtain a Drucks loop calibrator and related equipment from the NSF Secondary Fire Brigade locker and proceed to 45' West PEN room to determine 11 S/G level.

C. Obtain a multimeter from the locker in the operations study area and proceed to 45' West PEN room to determine 11 S/G Level

D. Obtain a Drucks loop calibrator and related equipment from the NSF Secondary Fire Brigade locker and proceed to 27' West PEN room to determine 11 S/G level.

Answer: B

Answer Explanation:

Per ERPI 3.0 Revision 40, pg 118
Choice B is correct since it correctly identifies the primary location for the equipment and the correct location for reading the level.

Choice A is incorrect since it identifies an invalid area to locate the equipment and incorrect location to read 11 SG level.

Choice C is incorrect since it identifies an invalid area to locate the equipment but has the correct location to read 11 SG level.

Choice C is incorrect since it identifies the correct area to locate the equipment but has the incorrect location to read 11 SG level.

Question 16 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50259
User-Defined ID:	Q50259
Cross Reference Number:	
Topic:	Given a security event affecting the switchyard, identify the appropriate response information). 3.2
RO Importance:	3.2
SRO Importance:	4.1
KA Number:	2428
Comments:	New Question Reference ERPI. 3.0 Revision 40 pg 118

17 **ID: Q20628** **Points: 1.00**

A loss of load transient resulted in a plant trip with PORVs lifting. What would indicate that the quench tank rupture disk has ruptured?

A. "CNTMT NORMAL SUMP LVL HI" alarm actuates

B. "QUENCH TK TEMP LVL PRESS" alarm clears

C. RCS pressure lowers rapidly.

D. RCS pressure lowers slowly.

Answer: A

Question 17 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	5
Difficulty:	2.00
System ID:	50260
User-Defined ID:	Q20628
Cross Reference Number:	
Topic:	Identify indications of a ruptured quench tank rupture disk.
RO Importance:	3.7
SRO Importance:	3.7
KA Number:	44E02EA11
Comments:	"CNTMT NORMAL SUMP LVL HI" alarm actuates--correct. The sump alarm along with quench tank pressure lowering are indications that the rupture disk has ruptured. RCS pressure lowers more rapidly RCS pressure lowers less rapidly----Both incorrect, the small range of back pressure associated with the intact or open quench tank would have little effect of PORV relief capacity. "QUENCH TK TEMP LVL PRESS" alarm clears--incorrect, level and temperature would remain high if the rupture disk blows. Used 7/2002 NRC exam References: Alarm Response Manual for 1C10 page 49 and 50 Alarm response manual for 1C06page 6 & 7 CFR 55.41.3, 55.41.7

Question 17 Table-Item Links

System Designations

Reactor Coolant

18 **ID: Q50261** **Points: 1.00**

Given the following conditions:
- Unit 1 is operating at 100 percent power
- 11 and 12 DFWCS are in AUTO

Which of the following sets of conditions would result in entry to AOP-3G, Feedwater Malfunction? (consider each condition separately)

A. SGFP Suct Press 220 psig for 20 seconds OR Hotwell Level at 50 inches

B. SGFP Suct Press 260 psig for 20 seconds OR Hotwell Level at 45 inches

C. SGFP Disch Press 1200 psig OR Hotwell Level at 50 inches

D. SGFP Disch Press 1300 psig OR Hotwell Level at 45 inches

Answer: D

Answer Explanation:

SGFP Suct Press 220 psig for 20 seconds OR Hotwell Level at 50 inches - Per ALM Manual, the SGFP suction at 220 would give alarm and require implementing AOP 3G, but the HW level at 50" would not

SGFP Suct Press 260 psig for 20 seconds OR Hotwell Level at 45 inches- Per ALM the HW level at 45" would result in AOP3G entry but SGFP suction pressure at 260 would not.

SGFP Disch Press 1200 psig OR Hotwell Level at 50 inches , Per ALM neither would result in AOP 3G entry

SGFP Disch Press 1300 psig OR Hotwell Level at 45 inches- Per ALM both of these conditions will result in AOP3 G entry

Question 18 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	3.00
System ID:	50261
User-Defined ID:	Q50261
Cross Reference Number:	
Topic:	Given conditions, parameter values and/or indications, identify if and which AOP/EOPshould be entere
RO Importance:	4.0
SRO Importance:	4.3
KA Number:	244
Comments:	New Question References _ Alarm Manual for 1C03 pages 28 and 29, 39, 48

19 **ID: Q50262** **Points: 1.00**

Due to continuous CEA withdrawal event, a reactor trip has occurred on Unit-1. Immediately after the reactor trip occurs, MCC 104R feeder breaker trips. While implementing EOP-0 the following indications are noted:

- 2 stuck CEAs.
- 11 Boric pumps trips when started
- Main turbine and generator are tripped.
- Pressurizer level indication is 40 inches and slowly rising
- RCS subcooling is 0 degrees F.
- RCS pressure is 1600 psia and dropping.
- S/G levels are both -40" and stable.
- S/G pressures are both 880 psia.
- Containment press. is 2.0 psig and rising.
- Containment temp is 215 degrees F and rising.
- All electrical buses are energized.

So far, no actions (other than the actions for reactivity control) have been taken. Which one of the following groups of safety functions should be reported as "cannot be met"?

A. Reactivity Control and RCS Pressure/Inventory Control.

B. RCS Pressure/Inventory Control and Containment Environment.

C. Core/RCS Heat Removal and RCS Pressure/Inventory Control.

D. Containment Environment and Reactivity Control.

Answer: B

Answer Explanation:

Candidate needs to recognize that even with both boric acid pumps not operating (Loss of MCC 104R loses 12 boric acid pump) there is boric acid flow available via gravity feed valves

A is incorrect, Boration is in progress means Reactivity is complete.
B is correct, PRZ level is low, RCS pressure is decreasing and SC is unsat, CNTMT temp. and pressure exceeding limits and increasing.
C is incorrect, HR is complete.
D is incorrect, Boration is in progress means Reactivity is complete.

Question 19 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	5
Difficulty:	2.00
System ID:	50262
User-Defined ID:	Q50262
Cross Reference Number:	201-0-8-S-02
Topic:	Determine Safety Function Reports
RO Importance:	3.5
SRO Importance:	3.6
KA Number:	2117
Comments:	Modified from Q25093 References EOP-0 pages 6 -17 AOP 7I page 148 and 149

20 **ID: Q50264** **Points: 1.00**

Given the following initial conditions:

- Unit 2 is at 100% power.
- All CEAs are fully withdrawn.
- CEDS Control System is in OFF
- Turbine Control is in OPER AUTO
- 21& 22 DFWCS are in AUTO

The following events occur:

- ONE (1) Reg Group 2 CEA drops to the bottom of the core.
- The reactor does NOT trip.
- TM/LP Pre-Trip is received on 1 channel
- The crew enters AOP1B, CEA Malfunction.

Which ONE of the following describes a correct action for the conditions listed above in accordance with AOP 1B?

A. Decrease Turbine load by momentarily depressing the "DOWN" Button to restore Tcold within 2°F of program value.

B. Decrease Turbine load by depressing the Turbine Manual Button, then depress the "DOWN" button to restore Tcold within 2°F of program value.

C. Decrease Turbine load by depressing the Turbine Manual Button, then depress the "DOWN" button to restore Tcold within 5°F of program value.

D. Decrease Turbine load by Momentarily depressing the Reference Signal Decrease Button , then depress the "GO" button to restore Tcold within 5°F of program value.

Answer: B

Answer Explanation:

Decrease Turbine load by momentarily depressing the Decrease Button for Manual Turbine control to restore Tcold within 2°F of program value. This is not correct since the turbine is in OPER AUTO mode, pressing the DEC button for Turbine MAN will have NO effect.

Decrease Turbine load by momentarily depressing the Decrease Button for Manual Turbine control to restore Tcold within 5°F of program value. This is not correct since the turbine is in OPER AUTO mode, pressing theDEC button for Turbine MAN will have NO effect, and Tcold should be restored to within 2°F of program by plant procedures. 5° is associated with a rapid downpower.

Decrease Turbine load by Momentarily depressing the DOWN button , then depress the GO button to restore Tcold within 2°F of program value. This is correct since in operator you decrease load by lowering the reference signal then pressing go.

Decrease Turbine load by Momentarily depressing the Reference Signal Decrease Button , then depress the GO button to restore Tcold within 5°F of program value. This is not correct since Tcold should be restored to within 2°F of program by plant procedures. 5° is associated with a rapid downpower.

Question 20 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	2.00
System ID:	50264
User-Defined ID:	Q50264
Cross Reference Number:	
Topic:	Given a drop rod event determine if turbine actions correct
RO Importance:	4.1
SRO Importance:	4.1
KA Number:	42003AA105
Comments:	New Question Reference OI-43A page 50 -52 AOP 1B page 7 section IV. A.2, OP-3 page 35

21 **ID: Q50265** **Points: 1.00**

Given the following:

Unit 1 is operating at 100% power.
A transient occurs that requires a rapid downpower. Due to problems with the CVCS system, CEAS are used during the rapid downpower. During the downpower, power is lowered to ~ 65% and Group 5 CEAS are lowered to approximately 60"

Which ONE of the following describes the correct actions and reasons based on the conditions above

A. ASI is monitored using Excore NIs which limits are more conservative than the Incore detectors

B. ASI is monitored using Excore NIs because the DAS must be declared inoperable under these conditions

C. ASI is monitored using Incore NIs because the Excore detectors are not reliable under these conditions

D. ASI is monitored using Incore NIs which limits are more conservative than the excore detectors

Answer: A

Answer Explanation:

Per AOP 1B Basis for step VI.C because of the position of GP 5 CEAS BASS is inoperable, with BASS inoperable the AOP directs ASI monitoring using Excore and it states that these limits are more conservative than those associated with the incores which are normally used for ASI monitoring

Question 21 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	3.00
System ID:	50265
User-Defined ID:	Q50265
Cross Reference Number:	
Topic:	Given a stuck/inoperable CEA and conditions, parameter values and/or indications, determine the appr
RO Importance:	3.9
SRO Importance:	4.2
KA Number:	42005AK306
Comments:	New Question AOP-1B Basis for IV. C page 14 1C06 alarm manual page 80-83 Loss of Plant Computer Lesson Plan LOI-202-7HR13 slide 28

22 **ID: Q50266** **Points: 1.00**

Unit 1 is at 10 - 6% power conducting a S/U after a shutdown to repair a steam leak on 12 S/G instrument line, when a loss of +15 VDC to the Wide Range Flux Trip relays occurs. Which of the following is correct for these conditions:

A. SUR TRIP A, B,C,D Enabled alarm on 1C05

B. SPDS indicates High SU rate on CSF1

C. TM/LP signal to CWP inhibited

D. TM/LP Trip is disabled

Answer: A

Answer Explanation:

THe flux Trip relays normally trip at 1E-4% rising and accomplish the following:
Enables TM/LP signal to CWP
Removes Zero Power Mode Bypass in RPS to reinstate Low flow and TM LP Trip and Thermal power to Q power calculation
Enables Plant Computer (PRimary) PDIL
Enables SUR signal to RPS
SUR TRIP A, B, C, D enabled alarm.

WHen the+_ 15 VDC signal is lost the relays are actuated which gives all of the above indications.

THe SPDS calculates its own SUR from power indication

Question 22 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	3.00
System ID:	50266
User-Defined ID:	Q50266
Cross Reference Number:	
Topic:	Given an operational scenario, conditions, and /or parameter values, analyze the conditions and dete
RO Importance:	2.5
SRO Importance:	3.1
KA Number:	42032AK101
Comments:	New Questions - Reference RPS Lesson Plan LOI-058-1-2 slides 101-11 also alarm manual 1C05- page 38

23 **ID: Q50267** **Points: 1.00**

Unit 1 is in a refueling outage and is currently performing core alteration when semi-trailer carrying a heavy load breaks down in the Butler Building ~ 2 feet from the Containment Outage Door (COD). Latest estimate is about 40 minutes to retrieve a tractor to move it. Which one of the following actions are required?

A. ERPIP 3.0 Attachment 23, Containment Evacuation

B. Implement AOP-4A, Loss of Containment Integrity/Closure.

C. AOP-6D, Fuel Handling Incident.

D. Process a containment closure deviation sheet

Answer: B

Answer Explanation:

Implement AOP-4A, Loss of Containment Integrity/Closure is correct per NO-1-114 section 5.7

Question 23 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	0
Difficulty:	2.00
System ID:	50267
User-Defined ID:	Q50267
Cross Reference Number:	204-1-02
Topic:	The unit is performing core alteration when the Containment Outage Door becomes blocked
RO Importance:	3.5
SRO Importance:	3.6
KA Number:	GEN 2.1.21
Comments:	Modified from early bank 204-1-02 Reference Per NO-1-114, pages 7, 9 and 23

Question 23 Table-Item Links

A / O Training Program

Licensed Operator Requal Training (LOR)

24 **ID: Q50268** **Points: 1.00**

Unit 2 was operating at 100% power when a leak in 11 Steam Generator Tube Leak occured. The appropriate AOP was entered, the reactor was manually tripped and the appropriate EOP has been entered. At 100% Power the following indications were noted:

11 S/G Pressure 860 PSIA
12 S/G Pressure 860 PSIA
Calculated leakage 60 GPM

11 S/G has been isolated and the RCS cooled down to 500°F. Due to problems with the ADVs the temperature is holding at 500° F.
Per the applicable optimal recovery procedure the pressure differential between RCS and the S/G should be minimized. Approximately what pressure does the RCS need to be depressurized to reduce the leak rate to ~25 GPM?

A. 1100 PSIA

B. 1021 PSIA

C. 921 PSIA

D. 840 PSIA

Answer: C

Answer Explanation:

$$\frac{m_1}{m_2} = \frac{\sqrt{Diff\ Press_1}}{\sqrt{Diff\ Press_2}}$$

m1 = 60 GPM, m2 = 25 GPM
Diff Press1 = 2250 PSI - 860 psi
Diff Press 2 = desired RCS pressure - Sat press for 500°F

Question 24 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	4.00
System ID:	50268
User-Defined ID:	Q50268
Cross Reference Number:	
Topic:	What pressure to depressurize RCs for SGTR
RO Importance:	3.5
SRO Importance:	3.9
KA Number:	42037AK102
Comments:	New Question Reference Steam tables and knowledge of relationship between DP and flow

25 **ID: Q50475** **Points: 1.00**

A Loss of offsite power occured along with a fire in the Unit1Cable spreading room. The SM has determined that a control room evacuation is necessary and AOP-9 should be implemented. Which of the following sets of actions are required to be completed within the first 30 minutes of CR Evacuation?

A. Trip the RCPs AND start the 0C Diesel Generator

B. Start the 0C Diesel Generator AND Establish Charging flow

C. Trip the RCPs AND Trip MCC-104 load center

D. Establish AFW flow AND Establish Charging flow

Answer: A

Answer Explanation:

Trip the RCPs AND start the 0C Diesel Generator - correct per AOP9A basis IV.C and notes III C. 2

Start the 0C Diesel Generator AND Establish Charging flow - Not correct, Charging flow not required until 60 minutes

Trip the RCPs AND Trip MCC-104 load center - Not correct, trip MCC-104 load center does not have a time limit

Establish AFW flow AND Trip MCC-104 load center - Not correct , charging flow not required for 60 minutes

Question 25 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	4.00
System ID:	50475
User-Defined ID:	Q50475
Cross Reference Number:	
Topic:	Given a fire in the plant, identify the effects on important plant equipment
RO Importance:	3.1
SRO Importance:	4.3
KA Number:	42067AA204
Comments:	New Question Reference AOP9A Basis page 1 AOP9A page 5

26 **ID: Q50270** **Points: 1.00**

A loss of offsite power has occurred and 1A Diesel Generator has failed to start, followed by a complete loss of all feedwater. Once Through Core Cooling (OTCC) was initiated due to a loss of all feedwater. Which of the following is true concerning OTCC.

A. OTCC will be successful

B. OTCC will be not be successful

C. OTCC will only be successful if 13 CHG pp is aligned to 14B 480V Bus

D. OTCC will only be successful if 12 HPSI pump is started

Answer: B

Answer Explanation:

PORV 1-RC-402-ERV will not operate on high RCS pressure, its "manual open" handswitch position will not function to open the PORV--correct, power from MCC-114 is required to allow the PORV to open automatically or manually. With only one PORV available, OTCC will not be successful per attachment 17 even wth all HPSI and Chg pumps.

All other answers are incorrect based on the need to have both PORVS operational for OTCC to be successful

Question 26 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50270
User-Defined ID:	Q50270
Cross Reference Number:	
Topic:	Effect of PORVs on OTCC with failure
RO Importance:	3.4
SRO Importance:	3.4
KA Number:	42056AA132
Comments:	PORV 1-RC-402-ERV will not operate on high RCS pressure, its "manual open" handswitch position will not function to open the PORV--correct, power from MCC-114 is required to allow the PORV to open automatically or manually. (This is a change in operation due to a modification). With only one PORV available, OTCC will not be successful per attachment 17 even with all HPSI and Chg pumps. All other answers are incorrect based on the need to have both PORVS operational for OTCC to be successful Modified from Q 20589 used on 2002 NRC Exam References: EOP Attachments - Attachment 17 AOP-7I pages 18 , 50

Question 26 Table-Item Links

Operations Procedure References (from Nucleis)

EOP EOP-02-1 LOSS OF OFFSITE POWER

27 **ID: Q50273** **Points: 1.00**

Unit one is operating at 100% power with the following conditions:

- 13 SRW Pump tagged out for maintenance

A large Loss of Coolant Accident (LOCA) occured on Unit-1. The following conditions are noted:

- 12 SRW PMP - Tripped
- CNTMT PRESS - 15 PSIG

Approximately 30 minutes later it was determined that 12 SRW Pump trip was caused by a blown fuse and has been replaced.
The CRS has directed you to restore SRW.

Which of the following set of actions is correct based on the conditions listed?

A. Isolate SRW to CACs on 12 SRW SUBSY and start 12 SRW Pump.

B. Isolate SRW to CACs on 12 SRW SUBSY and start 12 SRW Pump, then throttle SRW to 13 & 14 CACs

C. Place 12 SRW Pump in PTL, do not start 12 SRW until Technical support has provided guidance..

D. Place 12 SRW Pump in PTL, place 1B D/G OUT BKR in PTL, locally trip 1B D/G

Answer: A

Answer Explanation:

Reference
Reference EOP-5 Step IV.G.6 page 18 and basis for this section on page 33 of the basis document

Isolate SRW to CACs on 12 SRW SUBSY and start 12 SRW Pump to support 1B D/G operation - correct per EOP-5 basis allows restarting 12 SRW pump with SRW to 13 & 14 CAS isolated.

Isolate SRW to CACs on 12 SRW SUBSY and start 12 SRW Pump, then throttle SRW to 13 & 14 CACs - incorrect per the basis restoration via throttling ws not evaluated because these asre butterfly valves

Place 12 SRW Pump in PTL, do not start 12 SRW until Technical support has provided guidance..- incorrect, EOP-5 allows you to attempt a start of 12 SUSSYS in this condition and later contact TSC for continued operation.

Place 12 SRW Pump in PTL, place 1B D/G OUT BKR in PTL, locally trip 1B D/G - incorrect, these actions are for the case that 12 SRW subsys cannot be restarted.

Question 27 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50273
User-Defined ID:	Q50273
Cross Reference Number:	
Topic:	Actions for idle CAC with high CNTM pressure
RO Importance:	3.3
SRO Importance:	3.7
KA Number:	44A16AK33
Comments:	New Question Reference EOP-5 page 18 and EOP-5 Basis page 33

28 **ID: Q50476** **Points: 1.00**

Given the following conditions on Unit-2

Pressurizer Pressure = 315 PSIA
RCS Tcold = 140°F
S/G Temperature = 90°F
Pressurizer Level = 160 inches
4KV Bus Voltage = 4130 V
13.8 KV Bus Voltage = 14.2 KV

Which of the following conditions would prevent starting RCP 21A per plant operating procedures

A. A pressurizer level control malfunction causes pressurizer level to rise to 172 inches and stabilizes.

B. A heatup causes RCS Temperature to rise to 150°F and stabilizes

C. A voltage regulator pertubation causes 4 KV Bus voltage to lower to 4110 Volts and stablizes.

D. An electrical perturbation causes 13 KV Bus voltage to rise to 14.8 KV and stabilizes.

Answer: A

Answer Explanation:

Per OI-1A Section 6.1.B Starting requirements for an RCP, S/G Temp no more than 60°F below RCS temperature, Pressurizer level less than 170 inches, RCS PRessure and Temperature within the limits of FIgure17, 4KV Buss voltage is greater than 4100 VOlts, and 13.8 KV bus voltage less than or equal to14.8KV

Question 28 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50476
User-Defined ID:	Q50476
Cross Reference Number:	
Topic:	Provided a reference , identify the effect on starting an RCP
RO Importance:	2.6
SRO Importance:	2.9
KA Number:	34003K614
Comments:	New Question- OI-1A pages 5-13 OI-1A figure 17 NOTE Figure 17 is provided as Reference

29 **ID: Q50275** **Points: 1.00**

Which of the following sets of statement are true concerning the CVCS Backpressure Control Valve CV-110 P & CV-110Q?

A. (1)Letdown backpressure control valves, prevent saturated conditions between the LD Heat Exchanger and the LD Flow control valves to prevent erosion damage
(2)Letdown backpressure control valves, close to decrease pressure and open to increase pressure

B. (1)Letdown backpressure control valves, prevent saturated conditions between the LD Heat Exchanger and the LD Flow control valves to prevent erosion damage
(2)Letdown backpressure control valves, open to decrease pressure and close to increase pressure

C. (1)Letdown backpressure control valves, prevent saturated conditions between the regenerative heat exchanger and the Letdown Flow Control Valves to prevent erosion damage
(2)Letdown backpressure control valves, close to decrease pressure and open to increase pressure

D. (1)Letdown backpressure control valves, prevent saturated conditions between the regenerative heat exchanger and the Letdown Flow Control Valves to prevent erosion damage
(2)Letdown backpressure control valves, open to decrease pressure and close to increase pressure

Answer: B

Answer Explanation:

To prevent flashing of hot liquid to steam between the Letdown Flow Control valves and the Letdown Heat Exchanger, Control letdown system pressure at 460 + 40 psi (NOT/NOP) Prevents erosion damage from the letdown control valve to the inlet of the heat exchanger. Valves open to decrease system pressure and close to increase system pressure

Question 29 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50275
User-Defined ID:	Q50275
Cross Reference Number:	
Topic:	Backpressure control vlvl effect on subcooled conditions
RO Importance:	3.6
SRO Importance:	3.9
KA Number:	32004K543
Comments:	New Question References CVCS Lesson Plan LOI-041-1-1(LD) slides 72 -74

30 **ID: Q50276** **Points: 1.00**

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

Time 0
11 SG Pressure - P1013A, P1013B, P1013C, P1013D = 860 PSI
12 SG Pressure - P1023A, P1023B, P1023C, P1023D = 860 PSI

11 SG Level - LT114A, LT114B, LT114C, LT114D = 0 inches
12 SG Level - LT124A, LT124B, LT124C, LT124D = 0 inches

Time 1 Min
11 SG Pressure - P1013A, P1013B, P1013C = 865 PSI , P1013D = 856 PSI
12 SG Pressure - P1023A, P1023B, P1023C, P1023D = 740 PSI

11 SG Level - LT114A, LT114B, LT114C = -180 inches , LT114D= -120 inches
12 SG Level - LT124A, LT124B, LT124C = -100 inches , LT124D = -110 inches

Time 2 Min 30 seconds
11 SG Pressure - P1013A, P1013B, P1013C = 805 PSI , P1013D = 800 PSI
12 SG Pressure - P1023A, P1023B, P1023C, P1023D = 740 PSI

11 SG Level - LT114A, LT114B, LT114C = -180 inches , LT114D = -100 inches
12 SG Level - LT124A, LT124B, LT124C = -100 inches , LT124D = -180 inches

Based on these conditions which of the following is true:(Assume NO operator actions)

A. AFW is supplying 11 S/G ONLY

B. AFW is supplying 12 S/G ONLY

C. AFW is isolated to 11 & 12 S/Gs

D. AFW is supplying 11 & 12 S/G

Answer: D

Answer Explanation:

AFAS start signal is initiated when EITHER S/G has two of its four wide range level transmitters sensing < -170"(170 inches from normal level of 0 inches)
Starts AFW after a 20 second time delay to prevent spurious actuation.
If the S/G level rises above -170" prior to the 20 seconds the AFAS start signal will drop out. However, the sensors will have to reset.
Once initiated AFAS start stays locked in.

AFAS BLOCK
Secures AFW flow to the SG that has been identified as RUPTURED by shutting four blocking valves (2 motor and 2 turbine) to the S/G
Monitors four pressure channels for each SG.
Differential pressures of sensors (one from each SG) provides input to two bistables which trip at 115 psid (TS setpoints are 135 and 130).
When there are 2 of 4 D/P signals from a SG the logic matrix from either SG sends a RUPTURE signal to BOTH actuation logic subsystems (ZA and ZB).

AFAS Block isolates the generator with the lowest pressure.

When the differential pressure condition clears the block valves will Reopen unless the handswitches have been taken to close.

Question 30 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	5
Difficulty:	3.00
System ID:	50276
User-Defined ID:	Q50276
Cross Reference Number:	
Topic:	Evaluate FAS Logic COnditions
RO Importance:	2.9
SRO Importance:	3.3
KA Number:	32013K502
Comments:	New Question Reference AFAS Lesson plan LOI-036B-1-1 Slides 1-14, 37-39, 60-65

31 ID: Q50290 Points: 1.00

Which of the following is the most likely reason for this condition:

"SI PPS RECIRC MOV 659 CLOSED RAS BLOCKED" Alarm is ON

A. MINI FLOW RETURN TO RWT ISOL ,1- SI-659 MOV, is shut with an inadvertent RAS present

B. MINI FLOW RETURN TO RWT ISOL MOV, 1- SI-659 MOV is shut with no RAS present

C. SI PP RECIR LOCKOUT handswitch, 1-HS-3659A, is in ON and RAS present

D. MINI FLOW RETURN TO RWT ISOL, 1-SI-659-MOV shut and SI PP RECIR LOCKOUT handswitch, 1-HS-3659A in ON

Answer: B

Answer Explanation:

Per ALm Manual
MINI FLOW RETURN TO RWT ISOL MOV, 1- SI-659 MOV is shut with no RAS present will give this alarm

Question 31 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50290
User-Defined ID:	Q50290
Cross Reference Number:	
Topic:	Reason for SI PPS RECIRC MOB 659 ALM ON
RO Importance:	2.8
SRO Importance:	2.8
KA Number:	34005A405
Comments:	New Question Reference Alarm Manual 1C-09 page 86

32 **ID: Q50350** **Points: 1.00**

Using provided references:

U-1 is at 100% power, when one RPS matrix logic channel is declared inoperable. The present time is 1300. When must the unit be in Hot Standby?

A. 1900 today

B. 1300 two days from now

C. 1300 three days from now

D. 1900, two days from now

Answer: D

Question 32 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	3.00
System ID:	50350
User-Defined ID:	Q50350
Cross Reference Number:	Q20207
Topic:	Using provided references, determine Tech Spec actions for one RPS matrix logic channel inop
RO Importance:	3.4
SRO Importance:	3.8
KA Number:	2132
Comments:	Modified from Q20207 References: Tech Spec 3.1, 3.2, 3.3 Provide A copy of Tech Spec 3.1, 3.2, 3.3

33 **ID: Q50311** **Points: 1.00**

A LOCA occurred 24 hours ago. As a result of the LOCA Containment pressure rose to ~ 2.8 PSIG and operators verified the appropriate system actuations. RAS has actuated and been verified. HPSI has been throttled to minimum flow with two HPSI pumps running. The following indications are now noted:

- Both HPSI Pumps ammeters indicate ~ 5 amps
- HPSI flows are indicating 15 GPM through each header

What actions should be taken in this condition?

A. Commence ECCS pump room cooling

B. Stop one of the HPSI pumps and place its handwtich in pull-to-lock.

C. Re-open the RWT outlet valves and commence filling the RWT.

D. Implement EOP-8

Answer: D

Answer Explanation:

A is incorrect, because this action will not correct the problem of the HPSI pump cavitating.
B is incorrect, because this action will not prevent the remaining pump from cavitating.
C is incorrect, because the RWT is isolated after RAS.
D is correct. Since HPSI pump performance is not acceptable the HPSI pumps are stopped , with No HPSI EOP-8 is implemented
Basis EOP-5 Post RAS throttling

Question 33 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	0
Difficulty:	2.00
System ID:	50311
User-Defined ID:	Q50311
Cross Reference Number:	Q25107
Topic:	Actions for Cavitation of HPSI pumps
RO Importance:	2.8
SRO Importance:	3.2
KA Number:	32006A109
Comments:	Modified from Q25107 References : EOP-5 Page 47 EOP-5 page 58 & 59

34 **ID: Q50335** **Points: 1.00**

Given the following data on the Quench Tank:

1) Pressure is 4 psig
2) Temperature is 105°F
3) Level is 29 incHES

Which of the following is correct:

A. Pressure is too high

B. Temperature is too high

C. Level is too high

D. All parameters normal

Answer: D

Answer Explanation:

Parameters are all below the alarm setpoints and in the normal range for QT parameters

Question 34 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50335
User-Defined ID:	Q50335
Cross Reference Number:	CRO-5-2-10-05
Topic:	Monitor QT Parameters and identify any issues
RO Importance:	2.6
SRO Importance:	2.7
KA Number:	35007A103
Comments:	Bank Question CRO-5-2-10-05 References:RCS Lesson Plan 064A1-1 slides 123, 124, 125 Alarm Manual for 1C06 page 6 & 7 OI-1B REv 15 page 6

35 **ID: Q50337** **Points: 1.00**

Unit 1 is in Mode 1 at 100% power when a loss of Component Cooling occurs. Which of the following resulting condition(s) from this event alone would require a Reactor trip?

A. CCW Head tank level lowers to 5 inches and stabilizes

B. RCP upper thrust bearing temperature rises to 196°F and stabilizes.

C. RCP lower seal cavity temperature rises to 205°F and stabilizes.

D. CCW Header pressure lowers to 60 PSIG and stabilizes.

Answer: B

Question 35 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50337
User-Defined ID:	Q50337
Cross Reference Number:	Q20381
Topic:	Which resulting condition from a loss of CCW at 100% would require a Reactor trip?
RO Importance:	3.4
SRO Importance:	3.5
KA Number:	38008K301
Comments:	Modified from Q20381 in Bank Reference AOP7C page 7 -11

36 **ID: Q50338** **Points: 1.00**

Unit 2 is operating at 100% power with the Letdown Hx Temperature Controller, 2-TIC-223, in MANUAL. While adjusting 2- TIC-223 the Reactor Operator adjust the output of 2- TIC-223 to 100%. Which of the following could result from this action:

A. Radiation monitor isolation, 1-CV-521-CV shuts

B. L/D HX CCW Diff Press High Alarm

C. REGEN HX OUT TEMP HIGH Alarm

D. RCS boron concentration decreases and reactor power increases

Answer: A

Answer Explanation:

Raising the output of the TIC to 100% will shut the TCV therefore causing temperature to rise which will cause boron to be sloughed which is a negative effect

L/D HX CCW Diff Press High Alarm will not happen because this would mean max flow (Valve wide opn)

REGEN HX OUT TEMP HIGH Alarm. IS not affected by Letdown FLow

RCS boron concentration decreases and reactor power increases (This would mean increased flow lower temperature)

Question 36 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50338
User-Defined ID:	Q50338
Cross Reference Number:	
Topic:	Adjusting TIC-223 effects on plant
RO Importance:	3.0
SRO Importance:	2.9
KA Number:	38008A409
Comments:	New Question CVCS Lesson Plan LOI-041-1-1 (LD)- Slides 63-68 1C07 Alarm manual page 14

37 **ID: Q50339** **Points: 1.00**

Unit 1 was operating at 100% Power MOC, with the following conditions:

Unit-1 at 100% power
Pressurizer pressure is 2250 PSIA
PZR backup and proportional heater control is in AUTO
1-HS-100 (PZR pressure control) in the "X" position

A loss of 1Y09 has occured. What affect (if any) will this have on the operation of the Pressurizer Pressure Control System?

A. Pressurizer Spray Valve will not operate in MANUAL OR AUTO

B. Pressurizer Spray Valve will not operate in AUTO, but will operate in MANUAL

C. All Pressurizer Heaters will be OFF

D. Pressurizer Heaters will not energize on high pressurizer level (+13")

Answer: A

Question 37 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50339
User-Defined ID:	Q50339
Cross Reference Number:	
Topic:	Which power supply affects press control X
RO Importance:	2.5
SRO Importance:	2.7
KA Number:	33010K202
Comments:	New Question Reference- AOP 7I page 57

38 **ID: Q50340** **Points: 1.00**

U-1 is in Mode 3 performing a reactor startup per OP-2, "Plant Startup from Hot Standby to Minimum Load". The following initial conditions exists:

- DFWCS is in AUTO
- TBV in AUTO with setpoint of 900 PSI
- ALL TCBs are shut
- Crew is preparing to withdraw shutdown CEAs

Due to an electrical malfunction developing on the CEDM bus the following indications are noted:
4 reactor trip bus UV relay indicator lights energize on the Trip Status Panel above 1C15
What impact will this have on plant operations?

A. DFWCS will receive a signal from ESFAS AL ONLY to shift to Post Reactor Trip Mode

B. DFWCS will recieve a signal from ESFAS BL ONLY to shift to Post Reactor Trip Mode

C. DFWCS will receive a signal from ESFAS AL & BL to shift to Post Reactor Trip Mode

D. DFWCS will remain in its present mode and continue to feed the S/Gs

Answer: B

Answer Explanation:

DFWCS will recieve a signal from ESFAS BL ONLY to shift to Post Reactor Trip Mode is the correct answer

Question 38 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	4.00
System ID:	50340
User-Defined ID:	Q50340
Cross Reference Number:	
Topic:	Effects of RX Trip Bus UV on ESFAS
RO Importance:	3.8
SRO Importance:	4.1
KA Number:	37012K304
Comments:	New Question Reference ESFAS Lesson Plan LOI-048-1-2 Slides 109 -111, 114 - 116 AOP 7J Page 28

39 **ID: Q50341** **Points: 1.00**

U-1 is in Mode 3 returning from a maintenance outage. ESFAS sensor cabinet ZF (1C93) has been shutdown for cleaning and inspection. (All other channels are energized and signals are not bypassed).
Containment pressure transmitter (1PT5313B) fails high, which 3 ESFAS subsystems will actuate?

A. CIS, CVCIS, and CSAS

B. CIS, CVCIS, and SIAS

C. CIS, CSAS, and DSS

D. CIS, CSAS, and SIAS

Answer: D

Question 39 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	3.00
System ID:	50341
User-Defined ID:	Q50341
Cross Reference Number:	Q20783
Topic:	When a high containment pressure signal is generated, which 3 ESFAS subsystems receive this signal?
RO Importance:	2.7
SRO Importance:	3.1
KA Number:	32013K601
Comments:	Bank Q20783 3 ESFAS Subsystems Receiving High Containment Pressure Signal References: ESFAS Lesson Plan LOI-048-1-2 slides 17 ,19, 47, 49, 50, 54 -56, 65-66, 69, 73-74, 76, 104-107

40 **ID: Q50342** **Points: 1.00**

A SIAS has occured on Unit 1. Which of the following is a correct statment for this condition:

A. The CACs can be started in Fast Speed at 1C09 AND at the load contactor panel.

B. The CACs can be shifted to Fast Speed at the load contactor panel ONLY

C. The CACs can be stopped from the load contactor panel ONLY

D. The CACs can be stopped at 1C09 and at the load contactor panel.

Answer: B

Answer Explanation:

The CACs can be shifted to Fast Speed at the load contactor panel ONLY

Question 40 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	2.00
System ID:	50342
User-Defined ID:	Q50342
Cross Reference Number:	
Topic:	With SIAS where can CACs be placed in FAst Speed
RO Importance:	3.7
SRO Importance:	3.5
KA Number:	35022K102
Comments:	New Question ECCS Lesson Plan Containment Spray & Cooling LOI-052-3-3 slides 56-58, 60-61, 65 AOP-9A page 53

41 **ID: Q50343** **Points: 1.00**

Which of the following combinations of conditions/equipment would maintain the pressure and temperature of the containment within design parameters for a Design Basis LOCA

A. One CAC is OOS, and CS PMP A fails to start and CS PMP B seizes and trips when started

B. 13 CAC is OOS and 1A DG fails to start on SIAS

C. 11 CS is OOS , 13 SRW pump is OOS. 11 SRW pump fails to start on SIAS and and 14A 480V breaker trips

D. 13 CAC is OOS, and CS PMP B fails to start and 1A D/G trips when started on SIAS

Answer: A

Answer Explanation:

One CAC is OOS, and CS PMP A fails to start and CS PMP B trips when started - this would leave you with three CACs which will maintain CNTMT temperature/pressure below design

13 CAC is OOS and 1A DG fails to start on SIAS - this would leave one CAC and one spray pump which would not meet minimum DBA

13 CAC is OOS, and CS PMP B fails to start and 1A D/G trips when started on SIAS - this would leave No Spray pumps and 1 CAC which would not meet requirments

11 CS is OOS , 13 SRW pump is OOS. 11 SRW pump fails to start on SIAS and and 14A 480V breaker trips - this would leave 1 Spray pump and one CAC which is not above minimum

Question 41 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50343
User-Defined ID:	Q50343
Cross Reference Number:	Q20397
Topic:	Which combination of CACs & CS Pumps will maintain Containment Temp & Press?
RO Importance:	3.7
SRO Importance:	4.1
KA Number:	35026K404
Comments:	Modified from Q 20397 References ECCS Lesson Pan LOI-052-3-3 Slides 73-77 Basis: Ensure Design Pressure and Temperature of Containment / UFSAR Chapter 14.20

42 **ID: Q50345** **Points: 1.00**

Following a LOCA, instrument air has been isolated to the containment due to a CIS. What effect does this have on the continued use of the Containment Spray System to cool the containment?

A. Both spray flowpaths are no longer available as the spray header CVs have failed closed on a loss of air.

B. A bypass valve opens to ensure continued use of the Containment Spray System flowpath.

C. No effect, each spray header CV fails open on a loss of air to ensure the flowpath remains available.

D. No effect, the spray header CVs have keyswitches that override valves open to ensure the flowpath remains available.

Answer: C

Question 42 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	2.00
System ID:	50345
User-Defined ID:	Q50345
Cross Reference Number:	Q20409
Topic:	What effect does lost of Air have on Containment Spray CVs?
RO Importance:	2.7
SRO Importance:	2.9
KA Number:	35026K202
Comments:	Bank Question References: Drwg 60-617-B Sh. 33 AOP 7D attachment 1, 2, 3 Lesson Plan LOI-052-3-3 Slides 16, 21 , 24 Basis: Instrument Air Isolated to Containment Due to CIA

43 **ID: Q50347** **Points: 1.00**

Which radiation monitor detects noble gas releases from the Atmospheric Dump Valves?

A. Condenser Off-Gas Radiation Monitor (RE-1752A-D)

B. Wide Range Noble Gas Monitor (RIC-5415)

C. Main Steam Line Radiation Monitor (RE-5421)

D. Main Vent Gaseous Monitor (RE-5415)

Answer: C

Answer Explanation:

Main Steam Line Radiation Monitor (RE-5421, 22)--correct per OM-98 sh 2.

Wide Range Noble Gas Monitor (RIC-5415)--incorrect, monitors Main Vent stack.

Main Vent Gaseous Monitor (RE-5415)--incorrect,monitors Main Vent stack.

Condenser Off-Gas Radiation Monitor (RE-1752A-D)--incorrect, these monitor the CAR suctions.

Question 43 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	1.00
System ID:	50347
User-Defined ID:	Q50347
Cross Reference Number:	Q20605
Topic:	Rad monitoring for ADVs
RO Importance:	2.7
SRO Importance:	2.7
KA Number:	34039A109
Comments:	Bank Question Used 7/2002 NRC exam References Lesson Plan LOI-077-1-2 Slides 66-71 OM-98 sh2.

44 **ID: Q50348** **Points: 1.00**

Unit 2 is starting up from a refueling outage and has stabilized power at 440 MWE to perform an NI calibration prior to raising power to full power. The following indications are noted:

TBV 2-MS-3946-CV fails open
Electrical MWs lowering
Tave- Tref Alarm

Which of the following actions AND reasons are correct for the conditions given:

A. Adjust turbine load then insert CEAS, to stop reactor power rise.

B. Adjust turbine load then withdraw CEAS, to restore Tcold to program.

C. Adjust turbine load then insert CEAs, to maintain power < 5%

D. Adjust turbine load then withdraw CEAS, to maintain reactor power

Answer: D

Answer Explanation:

Adjust turbine load then withdraw CEAS, to maintain reactor powerr- is correct
Insert CEAS after turbine load has been adjusted, to stop reactor power rise.is incorrect
Insert CEAs to maintain power < 5% - incorrect
Withdraw CEAS after turbine load has been adjusted, to restore Tcold to program - incorrect

Question 44 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	2.00
System ID:	50348
User-Defined ID:	Q50348
Cross Reference Number:	
Topic:	Given conditions , parameter values and/or indications , determine the effects on plant operations a
RO Importance:	4.1
SRO Importance:	4.3
KA Number:	2143
Comments:	New Question Reference AOP-7K page 5, 9, 10

45 **ID: Q50349** **Points: 1.00**

Unit 2 is operating at 72% power with only one SGFP running and the following conditions exist:

- SGFP suction flow rate is 17,500 gpm
- SGFP speed is 5175 RPM
- SGFP bias setting at 5.25
- SGFP suction pressure is 255 PSIG

What action is required to be taken to allow continued operation?

A. Stop a Heater Drain Pump to lower SGFP suction flow.

B. Reduce reactor power to raise SGFP suction pressure.

C. Lower SGFP speed to within specifications

D. Lower bias setting to 5.0.

Answer: C

Answer Explanation:

Reduce reactor power to raise SGFP suction pressure

Question 45 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	2.00
System ID:	50349
User-Defined ID:	Q50349
Cross Reference Number:	CRO-103-2-4-12
Topic:	Evaluate conditions for 1 SGFP operation
RO Importance:	3.0
SRO Importance:	3.3
KA Number:	34059A207
Comments:	Modified from Q24634 References: OI-12A page 10 & 11, AOP-3G page 9 Basis: Continued Power Operation above 440 MWe per AOP-3G

46 **ID: Q50351** **Points: 1.00**

When a SGFP is in Direct Governor Valve control what does the OCS demand RPM indicate?

A. Displays % output demand to the HP & LP governor valves of that SGFP.

B. Displays speed demand signal from DFWCS to the Lovejoy system for that SGFP

C. Displays % output demand to the HP governor valve ONLY of that SGFP.

D. Displays speed demand signal from Lovejoy for that SGFP.

Answer: A

Question 46 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	2.00
System ID:	50351
User-Defined ID:	Q50351
Cross Reference Number:	CRO-103-1-6-04
Topic:	Indication on OCS demand RPM when in direct governor valve control
RO Importance:	2.5
SRO Importance:	2.6
KA Number:	34059A304
Comments:	Modified from Q24612 References: LOI-045E-1-1 Slide 131

47 **ID: Q50354** **Points: 1.00**

Unit 2 was operating at 100% power when a condensate header rupture occurs which requires a reactor trip. After the trip S/G levels are being controlled with #22 AFW pump. Subsequently a loss of Instrument Air occurs. What is the effect on the plant over the next hour ? **Assume no operator action taken**

A. RCS temperatures will lower due to the operating AFW pump speed rising to the maximum governor setting AND the FCV going to full open

B. RCS temperatures will rise due to the operating AFW pump trips on overspeed.

C. RCS temperatures will rise due to S/G levels lowering due ONLY to AFW pump Steam Supply valves shutting.

D. RCS temperatures will lower due to S/G levels rising due ONLY to the flow control valves failing full open.

Answer: A

Question 47 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50354
User-Defined ID:	Q50354
Cross Reference Number:	
Topic:	Evaluate the effect of a loss of operating air on the AFW system components. task 8
RO Importance:	4.4
SRO Importance:	4.6
KA Number:	34061K301
Comments:	New Question Reference AFW Lesson Plan LOI-036A-1 LP slides 117 , 118, 119, 125 AOP-9A page 21 & 22, 23

48 **ID: Q20632** **Points: 1.00**

Which of the following is a responsibility for the Refueling Control Room Operator (RCRO)?

A. Documenting any fuel handling problems and maintaining the Refueling Status board

B. Approving temporary changes to core alteration procedures, such as CEA or fuel assembly location, due to malfunctioning refueling equipment

C. Verifying the qualifications of refueling machine, spent fuel handling machine and transfer machine operators prior to commencing core alterations

D. Ensuring all applicable requirements of the technical Specifications and the TRM are met for the evolution in progress

Answer: A

Answer Explanation:

Documenting any fuel handling problems and maintaining the Refueling Status board--correct per NO-1-200.

Approving temporary changes to core alteration procedures, such as CEA or fuel aasembly location, due to malfunctioning refueling equipment--incorrect, approval process is per NFM procedures.

Verifying the qualifications of refueling machine, spent fuel handling machine and transfer machine operators prior to commencing core alterations--incorrect, this is done by the Fuel Handling Coodinator.

Ensuring all applicable requirements of the technical Specifications and the TRM are met for the evolution in progress--incorrect, this is the responsibility of the CRS, SM and FHS.

Question 48 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	2.00
System ID:	50357
User-Defined ID:	Q20632
Cross Reference Number:	
Topic:	Refueling Control Room Operator duties
RO Importance:	2.8
SRO Importance:	3.7
KA Number:	2.1.41
Comments:	BANK Used 7/2002 NRC exam References: NO-1-200 page 26

49 **ID: Q50358** **Points: 1.00**

Unit-1 has experienced a Loss of Offsite Power. Operators have implemented the appropriate Emergency Operating procedure. During plant stabilization a SIAS actuates due to low pressurizer pressure, and currently D/G 1B is loaded to 3630 KW.

Which of the following is correct for these conditions? (Assume NO operator actions)

A. 1B Diesel Generator ENGINE EXCTR SHUTDOWN alarm due to D/G shutdown

B. 1B DG POT VOLT FREQ LO Alarm due to low frequency

C. 1B DG POT VOLT FREQ LO Alarm due to low voltage

D. 1B Diesel Generator ENGINE EXCTR SHUTDOWN alarm due to exciter shutdown

Answer: B

Answer Explanation:

B is correct per EOP-2 step IV.P.1 and basis

Question 49 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	2.00
System ID:	50358
User-Defined ID:	Q50358
Cross Reference Number:	Q42248
Topic:	EDG response to overload
RO Importance:	4.1
SRO Importance:	4.4
KA Number:	36062K102
Comments:	Modified from Q42248 References : EOP-2 page 38 EOP -2 Basis page 37

50 **ID: Q50359** **Points: 1.00**

Given the following:

Unit 1 is operating at 100% power
A loss of 12 DC bus occurs

Which of the following describes the effect of the loss of 12 DC Bus? (Assume No operator actions)

A. 1B D/G start solenoids fail open AND SRW CV fails open

B. 1B D/G control power loses power AND TCBs 1, 2, 5, 6 trip

C. 1B D/G field flash AND control power lose power.

D. 1B D/G start solenoids fail open AND TCBs 3, 4, 7, 8 trip

Answer: C

Answer Explanation:

A. 1B D/G field flash AND control power lose power. Correct

B. 1B D/G start solenoids fail open AND SRW CV fails open - Not Correct Start Solenoids fail shut

C. 1B D/G control power loses power AND TCBs 1, 2, 5, 6 trip - Not Correct- TCBs 2,4,7,8 trip

D. 1B D/G start solenoids fail open AND TCBs 3, 4, 7, 8 trip - Not Correct - start solenoids fail shut

Question 50 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	4.00
System ID:	50359
User-Defined ID:	Q50359
Cross Reference Number:	
Topic:	Affect on D/G for loss of DC power
RO Importance:	2.7
SRO Importance:	3.2
KA Number:	36063K102
Comments:	NEW Question Reference: AOP7J page 80

51 **ID: Q50361** **Points: 1.00**

Unit 1 was operating at 100% power when a SIAS occured with a loss of 11 4KV BUS. Which of the following statments is correct for these conditions?

A. 1A D/G will trip a on Low -Low lube oil pressure OR High Crankcase pressure

B. 1A D/G will trip a on Lube Oil Temp High-High OR Engine Overspeed

C. 1A D/G will trip on HT Cooling Water Pressure Low OR generator overvoltage

D. 1A D/G will trip a on Low - Low lube oil pressure OR Generator Differential Protection

Answer: D

Question 51 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50361
User-Defined ID:	Q50361
Cross Reference Number:	Q15961
Topic:	1A D/G Effects of SIAS or UV on trips
RO Importance:	3.8
SRO Importance:	4.1
KA Number:	36064K401
Comments:	Modified from Q15961 Reference Diesel Generator Lesson Plan LOI-024A-1-1 Slides 84 -90 Drawing 61086 Sheet 19A

52 **ID: Q20392** **Points: 1.00**

Unit 1 has tripped and EOP-0 is implemented. The Condenser Off-Gas (1-RE-1752), S/G Blowdown Recovery (1-RIC-4095), S/G Blowdown Recovery (1-RE-4014) radiation monitor meter indications are pegged LOW and all lights on their panels are out/dark.

What action should be performed to support the Radiation Levels External to Containment (RLEC) safety function?

A. Shut the Steam Generator Blowdown Control Valves and report RLEC cannot be met, due to loss of power effects

B. Shut the Steam Generator Blowdown Control Valves and report RLEC is complete

C. Restart the sample pumps and re-evaluate the indications

D. Attempt to clear all RMS alarms and re-evaluate the indications

Answer: A

Answer Explanation:

Shut the Steam Generator Blowdown Control Valves and report RLEC cannot be met due to loss of power efects per EOP-0.- Correct

Report "Radiation Levels External to Containment is complete" to the CRS--incorrect, the safety function should be reported as "cannot be met, due to loss of power effects".

Restart the sample pumps and re-evaluate the indications--incorrect, pumps cannot be restarted with power unavailable, as indicated by no lights on the panels energized.

Attempt to clear all RMS alarms and re-evaluate the indications--incorrect, alarms and indications cannot be restored with power unavailable, as indicated by no lights on the panels energized.

Question 52 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	2.00
System ID:	50362
User-Defined ID:	Q20392
Cross Reference Number:	
Topic:	Given conditions associated with RMS, identify the actions to support RLEC Safety Function
RO Importance:	2.5
SRO Importance:	2.9
KA Number:	37073A201
Comments:	Bank Question Used 7/2002 NRC exam References: EOP-0 page 17 EOP-0 basis page 28 NO-1-201, pages 25-26

53 **ID: Q50363** **Points: 1.00**

Unit 1 is at 75% power, when 12 SW Pump trips. The appropriate AOP is entered. When 13 SW is started it seizes and the breaker trips. Which of the following is required for the listed conditions?

A. Commence a a power reduction Per OP-3, Normal Power Operation, as required

B. Trip the Reactor and Implement EOP-0, Post Trip Immediate Actions

C. Cross-connect SRW through 13 SRW pump suction and discharge

D. Line up the SW system to use the Emergency Return Discharge Header

Answer: C

Question 53 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	0
Difficulty:	1.00
System ID:	50363
User-Defined ID:	Q50363
Cross Reference Number:	CRO-113-2-5-11
Topic:	Unit 1 is at 75% power, when 12SW Pump trips. What actions are required
RO Importance:	3.5
SRO Importance:	3.7
KA Number:	34076A201
Comments:	Modified from CRO-113-2-5-11 References : AOP-7A pages 12, 19 AOP-7A Basis page 10 Action Taken When Unit1at 75% Power When 12 SW Pump trips and one header operating

54 **ID: Q50364** **Points: 1.00**

Unit one is operating at 100% power when INSTR AIR SYS MALF alarm comes in. The following conditions are noted:

? Instrument Air Header pressure is 96 psig
? 11 & 12 IA Dryer Malfunction Light is "Bright"

Which of the following describes the likely cause of this alarm?

A. Loss of Power to an IA dryer

B. Standby Air Compressor has picked up

C. Plant Air to I/A X-Conn, 1-IA-2061-CV has opened

D. Both dryers are in service due to low IA presure

Answer: A

Question 54 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50364
User-Defined ID:	Q50364
Cross Reference Number:	
Topic:	Monitor IA and identify required actions
RO Importance:	3.1
SRO Importance:	3.2
KA Number:	38073A301
Comments:	NEW Question References : 1C-13 Alarm Manual page 48-50 Compressed Air Lesson Plan- LOI-019-1-2 Slides 62, 63

55 **ID: Q50365** **Points: 1.00**

Which of the following combination of components must exist to allow resetting CIS from the Control Room?

A. 1-CC-3832, CC CNTMT Supply Vlv HS must be in Shut and 1-IA-2080 MOV OVERRIDE HS must be in Override

B. 1-CC-3832, CC CNTMT Supply Vlv, HS must be in Shut and 1-IA-2080 MOV must be in shut

C. 1-PA-1040,Plant Air CNTMT Isol Vlv HS must be in Shut and 1-IA-2080 MOV OVERRIDE HS must be in Normal

D. 1-CPA-1410-CV, CNTMT Purge SUpp Vlv, must be in Shut, and CNTMT Purge EXH Fan must be in OFF

Answer: B

Question 55 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50365
User-Defined ID:	Q50365
Cross Reference Number:	
Topic:	Given a CIS conditions, parameter values and/or indications determine the appropriate response
RO Importance:	3.1
SRO Importance:	3.7
KA Number:	35103K406
Comments:	New Question EOP Attachment 4 page 1 & 2

56 **ID: Q50366** **Points: 1.00**

Given the following:

? Unit is operating at 100% power.
? An event occurs
? You are standing next to 1C-15 and the CRS directs you to manually trip the Reactor
? You press two (2) Reactor Trip PBs on 1C-15

Which ONE (1) of the following describes the effect on the plant?

Reactor Trip Switchgear Breakers....

A. 1, 2, 5, and 6 OPEN; reactor trip occurs

B. 3, 4, 7, and 8 OPEN; reactor trip occurs

C. 1, 4 5, and 8 OPEN, reactor trip occurs

D. 2, 3, 6 and 7 OPEN; reactor trip occurs

Answer: D

Answer Explanation:

2, 3, 6 and 7 OPEN; reactor trip occurs.- Correct for K 2 & 3 from 1C-15

1, 2, 5, and 6 OPEN; reactor trip occurs.- Incorrect combination & location

3, 4, 7, and 8 OPEN; reactor trip occurs.- incorrect combination & location

1, 4 5, and 8 OPEN; reactor trip occurs.-correct combination wrong location

Question 56 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	3.00
System ID:	50366
User-Defined ID:	Q50366
Cross Reference Number:	
Topic:	Analyze effects of Rx Trip Bkrs open
RO Importance:	4.0
SRO Importance:	4.1
KA Number:	31001K614
Comments:	NEW Question Reference : RPS Lesson Plan LOI-058-1-2 (RPS part 1) slides 50 , 73, 76, 77, 78

57 **ID: Q50368** **Points: 1.00**

Unit two is in Mode 5 drawing a pressurizer bubble. Which of the following describes the current PZR level response and the reasons

A. When drawing a bubble in Mode 5, 1-LI-103 will read higher than 1-LIC-110X and 1-LIC110Y, AND when in Mode 1 at NOP/NOT, 1LI-103 will read approximately the same as 1-LIC-110X and 1-LIC110Y

B. When drawing a bubble in Mode 5, 1-LI-103 will read lower than 1-LIC-110X and 1-LIC110Y, AND when in Mode 1 at NOP/NOT, 1LI-103 will read approximately the same as 1-LIC-110X and 1-LIC110Y

C. When drawing a bubble in Mode 5, 1-LI-103 will read lower than 1-LIC-110X and 1-LIC110Y, AND when in Mode 1 at NOP/NOT, 1LI-103 will read lower than 1-LIC-110X and 1-LIC110Y

D. When drawing a bubble in Mode 5, 1-LI-103 will read higher than 1-LIC-110X and 1-LIC110Y, AND when in Mode 1 at NOP/NOT, 1LI-103 will read lower than 1-LIC-110X and 1-LIC110Y

Answer: B

Answer Explanation:

When drawing a bubble in Mode 5, 1-LI-103 will read lower than 1-LIC-110X and 1-LIC110Y, AND when in Mode 1 at NOP/NOT, 1LI-103 will read approximately the same as 1-LIC-110X and 1-LIC110Y - this is correct because 1-LIC-110X and 1-LIC110Y are calibrated for NOP/NOT conditions and as the pressurizer cools the density gets greater causing the DP (between reference leg and pressurizer) to lessen, given a higher indicated level. LI-103 is calibrated from 1TE-101 and PT-105A and will indicate correctly throughout its range.

Question 57 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	2.00
System ID:	50368
User-Defined ID:	Q50368
Cross Reference Number:	
Topic:	Recall the feature of the PLCS that provides for indication of acurate level when RCS is cold and wh
RO Importance:	2.9
SRO Importance:	3.2
KA Number:	32011K407
Comments:	New Question References RCS instrumentation Lesson Plan LOI-064A2-1 Slide 43 GFES Lesson Plan Sensors & detectors LOI-301-15-3 Slide 70

58 **ID: Q50369** **Points: 1.00**

Which NI power indication is lost on a loss of 120VAC bus 2Y02?

A. 1C43 channel B aux excore wide range.

B. Unit 2 Rx Reg Channel X.

C. 1C15 channel B linear range.

D. 2C43 channel B aux excore wide range.

Answer: A

Question 58 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	1.00
System ID:	50369
User-Defined ID:	Q50369
Cross Reference Number:	CRO-57-1-5-05
Topic:	NI power indication lost due to loss of 120VAC bus 2Y02
RO Importance:	3.3
SRO Importance:	3.7
KA Number:	37015K201
Comments:	BANK Question (CRO-57-1-5-05) References: AOP-7J basis page 16 Drawing 61022E

59 **ID: Q50370** **Points: 1.00**

Unit one was operating at 100% power when an event occured. The plant was tripped and EOP-0 was implemented. The appropriate optimal recovery procedure has now been implemented. The following indications are noted:

- SPDS alarm on 1(2)C06
- CSF3 (Core and RCS Heat Removal) block turns red for "CET High"

Which of the following is the Minimum conditions required to cause these indications?

A. 2 of 4 CETs in a quadrant exceeded 625° F

B. 1 CET in 2 of 4 quadrants exceeded 625° F

C. 2 of 4 CETs in a quadrant exceeded 650° F

D. 1 CET in 2 of 4 quadrants exceeded 650° F

Answer: C

Answer Explanation:

page 2 provides a quadrant display of four highest CETs in each quadrant
- a. Yellow alarms for > 625°F
- b. Red alarms for > 650°F

6. CSF3 red 2 alarm if 2/4 CETs in a quadrant exceed 650°F
   - a. SDPS alarm on 1(2)C03
   - b. CSF3 block turns red for "CET High"

Question 59 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50370
User-Defined ID:	Q50370
Cross Reference Number:	
Topic:	Cause of CSF3 alarm
RO Importance:	3.2
SRO Importance:	3.2
KA Number:	37017K101
Comments:	New Question Reference :SPDS screen last page of Core and RCS heat removal

60 **ID: Q50371** **Points: 1.00**

Which of the following combination of statements concerning the Containment Iodine Removal System is correct?

A. (1))Each IRU is 100% capacity, with each unit being 99% efficient for removing Iodine, (2) as humidty level approaches 99%, filter efficiency is ~ 50%

B. (1))Each IRU is 100 % capacity, with each unit being 99% efficient for removing Iodine, (2) as humidity level approaches 99%, filter efficiency is ~ 90%

C. (1))Each IRU is 50% capacity, with each unit being 99% efficient for removing Iodine, (2) as humidity level approaches 99%, filter efficiency is ~ 90%

D. (1))Each IRU is 50% capacity, with each unit being 99% efficient for removing Iodine, (2) as humidity level approaches 99%, filter efficiency is ~ 50%

Answer: C

Answer Explanation:

(1))Each IRU is 50% capacity, with each unit being 99% efficient for removing Iodine, (2) as humidity level approaches 99%, filter efficiency is ~ 90% - Correct

Question 60 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	2.00
System ID:	50371
User-Defined ID:	Q50371
Cross Reference Number:	
Topic:	Given conditions, parameter values and/or indications associated with the Containment Iodine Removal
RO Importance:	3.1
SRO Importance:	3.4
KA Number:	35027K501
Comments:	New question Reference : EOP-5 basis Page 66

61 **ID: Q50373** **Points: 1.00**

Unit-1 is in EOP-1 with feedwater controls in automatic mode (feedwater regulating bypass valves are controlling level) when RCP feeder breaker, 252-1201, trips. Assume no other operator action is taken. Which of the following secondary plant parameters indicate a loss of RCS flow is occurring?

A. Lowering feed flow and steam flow with rising S/G pressures

B. Rising steam flow and feed flow with lowering S/G pressures

C. Rising steam flow and feed flow with rising S/G pressures

D. Lowering steam flow and feed flow with lowering S/G pressures

Answer: C

Answer Explanation:

Rising steam flow and feed flow with rising S/G pressures--is correct, Tave will increase, causing ADVs to open. This will cause steam flow and feed flow to rise. S/G pressures will rise as Thot increases.
Distractors are possible combinations of secondary plant parameters.

Question 61 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	5
Difficulty:	3.00
System ID:	50373
User-Defined ID:	Q50373
Cross Reference Number:	
Topic:	Determine the core and plant parameters response to a Loss of Flow Accident.
RO Importance:	3.5
SRO Importance:	3.8
KA Number:	34035A102
Comments:	Bank question used 7/2002 NRC exam References: EOP-2 basis page 16, 29 -30 Loss of Flow Indicators in control room

62 **ID: Q50374** **Points: 1.00**

Unit 1 is operating at 50%, at EOC. A TBV fails partially open which causes steam flow to increase 5%. In response to rising Rx power, the RO inserts Group 5 CEAs enough to reduce power 5%. With no further operator actions, which best describes the plant's response.

A. Reactor power will decrease temporarily then return to 50%, S/G Pressure will not change.

B. Reactor power will decrease to a new lower value, S/G pressure will not change.

C. Reactor power will decrease temporarily then return to 50%, S/G pressure will be lower.

D. Reactor power will increase to a new higher value, S/G pressure will be lower.

Answer: D

Question 62 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	3.00
System ID:	50374
User-Defined ID:	Q50374
Cross Reference Number:	302
Topic:	TBV malfunction effect on S/G pressure
RO Importance:	3.2
SRO Importance:	3.3
KA Number:	34041K301
Comments:	Modified from Bank question 302 References: AOP-7K basis page 3, 7

63 **ID: Q50376** **Points: 1.00**

Unit 1 is operating at 100% power with condensate pumps 11,12 and 13 running when 12 condensate pump trips.

What effect will this have on the secondary and what initial steps should be taken to mitigate the consequences?

A. Reduced feed flow to the S/Gs and lowering levels will result. Bias feed pump speed as required to restore S/G levels.

B. Lower feed pump suction pressure will result. Verify a condensate booster pump automatically starts.

C. Cavitation and increased impellar wear will occur on the Condensate pumps. Reduce power to maintain condensate header flow less than 8,000 GPM.

D. Lower condensate header pressure will exist. Place hotwell level control in manual and bypass the condensate demins and precoat filters.

Answer: D

Answer Explanation:

Lower condensate header pressure will exist. Place hotwell level control in manual and bypass condensate demineralizers and precoat filters.--is correct per indications and actions in AOP-3G.

Reduced feed flow to the S/Gs and lowering levels will result. Bias feed pump speed as required to maintain S/G levels--is incorrect, S/G levels should be maintained by the feed pumps and the feed reg valves automatically.

Lower feed pump suction pressure will result. Verify a condensate booster pump automatically starts.--is incorrect, suction pressure will lower, but not to the point where the standby CBP starts.

Cavitation and increased impellar wear will occur on the Condensate pumps. Reduce power to maintain condensate header flow less than 8,000 GPM.-- is incorrect, power reduction is not required on loss of 1 condensate pump from 100% power

Question 63 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	3.00
System ID:	50376
User-Defined ID:	Q50376
Cross Reference Number:	
Topic:	Condensate Pump
RO Importance:	4.0
SRO Importance:	4.3
KA Number:	244
Comments:	Bank Question Used 7/2002 NRC exam . References: AOP-3G basis pages 9-11

64 **ID: Q50377** **Points: 1.00**

Upon receiving a Gaseous Waste Discharge (O-RE-2191) high rad alarm, what automatic action occurs and immediate followup action is needed?

A. Shuts waste gas discharge valves, O-WGS-2191 and -2192; notify chemistry.

B. Shuts waste gas discharge valves, O-WGS-2191 and 2192; manually shut waste gas discharge header flow control valve, O-WGS-2191-PCV.

C. Shuts waste gas discharge valves, O-WGS-2191 and -2192; purge the waste gas discharge header.

D. Shuts waste gas discharge header flow control valve, O-WGS-2191-PCV; manually shut waste gas discharge valves, O-WGS-2191 and -2192.

Answer: B

Answer Explanation:

Correct per Alarm manual response **1C22H . these actions need to be performed by the operator.**

Question 64 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	1
Difficulty:	2.00
System ID:	50377
User-Defined ID:	Q50377
Cross Reference Number:	CRO-122-1-3-24
Topic:	What automatic action occurs and followup actions on Gaseous Waste Discharge (O-RE-2191) High Alarm
RO Importance:	3.3
SRO Importance:	3.5
KA Number:	39071A409
Comments:	**Modified from Q24720** **References: Alarm manual for 1C22H PAge 102-104** Gaseous Waste Discharge High Rad Alarm Automatic Action 55.41:11 55.43:5 /

65 **ID: Q50378** **Points: 1.00**

A smoke detector for the Unit-1 45' Switch Gear Room malfunctions, causing an alarm. Which one of the following describes the effect on the system and the appropriate response?

A. "FIRE PROT PANEL 1C24B" alarm actuates and after a time delay, Halon system discharges. Reset the fire panel 1FP430 and restore ventilation in the Switchgear room.

B. "FIRE PROT PANEL 1C24B" alarm actuates and immediately results in Halon system discharge. Reset the fire panel 1FP430 and restore ventilation in the Switchgear room.

C. "FIRE SYS" alarm actuates and after a time delay, Halon system discharges. Reset the fire panel 1FP430.

D. "FIRE SYS" alarm actuates but does not result in Halon system discharge. Reset the fire panel 1FP430

Answer: D

Question 65 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50378
User-Defined ID:	Q50378
Cross Reference Number:	FIRE PROTECTION 002
Topic:	What is the effect on the system for a 45' SGR Smoke Detector malfunction?
RO Importance:	2.7
SRO Importance:	2.9
KA Number:	38086A203
Comments:	Modified from 28827 REference : 124B Alarm Manual page 88 & 89 FIre System Lesson Plan

66 **ID: Q50381** **Points: 1.00**

In the event of a Control Room evacuation, what means is provided for control of the saltwater pumps?

A. Remote override transfer valves in the SRW pump room.

B. Local closure and trip of circuit breakers using the breaker front pushbuttons.

C. Local/remote keyswitches at the pump breakers.

D. LOCI sequencer override pushbuttons at the ESFAS cabinets.

Answer: C

Question 66 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	1.00
System ID:	50381
User-Defined ID:	Q50381
Cross Reference Number:	CRO-113-2-5-15
Topic:	In the event of a Control Room evacuation, what means is provided for control of the saltwater pumps
RO Importance:	3.9
SRO Importance:	3.4
KA Number:	2130
Comments:	Bank Question References SaltWater Lesson Plan LOI-012-1-2 slides 50 - 52 Basis: Control Room Evacuation Means Provided for Control of SW PumpsReferences: KA1: KA2:

67 ID: Q50383 Points: 1.00

Given the following conditions:

" Unit 2 is at 100% power.
" 23 CCW Pump is OOS.

1205 21 CCW Pump declared INOPERABLE due to a failed surveillance.
1232 22 CCW Pump also declared INOPERABLE due to the results of a common cause failure analysis.
1259 Plant Shutdown to Mode 3 commenced.
1324 21 CCW Pump returned to OPERABLE status.
1343 22 CCW Pump returned to OPERABLE status.

Which ONE (1) of the following describes the Technical Specification requirements for operation of the plant?

Plant conditions...

A. allowed the plant shutdown to be terminated no earlier than 1324.

B. allowed the plant shutdown to be terminated no earlier than 1332

C. require that the Shutdown to Mode 3 is completed by 1832

D. require that the Shutdown to Mode 3 is completed by 1932

Answer: A

Answer Explanation:

A. allowed the plant shutdown to be terminated no earlier than 1324. - Correct

B. allowed the plant shutdown to be terminated no earlier than 1332.- Incorrect

C. require that the Shutdown to Mode 3 is completed by 1832. - Incorrect

D. require that the Shutdown to Mode 3 is completed by 1932.- Incorrect

Question 67 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	5
Difficulty:	3.00
System ID:	50383
User-Defined ID:	Q50383
Cross Reference Number:	
Topic:	Given Conditions, parameter values and/or indications , apply the appropriate technical specificatio
RO Importance:	3.4
SRO Importance:	3.8
KA Number:	2132
Comments:	New question Referecne - Technical specifications 1-3.1 through 1-3.13 and 3.7.5 -2 through 3.7.5-2

68 **ID: Q50385** **Points: 1.00**

Unit 2 has just completed a refueling outage and is conducting PSTP3," Escalation to Power Test Procedure", at 85% it was determined that Frt is greater than the full power value of T.S 3.2.3. While reviewing the data a transient occurs and power rises to 90% and is stabilized. Which of the following is required?

A. Reduce Thermal Power to less than or equal to 85% within 1hour

B. Reduce Thermal Power to less than or equal to 85% within 15 minutes

C. Reduce Thermal Power to less than or equal to 50% within 1 hour

D. Reduce Thermal Power to less than or equal to 50% within 15 minutes

Answer: B

Answer Explanation:

Reduce Thermal Power to less than or equal to 85% within 15 Mins - Correct per T.S. 3.1.8

Question 68 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	3.00
System ID:	50385
User-Defined ID:	Q50385
Cross Reference Number:	
Topic:	Given conditions, parameter values and/or indications, determine if theses conditions are entry valu
RO Importance:	3.4
SRO Importance:	4.1
KA Number:	2222
Comments:	NEW Question Reference Technical Specification 3.1.8 and PST-3 page 6

69 **ID: Q50384** **Points: 1.00**

Unit-2 is in Hot Standby and the latest leakage reports are:

- 0.8 gpm - RCS drain valve weld leakage
- 1.8 gpm - leakage past check valves from the RCS to the SI system
- .05 gpm - primary-to-secondary leakage (.04 gpm 21 S/G, .01 gpm 22 S/G)
- 3.8 gpm - total leakage.

Which of the following Technical Specification leakage limits are exceeded?

A. Pressure Boundary leakage and Primary to Secondary leakage

B. Pressure Boundary leakage and Unidentified leakage

C. Identified leakage and Unidentified leakage

D. Pressure Boundary leakage and Identified leakage

Answer: B

Answer Explanation:

A. is incorrect because primary to secondary leakage is less than T.S. and unidentified is > T.S.
B. is correct, pressure boundary leakage exists and unidentified is > 1 gpm. {3.8-(1.8+.8=.05)=1.15 gpm}
C. is incorrect because identified leakage is < 10 gpm.
D. is incorrect because identified leakage is < 10 gpm and pressure boundary leakage exists.

Question 69 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	3.00
System ID:	50384
User-Defined ID:	Q50384
Cross Reference Number:	LOR-032020306-001
Topic:	RCS leakage TS
RO Importance:	3.9
SRO Importance:	4.6
KA Number:	2242
Comments:	Bank Question References: Technical Specification 3.4.13-1 through 3.4-13-3

70 ID: Q50387 Points: 1.00

Unit 2 is performing a startup after a refueling outage. Power is currently 20% and the turbine is in "Hold". The CRO places steam generator blowdown in service at 100 GPM/SG per plant Chemistry recommendations.

Which of the following describes the immediate plant response to this evolution? (Assume no additional operator actions)

A. Reactor power increases, letdown flow increases, feedwater flow increases.

B. Reactor power decreases, letdown flow increases, feedwater flow decreases.

C. Reactor power increases, letdown flow decreases, feedwater flow decreases.

D. Reactor power decreases, letdown flow decreases, feedwater flow increases.

Answer: D

Answer Explanation:

Reactor power decreases, letdown flow decreases, feedwater flow increases - correct + MTC at BOC which means power lowers with decreasing temperature.

Question 70 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	4
Difficulty:	4.00
System ID:	50387
User-Defined ID:	Q50387
Cross Reference Number:	
Topic:	Facility operating characteristics
RO Importance:	4.2
SRO Importance:	4.4
KA Number:	2244
Comments:	New Question References : Blow Down System Lesson plan LOI-83-1-0 Slides 93, 96, 97 OI-8A REv 38 page 18

71 **ID: Q50388** **Points: 1.00**

Given the following:

" A CCNPP employee has returned from working an outage at Ginna NPP.
" The dose received at GINNA was 750 millirem.
" His TEDE radiation exposure for the year is 1550 millirem.
" The remainder of his dose was received at CCNPP.

Which ONE (1) of the following describes the MAXIMUM additional dose the employee may receive prior to exceeding his TEDE alara dose goal for the year?

A. 700 millirem

B. 1450 millirem

C. 1700 millirem

D. 2450 millirem

Answer: B

Answer Explanation:

1450 millirem = correct
1700 millirem = incorrect, adds dose from Ginna
2450 millirem = incorrect, based on max admin limit of 4000 mr
700 millirem = incorrect, adds Ginna and based on max admin limit of 3000 mr

Question 71 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	1.00
System ID:	50388
User-Defined ID:	Q50388
Cross Reference Number:	
Topic:	Recall important Radiation Control Limits
RO Importance:	2.5
SRO Importance:	3.1
KA Number:	234
Comments:	New Question References RP-1-100 pages 18-27

72 **ID: Q50389** **Points: 1.00**

For entry itno a LOCKED HIGH RADIATION AREA which of the following correctly describes all requirements that must be met?

A. A Radiation Work Permit, work approved by GS-RP, Radiation Protection approval for access, Pre Job Brief, dosimetry, pre-entry verification

B. A Radiation Work Permit, work approved by GS-RP, Radiation Protection approval for access, Pre Job Brief, dosimetry, hand held survey instrument

C. A Radiation Work Permit, continuously indicating dose rate meter, Radiation Protection approval for access, Pre Job Brief, dosimetry, pre-entry verification.

D. A Radiation Work Permit, continuously indicating dose rate meter, Radiation Protection approval for access, Pre Job Brief, dosimetry, hand held survey instrument

Answer: C

Answer Explanation:

A Special Work Permit, continuously indicating dose rate meter, Radiation Protection approval, Pre Job Brief, dosimetry, pre-entry verification = correct.

Question 72 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	2.00
System ID:	50389
User-Defined ID:	Q50389
Cross Reference Number:	
Topic:	Recall radiological safety principles, such as locked high radiation area
RO Importance:	3.2
SRO Importance:	3.7
KA Number:	2312
Comments:	New Question RP-1-101 pages 30 -37

73 **ID: Q50390** **Points: 1.00**

Unit-1 Waste Processing Ventilation Radiation Monitor (1-RE-5410) is in alarm. **All other RMS indications appear normal.**
Which of the following would be a likely cause?

A. A fuel handling event in the spent fuel pool

B. Elevated dose rates in the ECCS pump rooms due to SDC operation

C. Leakage from a Waste Gas Compressor

D. Excessive packing leakage from a Charging pump

Answer: D

Answer Explanation:

Excessive packing leakage from a Charging pump--correct per alarm response manual and operator experience

A fuel handling event in the spent fuel pool--incorrect, the SFP area monitor and Main Vent RMS indications would also be expected to rise.

Elevated dose rates in the ECCS pump rooms due to SDC operation--incorrect, ECCS pump room RMS would indicate this, WP would would only increase if SDC leakage were present.

Leakage from a Waste Gas Compressor--incorrect, Main Vent and Waste Gas Equipment Room area monitors would indicate this location for leakage.

Question 73 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	3.00
System ID:	50390
User-Defined ID:	Q50390
Cross Reference Number:	
Topic:	Knowledge of the Gaseous RMS responses to accidental Liquid Waste releases
RO Importance:	3.4
SRO Importance:	3.8
KA Number:	2313
Comments:	Bank Question Used 7/2002 NRC exam References: Alarm Response Manual 1C22 pages 52 -56

74 **ID: Q50395** **Points: 1.00**

Following a plant transient, all control room annuciators are lost. The appropriate Abnormal and Emergency operating Procedures have been implemented and the CRS has directed appropriate compensatory actions. Which of the following feature(s) aids the control room staff in assessing panel indications to determine how close they are to exceeding limits?

A. Level indicators with alarm setpoints associated with them have yellow zonebanding ranging from the normal value to the alarm setpoint.

B. Level indicators with alarm setpoints associated with them have yellow zone banding ranging from the alarm setpoint to the Technical Specification Limit.

C. Steam Generator level instruments have Orange zonebanding that range from the trip setpoint out to the scale end.

D. Steam Generator level instruments have Orange zonebanding ranging from the normal indicating range to the alarm setpoint

Answer: B

Answer Explanation:

Level indicators with alarm setpoints associated with them have a yellow zoneband ranging from the alarm setpoint to the Technical Specification Limit - Correct per NO-1-200 Rev 34 pg 73. CNG-OP-1.01 5.2.B.1,2 describes compensatory actions to incude alternate meands for monitoring the affected parameter.

Question 74 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	3
Difficulty:	2.00
System ID:	50395
User-Defined ID:	Q50395
Cross Reference Number:	
Topic:	Loss of Annunciators response
RO Importance:	3.3
SRO Importance:	3.5
KA Number:	2432
Comments:	NEW Question References NO-1-200 Rev 34 page 73.

75 **ID: Q50398** **Points: 1.00**

At 6am on a Saturday morning a terrorist attack has resulted in significant damage to the Control Room and Auxiliary Building and all members of the control room staff were killed. Security has secured the terrorist and are attempting to coordinate activities in the Emergency Plan with Operations. In addition to the security personnel, the following onsite personnel are left alive :

Operations Manager (Inactive License)
Principal Plant Operator (Non-Licensed)
Plant Operator Instructor (Active License)
Turbine Building watch (Non-LIcensed)
Outside Watch (Non-Licensed)

Which of the following is correct for the listed conditions concerning coordination of required actions per the ERPIP?.

A. The Principal Plant Operator is the operator in charge and will go to the Secondary Fire Brigade Locker and assume command of the site.

B. The Operations Manager is the operator in charge and will go to the Operational Support Center and assume command of the site

C. The Plant Operator Instructor is the operator in charge and will go to the Secondary Fire Brigade Locker and assume command of the site.

D. The Operations Manager is the operator in charge and will go to the Fire Brigade locker and assume command of the site

Answer: C

Answer Explanation:

The Plant Operator Instructor is the operator in charge and will go to the Secondary Fire Brigade Locker and assume command of the site- Correct - Per ERPIP 3.0 Attachment 27.

Question 75 Info	
Question Type:	Multiple Choice
Status:	Active
Always select on test?	No
Authorized for practice?	No
Points:	1.00
Time to Complete:	2
Difficulty:	2.00
System ID:	50398
User-Defined ID:	Q50398
Cross Reference Number:	
Topic:	Identify who should become the operator in charge
RO Importance:	3.0
SRO Importance:	4.1
KA Number:	2437
Comments:	New Question References Per ERPIP 3.0 Attachment 27 Note.