

# Waterford III 2006 SRO/RO Initial License Examination Justifications for changes from Initial Approved Outlines.

## Written Examination

### RO Written:

1. Question 14; Tier 1/1 4.1-055-G 2.4.20 Knowledge of operational implications of EOP warnings, cautions and notes.  
No credible discriminatory RO level tie exists; OP-902-005 Station Blackout notes and cautions are very limited. Replaced with Generic 2.4.12 Knowledge of general operating crew responsibilities during emergency operations.
2. Question 33 Tier 2/1 RO 007/A1.01 Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the PRTS controls including: Maintaining Quench Tank water level within limits. Rejected due to this K/A being too similar to question 87 on the SRO portion of this exam. Replaced system with 013, but maintained A1.01.
3. Question 47; Tier 2/1 3.6-063-A4.03 Battery discharge rate cannot be monitored in the Control room the only indication available is DC bus voltage which is not a true indicator of discharge rate. Overlap between other written questions dealing with reducing DC loads in the event of a SBO. Replaced with 3.4-005-A4.01 Controls and indications for RHR pump.
4. Question 50, Typo - changed CFR 43.12 to 41.12
5. Question 55; Tier 2/1 3.5-103-G2.1.29; Knowledge of how to conduct and verify valve lineups. The only credible discriminatory tie to be made would be for containment integrity or closure which is used on previous questions. Replaced with 2.1.27 Knowledge of system purpose and or function.
6. Question 57, Typo – changed A4.03 to A4.02. Description accurate, mis-numbered K/A.
7. Question 61; 2/2 3.8-029-A2.04 A2.04 - Ability to (a) predict the impacts of the following malfunctions or operations on the Containment Purge System; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Health physics sampling of containment atmosphere No discriminatory RO level tie for malfunction of HP sampling of containment effect of Containment Purge (CFR: 41.9) Replaced with 3.1-014-A2.07 RPIS loss of reed switch.
8. Question 70; Tier 3 2.2.34 Knowledge of the process for determining the internal and external effects on core reactivity. Duplicated for Question 2 Replaced with: 2.2.22 Knowledge for limiting conditions for operations and Safety Limits.

## **Waterford III 2006 SRO/RO Initial License Examination Justifications for changes from Initial Approved Outlines.**

### **SRO written:**

1. SRO Question 81; Tier 1/1. Rejecting E55/2.2.25: **Knowledge of bases in technical specifications for limiting conditions for operations and safety limits**

Rejected due to no technical specification bases relating to SBO. Replaced with 2.4.47 **Ability to diagnose and recognize trends in an accurate and timely manner utilizing the appropriate control room reference material.** (kept E55).

2. SRO Question 88: Tier 2/1. Rejecting 3.2-013-A2.04: **Ability to (a) predict the impacts of the following malfunctions or operations on the ESFAS; and (b) based Ability on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Loss of instrument bus)**

Rejected due to topic being too similar to question 16. Replaced with A2.06: **Inadvertent ESFAS actuation** (kept 013).

3. SRO Question 91: Tier 2/2. Rejecting 3.8-034-K5.02, **Fuel Handling Equipment Knowledge of the operational implications of the following concepts as they apply to the fuel handling system: Limiting of Load.**

Rejected due to topic being too similar to question 69. Replaced with A2.01: **Ability to (a) predict the impacts of the following malfunctions or operations on the Fuel Handling System; and (b) based Ability on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Dropped fuel element.**

4. SRO Question 99: Tier 3. Rejecting 2.3.6: Knowledge of requirements for reviewing and approving release permits.

Rejected due to being too similar to question 23. Replaced with 2.3.9: **Knowledge of the process for performing a containment purge.**

# **Waterford III 2006 SRO/RO Initial License Examination Justifications for changes from Initial Approved Outlines.**

## **Operating Test**

### **RO Admin JPM**

1. RO Admin JPM 2; Evaluate proposed Work Schedule against Established Overtime Guidelines. Could not be written to a discriminatory RO level more of an SRO task. Replaced with Calculate Shutdown Margin.
2. RO Admin JPM 4; Radiation control; Determine Stay Times to Operate Equipment in a High Dose Field. Duplication of written question. Changed to Review RWP prior to entering the CAA.

### **SRO Admin JPM**

1. SRO Admin JPM 4; Changed from perform OP-901-131 Attachment 1 Containment closure checklist. Unable to develop discriminatory SRO level conditions. Changed to Review and approve Gaseous release permit.

### **Control Room/In-plant JPM**

1. RO JPM H; Restoration from Control Room isolation, did not meet requirements for safety function 8. Changed to perform actions in response to CCW leakage. New JPM, JPM acceptance criteria verified.
2. RO JPM C changed from Alternate Path to non-faulted. Alternate path designation chosen for fire in the control room which is covered in the procedure and does not justify alternate path. Verified required number of alternate path JPMs within acceptable limits.

## **Simulator**

### **Scenario 1**

Added EFW B fails to auto start in event 8 to provide verifiable action for critical task. After EDG B breaker is closed sequencer will run and auto start EFW B and begin feeding S/Gs this provides identifiable actions for the crew to meet Heat sink safety function.

### **Scenario 3**

Replaced EFW B failure to autostart with Main Generator Exciter Field Breaker fail to open on trip. EFW B fail to start added to Scenario 1 for critical task swapped to prevent duplication between Scenarios.

Q#	QID	New	Modified	Direct from Bank
1	R06001			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	87-N	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	TGOP-902-000 T.S Bases 3 / 4.1.1.1	K/A	4.1-E7-EK1.02
Ref Supplied	N/A	Imp. Rating	3.4
Cognitive Level	1	10 CFR 55.41(b)	10
Learning Objective	WLP-OPS-PPE01	11	

Proposed Question	
<p>The reactor trips from 100% power at MOC. The control room operators verify that the reactor is tripped, BUT immediately note that the turbine has NOT tripped and the generator breakers remain closed.</p> <p>If left unresolved this malfunction will cause _____, resulting in...</p>	
A	an uncontrolled cooldown of the RCS; less shutdown margin.
B	main turbine blade heating; damage to the main turbine rotor and shaft.
C	a loss of condenser vacuum; loss of steam bypass capability.
D	an increase in RCS pressure; pressurizer safety valves lifting.
<b>Answer</b>	A
Explanation	
<p>A is correct; heat removal by the generator after the trip would cause a cooldown resulting in the addition of positive reactivity thus reducing shutdown margin.</p> <p>B is incorrect; the reduced steam flow would NOT result in blade overheating.</p> <p>C is incorrect; there would be no loss of circ water and vacuum would be maintained.</p> <p>D is incorrect; the reduced heat input to the RCS would lower pressure.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
2	R06002	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	OP-902-002; TGOP-902-002	K/A	4.2-A8-G2.2.34
Ref Supplied	N/A	Imp. Rating	2.8
Cognitive Level	2	10 CFR 55.41(b)	1
Learning Objective	WLP-OPS-PPE02	18	

Proposed Question	
<p>Plant conditions are as follows:</p> <ul style="list-style-type: none"> <li>• A pressurizer safety valve has failed partially open.</li> <li>• RCS pressure is 1150 psia and slowly dropping.</li> <li>• All systems have operated per design.</li> <li>• The crew has entered OP-902-002, Loss of Coolant Accident.</li> <li>• The procedure directs performing a controlled cooldown to &lt; 350°F using steam bypass or atmospheric dumps valves.</li> </ul> <p>In this situation, a _____ procedurally directed ...</p>	
A	SDM calculation is; due to the positive reactivity effects from the cooldown.
B	SDM calculation is NOT; because adequate boration is assumed due to the SIAS.
C	depressurization is; to provide more Safety Injection flow to the core.
D	depressurization is NOT; because break flow is assumed to reduce pressure enough to permit SDC entry.
<b>Answer</b>	B
Explanation	
<p>B is correct; SDM calculation is NOT required by OP-902-002. The Tech Guide states that the effects of the cooldown on core reactivity should be considered, but adequate boration is assumed due to the SIAS.</p> <p>A is incorrect; SDM calculation is NOT required by OP-902-002.</p> <p>C and D are incorrect; the Tech Guide states that depressurization may be necessary to permit SDC entry.</p>	
Comments	

Q#	QID	New	Modified	Direct from Bank
3	R06003	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	TS and Basis 3.6.1.5	K/A	4.1-E9-EK3.16
Ref Supplied	N/A	Imp. Rating	3.8
Cognitive Level	2	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-CB00	06	

Proposed Question	
<p>The 90°F temperature limit for the Containment applies _____.</p> <p>This limit ensures _____ temperature is maintained within design specifications during a LOCA.</p>	
A	in Modes 1-4; clad
B	in Modes 1-4; Containment
C	above 70% power; clad
D	above 70% power; Containment
<b>Answer</b>	C
Explanation	
<p>C is correct; TS 3.6.1.5 limits the low temperature to 90°F only above 70% power, and the basis states this is to ensure peak clad temperature remains <math>\leq</math> 2200°F.</p> <p>A and B are incorrect; TS 3.6.1.5 limits the low temperature to 90°F only above 70% power.</p> <p>D is incorrect; TS 3.6.1.5 basis states this is to ensure peak clad temperature remains <math>\leq</math> 2200°F.</p>	

Comments
<p>This limit applies to a SB LOCA because it is based on the difference in the rate ECCS is injecting versus the rate at which the RCS is emptying into the Containment. At lower Containment pressures, this difference is greater than at higher Containment pressures.</p>

Q#	QID	New	Modified	Direct from Bank
4	R06004		X	

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	15-A	Level	RO
NRC Exam History	2002 NRC RO Exam	Tier/Group	1/1
Tech References	OP-902-002	K/A	4.1-E11-EK2.02
Ref Supplied	Att.2-F of OP-902-009	Imp. Rating	2.6
Cognitive Level	2	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-PPE02	16	

Proposed Question	
<p>Following a Large Break LOCA, Reactor Coolant System pressure is 125 psia, and temperature is 345°F. Select the MINIMUM flow required to meet acceptable Low Pressure Safety Injection (LPSI) System performance.</p>	
A	LPSI flow is 2000 gpm from Train A or B
B	LPSI flow is 2500 gpm from Train A or B
C	LPSI Train A flow is 1000 gpm, LPSI Train B flow is 1000 gpm
D	LPSI Train A flow is 1250 gpm, LPSI Train B flow is 1250 gpm
<b>Answer</b>	B
Explanation	
<p>B is correct; minimum acceptable LPSI flow for RCS pressure of 125 psia is 2500 from Train A or B. A is incorrect; 2000 gpm from train A or B is in the unacceptable region of Curve 2-F. C and D are incorrect; neither meets the 2500 gpm per Train A or B flow.</p>	

Comments
<p>Old Q modified to force student to distinguish BOTH Train flow vs single train flow. Old Q answer C was correct.</p>

Q#	QID	New	Modified	Direct from Bank
5	R06005		X	

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	3491-B OPS bank	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	OP-901-130	K/A	4.2-A15/17-AA2.02
Ref Supplied	N/A	Imp. Rating	2.8
Cognitive Level	1	10 CFR 55.41(b)	14
Learning Objective	WLP-OPS-PP0-10	04	

Proposed Question	
<p>The following plant conditions exist:</p> <ul style="list-style-type: none"> <li>• Mode 1, 100% power</li> <li>• RCP 2B THRUST BRNG TEMPERATURE HI annunciator is in alarm</li> <li>• RCP 2B Motor Lube Oil Reservoir temperature is 185°F and stable</li> <li>• RCP 2B Upper Thrust Bearing Temperature indicates 206°F and stable</li> </ul> <p>What ONE action is required by OP-901-130, Reactor Coolant Pump Malfunction, as a result of the PRESENT indications?</p>	
A	Trip the reactor and secure RCP 2B.
B	Commence a plant shutdown.
C	Start ACCW Pumps and WCT Fans.
D	Start one RCP 2B lift oil pump.
<b>Answer</b>	C
Explanation	
<p>C is correct; when bearing temperatures exceed 205°F, Duty Plant Manager and System Engineer are notified and attempt to lower bearing temperature(s) by <b>EITHER</b> of the following:</p> <ul style="list-style-type: none"> <li>• Start Dry Cooling Tower Fans.</li> <li>• Start Auxiliary Component Cooling Water Pump(s) <b>AND</b> associated Wet Cooling Tower Fans.</li> </ul> <p>A is incorrect; Reactor and RCP are required to be tripped when bearing temperatures exceed 225°F.</p> <p>B is incorrect; if any bearing temperature exceeds 212°F, then commence Rapid Plant power reduction.</p> <p>D is incorrect; Oil Lift pump is required to be started only if the ARD has a high temperature condition.</p>	

**Comments**

Old question matched K/A AA2.08 for RCP trip conditions on high bearing temperature.

RCP 2B THRUST BRNG TEMPERATURE HI annunciator F-9 setpoint is 203°F for upper bearing, per ARP OP-500-008 Rev 17.

Q#	QID	New	Modified	Direct from Bank
6	R06006	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	Dwg. G-168 Sheet 1	K/A	4.2-A22-G2.1.24
Ref Supplied	Dwg. G-168 Sheet 1	Imp. Rating	2.8
Cognitive Level	2	10 CFR 55.41(b)	3
Learning Objective	WLP-OPS-PID00 WLP-OPS-CVC00	03 03	

**Proposed Question**

Plant conditions are as follows:

- Plant is at 100% power.
- First standby Charging Pump has started; Charging flow is ~88 gpm.
- Containment Liquid Leakage Rate Recorder has risen to maximum flow (20 gpm).
- Letdown Containment Isolation valve CVC-101 has automatically closed on high temperature.
- Pressurizer level has dropped to 53% and is NOT recovering.

The crew secures Charging and Letdown, and Containment Liquid Leakage Rate Recorder slowly drops to < 0.5 gpm.

Using flow diagram G-168 Sheet 1; identify which ONE of the listed pipe lines is the MOST LIKELY leakage location for the above conditions.

A	2CH2-56A
B	2CH2-191A/B
C	1RC2-42RL2
D	1CH2-58A/B
<b>Answer</b>	B

**Explanation**

B is correct; At this location, cooling from incoming Charging flow will be lost to the Regenerative HX and Letdown will auto isolated on high temperature, and the source of leakage will be stopped.

A is incorrect; At this location, letdown will NOT auto isolate on high temperature.

C is incorrect; At this location, the leak location would NOT be isolated from the RCS.

D is incorrect; At this location, Letdown flow indication would have been 0 because the leak would have been upstream of the flow transmitter (which is NOT shown on the provided reference).

**Comments**

55.6 % is 100% PZR level, 1<sup>st</sup> backup Charging pump starts at -2.5%, 53% is below that value.

Q#	QID	New	Modified	Direct from Bank
7	R06007			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	4130-O	Level	RO
NRC Exam History	2002 NRC RO Exam	Tier/Group	1/1
Tech References	OP-901-131	K/A	4.2-A25-AA1.01
Ref Supplied	Att. 2 from OP-901-131	Imp. Rating	3.6
Cognitive Level	2	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-REQ21	03	

Proposed Question	
<p>The plant is shutdown and drained to mid-loop for replacing Reactor Cooling Pump seals. The time of shutdown was 10/31/06 at 0300. At 0300 on 11/4/06, SDC Train A is secured due to loss of cooling flow to SDCHX A. LPSI Pump B is started and trips.</p> <p>Estimate the MINIMUM time before MODE 4 conditions exist if initial RCS temperature is 110°F.</p>	
A	25 Minutes
B	20 Minutes
C	15 Minutes
D	10 Minutes
<b>Answer</b>	C
Explanation	
<p>C is correct; 4 days after shutdown heatup rate would be 6°F/ min. Initial temp = 110°F, Mode 4 = 200°F, Delta T = 90°F, 90°F / 6°F/min = 15 minutes.</p> <p>D is incorrect; 10 minute RCS temp would be 170°F &lt; mode 4.</p> <p>A and B are incorrect; Mode 4 would be exceeded before 20 and 25 minutes.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
8	R06008			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	6905-A OPS bank	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	OP-901-510	K/A	4.2-A26-AA1.07
Ref Supplied	Att. 1 of OP-901-510	Imp. Rating	2.9
Cognitive Level	2	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-PP05	03	

**Proposed Question**

A Steam line break outside of containment has occurred. The crew manually initiated SIAS, CIAS and MSIS. The closure of the MSIVs isolated the break. CCW Surge Tank level switch, CC-ILS-7013A, fails low. The CRS directs entry into OP-901-510, Component Cooling Water System Malfunction.

Based on the above events, the crew should...

A	secure all Reactor Coolant Pumps within 3 minutes.
B	isolate the CCW Surge Tank makeup path.
C	pull the overspeed trip on EDG A.
D	start CCW Pump A/B.

**Answer** A**Explanation**

A is correct; SIAS will isolate AB header from B train, the level switch will isolate AB header from the A Train. CCW flow lost to the RCPs will require securing RCP if flow is lost for 3 minutes.

B is incorrect; no guidance for isolating makeup path. Makeup pump will run for 3 minutes, then secure.

C is incorrect; EDGs are supplied from the safety headers and are NOT affected by loss of the AB header.

D is incorrect; no guidance for starting AB pump, and it does NOT directly supply the AB Header.

**Comments**

Q#	QID	New	Modified	Direct from Bank
9	R06009	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	SD-PLC	K/A	4.2-A27-AK1.01
Ref Supplied	N/A	Imp. Rating	3.1
Cognitive Level	2	10 CFR 55.41(b)	14
Learning Objective	WLP-OPS-PLC00	07	

Proposed Question	
Which ONE of the following will cause saturation temperature to rise in the Pressurizer?	
A	Pressurizer Spray Controller input fails high.
B	Pressurizer Spray Controller output fails high.
C	Pressurizer Pressure Controller output fails low.
D	Pressurizer Pressure Controller setpoint fails low.
Answer	C
Explanation	
<p>C is correct. Failing the output low sends a signal to energize the heaters, causing temperature/pressure to rise. As pressure rises, saturation temperature rises.</p> <p>A and B are incorrect. These failures both cause the spray valves to open and lower pressure (saturation temperature drops).</p> <p>D is incorrect. This failure would cause the current pressure to appear high, causing the controller output to rise and send a signal to open the spray valves.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
10	R06010	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	SD-ATS00	K/A	4.1-E29-EK2.06
Ref Supplied	N/A	Imp. Rating	2.9
Cognitive Level	1	10 CFR 55.41(b)	6
Learning Objective	WLP-OPS-ATS00	03	

Proposed Question	
The Diversified Reactor Trip System performs its diversified trip function by opening the...	
A	Reactor Protection System trip relay backup contacts.
B	Reactor Trip Breaker shunt trip contacts.
C	CEDM MG supply breakers
D	CEDM MG set load contactors.
<b>Answer</b>	D
Explanation	
<p>D is correct; SD-ATS00 states that DRTS opens the CEDM MG set load contactors.</p> <p>A is incorrect; This is a plausible answer, but there are no back up RPS contacts.</p> <p>B and C are incorrect; these actions would result in a reactor trip; however, SD-ATS00 states that DRTS opens the CEDM MG set load contactors.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
11	R06011		X	

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	6043-A	Level	RO
NRC Exam History	2003 NRC SRO Exam	Tier/Group	1/1
Tech References	OP-902-007; Steam Tables	K/A	4.1-E38-EK1.01
Ref Supplied	Steam Tables	Imp. Rating	3.1
Cognitive Level	2	10 CFR 55.41(b)	10
Learning Objective	WLP-OPS-PPE07	09	

Proposed Question	
<p>A Steam Generator Tube Rupture has occurred in S/G 1, with a concurrent Loss Of Offsite Power (LOOP). S/G 1 has been isolated at 550 psia. The CRS orders an RCS pressure reduction to 50 psi above S/G 1 pressure.</p> <p>Assuming the ruptured S/G remains at 550 psia, what is the HIGHEST RCS temperature allowed, in order to maintain 28°F subcooled margin AND meet the CRS' instructions?</p>	
A	466°F using T-hot Loop 1.
B	466°F using Representative CET Temperature.
C	458°F using T-hot Loop 1.
D	458°F using Representative CET Temperature.
<b>Answer</b>	D
Explanation	
<p>D is correct; 550 psia + 50 = 600 psia sat temp = 486°F, 486-28 = 458°F. Representative CET temperature is used versus the affected loop T-hot.</p> <p>A and B are incorrect; cooldown to 466°F would be less than 28 degrees subcooling.</p> <p>C is incorrect; T-hot loop 1 is the affected loop.</p>	

Comments
Old Q had the SG at 600 psia. Correct answer was 466°F.

Q#	QID	New	Modified	Direct from Bank
12	R06012	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	OP-902-004 TG-OP-902-004 OI-038-000	K/A	4.4-E5-EK3.3
Ref Supplied	N/A	Imp. Rating	3.8
Cognitive Level	2	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-PPE04	07	

Proposed Question	
<p>OP-902-004, Excess Steam Demand Recovery, directs the operator to verify all available Charging Pumps are operating. Following an SIAS, starting the third Charging Pump...</p>	
A	is NOT necessary and may actually complicate the event following steam generator dryout.
B	protects the plant from a passive failure due to loss of one Charging Pump.
C	provides necessary boric acid to prevent a loss of Shutdown Margin during a rapid cool down.
D	provides necessary makeup to the RCS to restore inventory lost due to leakage or cool down.
<b>Answer</b>	A
Explanation	
<p>A is correct; the Tech Guide confirms that this is NOT necessary. After SG dryout, the 3<sup>rd</sup> Charging Pump will add excessive inventory and complicate the crew's control of Pressurizer level.</p> <p>B and D are incorrect; after SG dryout, the 3<sup>rd</sup> Charging Pump will add excessive inventory and complicate the crew's control of Pressurizer level.</p> <p>C is incorrect; previous revisions of OP-902-004, starting the 3<sup>rd</sup> Charging Pump was desired (this was changed several years ago).</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
13	R06013			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	2335-A	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	SD-EFW	K/A	4.4-E6-EK2.1
Ref Supplied	N/A	Imp. Rating	3.3
Cognitive Level	1	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-EFW	05	

Proposed Question	
An EFAS 1 signal will be present for which ONE of the following?	
A	S/G 1 is 20% NR, S/G 2 is 26.5% NR, S/G 1 & 2 are 600 psia
B	S/G 1 is 30% NR, S/G 2 is 25% NR, S/G 1 is 700 psia, S/G 2 is 680 psia
C	S/G 1 is 15% NR, S/G 2 is 20% NR, S/G 1 is 200 psia, S/G 2 is 400 psia
D	S/G 1 is 5% NR, S/G 2 is 10% NR, S/G 1 is 500 psia, S/G 2 is 370 psia
Answer	D
Explanation	
D is correct; S/G 1 level low (27.4% NR) AND S/G 1 pressure NOT low (>666psia) OR S/G1 level low (27.4% NR) AND DP between both S/Gs > 123psid with the higher pressure in S/G1 is a valid EFAS 1 signal.	
A and C are incorrect; pressures are below 666 psia.	
B is incorrect; EFAS 2 signal valid - NOT EFAS 1.	

Comments

Q#	QID	New	Modified	Direct from Bank
14	R06014			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	5659-A	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	OP-902-005	K/A	4.1-E55-G2.4.12
Ref Supplied	N/A	Imp. Rating	3.4
Cognitive Level	1	10 CFR 55.41(b)	10
Learning Objective	WLP-OPS-PPE05	03	

Proposed Question	
<p>The following plant conditions exist:</p> <ul style="list-style-type: none"> <li>• EDG B OOS for maintenance, due to ground in generator.</li> <li>• Reactor trip due to Loss Of Offsite Power (LOOP).</li> <li>• EDG A started, but immediately tripped on overspeed.</li> </ul> <p>In accordance with OP-902-005, Station Blackout, if AC power is not expected to be restored within _____ minutes, then _____ and _____.</p>	
A	15 / verify equipment ventilation / verify proper battery operation
B	15 / replenish EDG air start receivers / reduce battery loads
C	30 / verify equipment ventilation / reduce battery loads
D	30 / verify proper battery operation / replenish EDG air start receivers
<b>Answer</b>	C
Explanation	
<p>C is correct. OP-902-005 steps 13 and 14 specify 30 minutes to verify ventilation and reduce battery loads.</p> <p>A and B are incorrect. 30 minutes are allowed prior to steps, steps require verifying ventilation and reducing battery loads.</p> <p>D is incorrect. Plausible due to Station Mod which added a portable generator to allow charging EDG air start receivers. No time limit in Step 12, plus 1 start should NOT deplete the receiver.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
15	R06015	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	SD-EDG	K/A	4.2-A56-AA2.38
Ref Supplied	N/A	Imp. Rating	3.7
Cognitive Level	1	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-SEQ00	02	

Proposed Question	
<p>Given the following conditions:</p> <ul style="list-style-type: none"> <li>A Loss of Offsite Power occurred 210 seconds ago.</li> <li>The A EDG sequencer Lockout light is illuminated; all A Train Sequencer load block lights are extinguished.</li> <li>The B EDG sequencer Lockout light is extinguished; all B Train Sequencer load block lights are illuminated.</li> </ul> <p>All A train sequencers loads are _____. All B train sequencer loads are _____.</p>	
A	energized; energized.
B	de-energized; de-energized.
C	energized; de-energized.
D	de-energized; energized.
<b>Answer</b>	D
Explanation	
<p>D is correct; the A sequencer lockout light illuminated indicates that all loads loaded prior to the 17 sec load block were stripped and the timer was reset which prevented loads from being sequenced on. All load blocks illuminated indicate loads sequenced on.</p> <p>A and C are incorrect; the A sequencer failed to load due to a sequencer lockout.</p> <p>B is incorrect; B sequencer loads loaded per design.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
16	R06016	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	TGOP-902-008	K/A	4.2-A57-AK3.01
Ref Supplied	N/A	Imp. Rating	4.1
Cognitive Level	1	10 CFR 55.41(b)	10
Learning Objective	WLP-OPS-PPE08	02	

Proposed Question	
<p>The main objective of the OP-902-008 Success Path MVA-DC-1, Battery Chargers/Station Batteries, is to maintain power to at least one DC train and _____ 120 VAC instrument bus(es) powered from _____ side electrical distribution system.</p>	
A	one; the same
B	one; any
C	two; the same
D	two; any
<b>Answer</b>	A
Explanation	
<p>A is correct; TGOP-902-008 identifies this in the Objective and Criteria for MVA-DC-1.</p> <p>B is incorrect; the Criteria for MVA-DC-1 states that the electrical buses must be powered from the same side.</p> <p>C is incorrect; the Objective for MVA-DC-1 states that one of each is the minimum required.</p> <p>D is incorrect; the Objective for MVA-DC-1 states that one of each is the minimum required; the Criteria for MVA-DC-1 states that the electrical buses must be powered from the same side.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
17	R06017		X	

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	4219-A	Level	RO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	OP-901-313	K/A	4.2-A58-AA1.03
Ref Supplied	N/A	Imp. Rating	3.1
Cognitive Level	2	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-PPO30	04	

Proposed Question	
<p>Given the following conditions:</p> <ul style="list-style-type: none"> <li>The plant is operating at 100% power.</li> <li>A loss of the TGB-DC bus occurs.</li> </ul> <p>Which ONE of the following is a result of a loss of the TGB-DC bus?</p>	
A	Non-safety 7KV and 4KV switchgear breaker overcurrent protection will be via Electronic Current Sensing devices.
B	Steam Bypass valves will have to be manually operated from CP-1 on a Reactor Cutback.
C	Instrument Air pressure will cycle between 95-105 psig.
D	Main Turbine electric trips will be disabled.
<b>Answer</b>	D
Explanation	
<p>D is correct; Turbine trip solenoids are powered from TGB-DC bus.</p> <p>A is incorrect; only 480V components have ECS protection.</p> <p>B is incorrect; Steam Bypass valves can NOT be operated from CP-1 without TGB-DC bus power.</p> <p>C is incorrect; a loss of TGB-DC will cause Instrument and Station Air compressor unloader valves to lose power. Compressors will continue to run unloaded and Instrument Air pressure will drop.</p>	

Comments
Original Q was a NOT question.

Q#	QID	New	Modified	Direct from Bank
18	R06018			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	3318-B	Level	RO
NRC Exam History	2002 NRC Reactor Operator Makeup Exam	Tier/Group	1/1
Tech References	OP-901-511	K/A	4.2-A65-AA2.06
Ref Supplied	N/A	Imp. Rating	3.6*
Cognitive Level	1	10 CFR 55.41(b)	10
Learning Objective	WLP-OPS-PPO50	04	

Proposed Question	
<p>Given the following:</p> <ul style="list-style-type: none"> <li>The plant is at 100 % power.</li> <li>On CP-1, IA pressure is reading 60 psig and dropping slowly.</li> <li>The crew is implementing OP-901-511, Instrument Air Malfunction.</li> </ul> <p>What action should be taken?</p>	
A	Trip the main turbine and perform OP-901-101, Reactor Power Cutback, concurrently with this procedure.
B	Trip the reactor and perform OP-902-000, Standard Post Trip Actions, concurrently with this procedure.
C	Perform a rapid plant shutdown per OP-901-212, Rapid Plant Downpower.
D	Perform a normal plant shutdown per OP-010-005, Plant Shutdown.
<b>Answer</b>	B
Explanation	
<p>B is correct: OP-901-511 step E1, trip Rx if IA drops to 65 psig.</p> <p>A, C and D are procedurally incorrect; all are valid methods for reducing power or shutting down the plant, making them valid distractors.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
19	R06019	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/2
Tech References	TS 1.28, TS 3.1.3.1, TS & Bases 3.1.1	K/A	4.2-A5-AK3.04
Ref Supplied	N/A	Imp. Rating	3.4
Cognitive Level	2	10 CFR 55.41(b)	2
Learning Objective	WLP-OPS-CED00	07	

Proposed Question	
Technical Specifications requires a prompt Shutdown Margin calculation for a Control Element Assembly (CEA) that is...	
A	mechanically bound because another CEA is assumed to be mechanically bound.
B	mechanically bound to ensure that fuel performance and offsite dose criteria are satisfied.
C	misaligned by 15 inches because another CEA is assumed to be mechanically bound.
D	misaligned by 15 inches to ensure that fuel performance and offsite dose criteria are satisfied.
<b>Answer</b>	A
Explanation	
A is correct. Basis for 3.1.3.1 relates a stuck CEA to a loss of SDM. The TS definition for SDM assumes one CEA stuck fully withdrawn.	
B is incorrect. Basis for 3.1.1.1 relates this to fuel depletion and RCS temperature.	
C is incorrect. 3.1.3.1 requires CEA misaligned >19 inches.	
D is incorrect. Basis for 3.1.1.1 relates this to fuel depletion and RCS temperature.	

Comments

Q#	QID	New	Modified	Direct from Bank
20	R06020	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/2
Tech References	OP-901-103, SD-CVC	K/A	4.2-A24-AK2.04
Ref Supplied	N/A	Imp. Rating	2.6
Cognitive Level	2	10 CFR 55.41(b)	8
Learning Objective	WLP-OPS-PPE01	10	

Proposed Question	
<p>Plant conditions are as follows:</p> <ul style="list-style-type: none"> <li>Emergency Boration has been manually initiated due to NOT meeting Shutdown Margin.</li> <li>The operator has chosen to use Boric Acid Makeup Pump B as the borated water source.</li> <li>All 3 Charging Pumps are in operation.</li> </ul> <p>Emergency Boration flowrate to the Reactor Coolant System will be LEAST affected by a complete loss of the ____ 4.16 KV Safety Bus with the AB Buses aligned to the ____ side.</p>	
A	A; A
B	A; B
C	B; B
D	B; A
<b>Answer</b>	D
Explanation	
<p>D is correct. The A and AB Charging Pumps will remain energized (88 gpm flow). BAMP B will remain energized (A train power) to provide a suction path.</p> <p>A and B are incorrect. BAMP B will lose power (A train power). With BAMP B de-energized under the above conditions, the Charging Pumps will NOT have a suction path.</p> <p>C is incorrect. Only the A Charging Pump will remain energized (44 gpm flow). BAMP B will remain energized (A train power) to provide a suction path.</p>	
Comments	

Q#	QID	New	Modified	Direct from Bank
21	R06021	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/2
Tech References	SD-ENI	K/A	4.2-A33 AK1.01
Ref Supplied	N/A	Imp. Rating	2.7
Cognitive Level	1	10 CFR 55.41(b)	2
Learning Objective	WLP-OPS-ENI00	06	

Proposed Question	
<p>Following maintenance on Excore Nuclear Instrumentation C Log Safety Channel, the pulse height discriminator voltage was left at too high a setting, causing a higher discriminator threshold level.</p> <p>Following a reactor trip, this condition will automatically bypass the Channel C _____ at an actual reactor power level _____ than designed.</p>	
A	High Log Power Trip; higher
B	High Log Power Trip; lower
C	CPC-generated CWP; higher
D	CPC-generated CWP; lower
Answer	C
Explanation	
<p>C is correct. See SD pages 15 &amp; 26, CPC-generated CWP is automatically bypassed as power lowers below 10<sup>-4</sup>% power. Raising discriminator voltage causes indicated power to be lower than actual power; therefore, the 10<sup>-4</sup>% bistable will be reached sooner.</p> <p>A and B are incorrect. High Log Power Trip bypass is removed as power lowers below 10<sup>-4</sup>% power.</p> <p>D is incorrect. Actual power will be higher - NOT lower.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
22	R06022			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	4645-A	Level	RO
NRC Exam History	2002	Tier/Group	1/2
Tech References	OP-002-010	K/A	4.2-A36-AA1.01
Ref Supplied	N/A	Imp. Rating	3.3
Cognitive Level	2	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-HVR00	03	

Proposed Question	
<p>Given the following:</p> <ul style="list-style-type: none"> <li>The plant is in MODE 6 with fuel shuffle in progress in both the Fuel Handling Building and Containment.</li> <li>Refueling Ventilation with RAB Normal Ventilation is in progress.</li> <li>A fuel bundle is dropped from the Refueling Machine Fuel Hoist.</li> </ul> <p>Which ONE of the following radiation monitors can detect the event AND terminate the radioactive gas release?</p>	
A	Containment High Radiation Area Monitor, ARM-IRE-5400A.
B	Containment Purge Area Radiation Monitor, ARM-IRE-5024.
C	Refueling Machine Area Radiation Monitor, ARM-IRE-5013.
D	Fuel Handling Building Isolation Monitor, ARM-IRE-0300.1.
<b>Answer</b>	B
Explanation	
<p>B is correct. SD-RMS states that this monitor will isolate Containment Purge on high radiation.</p> <p>A is incorrect. SD-RMS states that this monitor provides annunciation in the Containment and Control Room, but no automatic functions.</p> <p>C is incorrect. This monitor has no automatic functions, and will NOT terminate the release.</p> <p>D is incorrect. SD-RMS states that this monitor will isolate Fuel Handling Building (FHB) ventilation on high radiation. With a fuel bundle dropped from the Refueling Machine Fuel Hoist, the high radiation will be in the Containment and NOT the FHB.</p>	

Comments



Q#	QID	New	Modified	Direct from Bank
23	R06023	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/2
Tech References	CE-003-514	K/A	4.2-A59-AA2.02
Ref Supplied	N/A	Imp. Rating	2.9
Cognitive Level	1	10 CFR 55.41(b)	13
Learning Objective	WLP-OPS-RMS	04	

**Proposed Question**

The plant is at 100% power with 3 Circulating Water pumps running. The liquid release permit below is for the batch release currently in progress.

```

R TYPE K 2.33
Liquid Waste Batch Release Permit                                     Permit Number : LB2006-0043
=====
Entergy Operations, Inc.      Waterford Steam Electric Station Unit III
=====
Release Point   ( 9 ) : Boric Acid Condensate Tank 'B'
Waste Volume   :      14988.0 gal                               Maximum Waste Flow :      50.00 gpm
Minimum Dilution Flow : 5.0000e+05 gpm ( 2 Circ Water Pumps )   Total Gamma Conc.  : 4.9240e-07 uCi/ml
SINGLE Release Setpoint For PRM-IRE-0627 : 3.41e-05 uCi/ml  ****ADJUST****
** Concurrent with Permit Number LC2006-0038 : (22) Dry Cooling Tower Sump #1 to Circ Water
** Concurrent with Permit Number LC2006-0039 : (23) Dry Cooling Tower Sump #2 to Circ Water
** Concurrent with Permit Number LC2006-0040 : (24) Turbine Building Industrial Waste Sump to Circ Water
=====
Estimated Maximum Organ Dose : 0.0000 mrem for the Adult Liver
=====
Estimated Cumulative Maximum Organ Doses - Including this release.
      31 Day      Quarter-to-date      Year-to-date
Limit   0.06 mrem      1.50 mrem      3.00 mrem
Organ   Total-body      Total-body      Total-body
=====
      0.0001 mrem      0.0001 mrem      0.0001 mrem
=====
Special Conditions : ADJUST PRM-IRE-0627 radiation monitor setpoint to 3.41e-05 uCi/ml prior to release.
                    RETURN PRM-IRE-0627 setpoint to 8.00e-02 uCi/ml after release when permit is closed.
    
```

Assuming the release is NOT terminated, which ONE of the following conditions constitutes an accidental liquid release?

A	Dry Cooling Tower Sump #2 pumps to Circ Water.
B	One Circ Water pumps trips.
C	The Boric Acid Condensate Discharge radiation reading indicates 6.4 e-07 $\mu$ ci/ml and then returns to 5.3 e-06 $\mu$ ci/ml after two minutes.
D	The Boric Acid Condensate Discharge radiation reading indicates 6.4 e-04 $\mu$ ci/ml and then returns to 5.3 e-05 $\mu$ ci/ml after two minutes.

<b>Answer</b>	D
<b>Explanation</b>	
<p>D is correct. Radiation level rises above the High Alarm setpoint of <math>3.41 \text{ e-}05 \text{ } \mu\text{ci/ml}</math>.</p> <p>A is incorrect. This release permit may be run with the 3 others listed.</p> <p>B is incorrect. The number of Circ Water pumps drops to 2, which meets the limit set by this permit.</p> <p>C is incorrect. The radiation level remains below the High Alarm setpoint of <math>3.41 \text{ e-}05 \text{ } \mu\text{ci/ml}</math>.</p>	

<b>Comments</b>

Q#	QID	New	Modified	Direct from Bank
24	R06024	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/2
Tech References	TS 3.6.1.1, 3.6.1.3, and 3.6.3	K/A	4.2-A69-AA2.01
Ref Supplied	N/A	Imp. Rating	3.7
Cognitive Level	2	10 CFR 55.41(b)	9
Learning Objective	WLP-OPS-CB00	07	

Proposed Question	
<p>With the plant at 100%, the STA performed leakage rate testing of the Personnel Air Locks and determined that the inner door seal exceeded the allowable leakage requirements.</p> <p>The pre-job brief to the investigation/repair team should include the following discussion:</p> <p>The investigation/repair team has...</p>	
A	one hour from the time of discovery to repair the inner door to prevent a forced plant shutdown.
B	four hours from the time of discovery to repair the inner door to prevent a forced plant shutdown.
C	one hour from the time they open the outer door to re-close the outer door to prevent a forced plant shutdown.
D	four hours from the time they open the outer door to re-close the outer door to prevent a forced plant shutdown.
<b>Answer</b>	C
Explanation	
<p>C is correct. This requirement is consistent with the combined actions of TS 3.6.1.1 and 3.6.1.3.</p> <p>A is incorrect; but plausible due to similarities with TS 3.6.1.1.</p> <p>B and D are incorrect; but plausible due to similarities with TS 3.6.3.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
25	R06025	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/2
Tech References	OP-902-005; TG-OP-902-005	K/A	4.1-E74-EK2.06
Ref Supplied	N/A	Imp. Rating	3.5 *
Cognitive Level	1	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-PPE05	02	

Proposed Question	
During a Station Blackout the _____ ensure that Inadequate Core Cooling conditions are avoided.	
A	Atmospheric Dump Valves and the Main Steam Safety Valves.
B	Atmospheric Dump Valves and the Pressurizer Safety Valves.
C	Steam Bypass Valves and the Main Steam Safety Valves.
D	Steam Bypass Valves and the Pressurizer Safety Valves.
<b>Answer</b>	A
Explanation	
A is correct. Steps 7-9 of OP-902-005.	
B is incorrect. Pressurizer Safety Valves will protect RCS integrity, but will NOT provide cooling to the core.	
C and D are incorrect. Steam Bypass Valves are NOT available during a SBO.	

Comments

Q#	QID	New	Modified	Direct from Bank
26	R06026	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/2
Tech References	SD-SDC OP-500-011, A-7 OP-500-012, A-17 & K-20	K/A	4.4-A16-G2.4.10
Ref Supplied	N/A	Imp. Rating	3.0
Cognitive Level	2	10 CFR 55.41(b)	10
Learning Objective	WLP-OPS-SDC00	01	

Proposed Question	
<p>Plant conditions are as follows:</p> <ul style="list-style-type: none"> <li>• RCS temperature is 340°F.</li> <li>• RCS pressure is 380 PSIA.</li> <li>• SDC Train A is in service.</li> <li>• Low Temperature Overpressure Protection Relief Valve, SI-406B, is isolated for repairs.</li> </ul> <p>Of the following Annunciators, which will you receive following an inadvertent re-pressurization of the RCS that causes Low Temperature Overpressure Protection Relief Valve, SI-406A, to lift?</p> <p>A. LOOP 1 SDC RELIEF VLV ACTIVE (Cabinet N, A-17)                      B. LOOP 2 SDC RELIEF VLV ACTIVE (Cabinet M, A-7)                      C. CONTAINMENT WATER LEAKAGE HI-HI (Cabinet N, K-20)</p>	
A	A only
B	A and C
C	B only
D	B and C
<b>Answer</b>	C
Explanation	
<p>C is correct. SI-406A is on Loop 2 SDC and it relieves directly to the Containment Sump bypassing the Containment Water Leakage detector.</p> <p>A is incorrect. Loop 1 actuates if SI-406B lifts.</p> <p>B and D are incorrect. K-20 is NOT actuated since the flow bypasses the detector.</p>	
Comments	



Q#	QID	New	Modified	Direct from Bank
27	R06027	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	1/2
Tech References	OP-902-008, TGOP-902-008	K/A	4.4-E9-EK3.2
Ref Supplied	N/A	Imp. Rating	3.0
Cognitive Level	2	10 CFR 55.41(b)	10
Learning Objective	WLP-OPS-PPE08	02	

Proposed Question	
OP-902-008 Success Path IC-2, RCS Inventory Control with Safety Injection, provides instructions to makeup to _____ if an RAS has occurred due to a possible ...	
A	the RWSP; Safety Injection Sump blockage.
B	the RWSP; high radiation level in the RWSP.
C	a BAMT; need for Auxiliary Spray.
D	a BAMT; need for Emergency Boration.
<b>Answer</b>	A
Explanation	
A is correct; TGOP-902-008 for step 10 of OP-902-008 Success Path IC-2, RCS Inventory Control with Safety Injection.	
B is incorrect; step 12 of the Tech Guide lists this as the reason for closing the SI Pump Recirc Valves.	
C and D are incorrect; step 2 of OP-902-008 includes verifying ALL available Charging Pumps operating, but no instruction to refill BAMTs is mentioned.	

Comments

Q#	QID	New	Modified	Direct from Bank
28	R06028	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	OP-901-130 WLP-OPS-PPO10	K/A	3.4-003-A1.09
Ref Supplied	N/A	Imp. Rating	2.8
Cognitive Level	2	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-RCP00	05	

Proposed Question	
<p>The plant is operating at 100% power when the ATC observes the following RCP 2A seal parameters:</p> <ul style="list-style-type: none"> <li>• Vapor Seal pressure: 70 psia</li> <li>• Upper Seal pressure: 70 psia</li> <li>• Middle Seal pressure: 1250 psia</li> <li>• RCP controlled bleed-off: 2.2 gpm</li> </ul> <p>Using the above parameters, determine which seal has failed.</p>	
A	Lower seal
B	Middle seal
C	Upper seal
D	Vapor seal
<b>Answer</b>	C
Explanation	
<p>C is correct. Middle seal pressure approximately equal to upper seal pressure indicates upper seal failure. RCP Seal pressure and Control Bleedoff temperature and flow are normally: Vapor Seal pressure - 25 to 45 PSIG; Upper Seal pressure - 585 to 915 PSIG; Middle Seal pressure - 1237 to 1815 PSIG CBO temperature - 135° to 190°F; CBO flow - 1.2 to 1.8 GPM</p> <p>A, B, and D are incorrect; middle seal pressure approximately equal to upper seal pressure indicates upper seal failure.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
29	R06029	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	SD-CVC, OP-002-005	K/A	3.2-004-K6.05
Ref Supplied	N/A	Imp. Rating	2.5
Cognitive Level	2	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-CVC00	03	

Proposed Question	
<p>The plant is operating at 90% power when CVC-ITIC-0223, temperature input to Letdown TCV CC-636, fails high. What effect will this malfunction have?</p>	
A	VCT boron concentration lowers.
B	Ion exchangers will be bypassed.
C	Flashing will occur upstream of the Letdown heat exchanger.
D	CCW flow through the Letdown Heat Exchanger will exceed 1300 gpm.
<b>Answer</b>	A
Explanation	
<p>A is correct; High failure will send signal to raise CCW flow through the Letdown Heat Exchanger, causing letdown temperature to lower causing a dilution of the RCS.</p> <p>B is incorrect; Ion exchanger bypass signal is generated from CVC ITE-0224 (separate from 0223) lower letdown temperature will NOT result in demineralizer bypass.</p> <p>C is incorrect; Flashing upstream of the Letdown Heat Exchanger will result from a malfunction of the Letdown pressure control valve.</p> <p>D is incorrect; CC-636 is gagged to limit CCW flow to 1200 gpm</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
30	R06030			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	5695-N	Level	RO
NRC Exam History	1999/2002 NRC exam	Tier/Group	2/1
Tech References	SD-RCS	K/A	3.4-005-K5.05
Ref Supplied	N/A	Imp. Rating	2.7*
Cognitive Level	2	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-RCP00	12	

Proposed Question	
<p>The following conditions exist:</p> <ul style="list-style-type: none"> <li>• RCS is filled and vented and the PZR is solid</li> <li>• RCS pressure is being controlled by both letdown backpressure control valves</li> <li>• RCS pressure = 370 psia</li> <li>• CET temperature = 130°F</li> <li>• Steam Generator 1 water temperature = 220°F</li> <li>• All RCPs are secured</li> </ul> <p>When starting RCP 1A under these conditions...</p>	
A	RCS pressure will rise above the setpoint of the LTOP reliefs; the combined capacity of BOTH LTOP reliefs is required to protect the RCS from overpressure.
B	RCS pressure will lower but be controlled by the letdown backpressure control valves above the minimum pressure for running the RCP.
C	RCS pressure will rise above the setpoint of the LTOP reliefs; the RCS is protected from overpressurization by the capacity of ONE LTOP relief.
D	RCS pressure will lower below the pressure for operating a RCP causing cavitation of the RCP and possible damage to the impeller and seals.
<b>Answer</b>	<b>C</b>

**Explanation**

C is correct; one LTOP capacity is designed to relieve the pressure transient caused by the start of an idle RCP with secondary water temperature of the steam generator less than or equal to 100 °F above RCS cold leg temperatures.

A is incorrect; only one LTOP required.

B and D are incorrect; S/G temp above RCS would result in an RCS temp and press rise.

**Comments**

Q#	QID	New	Modified	Direct from Bank
31	R06031	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	OP-901-112	K/A	3.2-006-K1.08
Ref Supplied	N/A	Imp. Rating	3.6
Cognitive Level	2	10 CFR 55.41(b)	6
Learning Objective	WLP-OPS-SI00	02	

Proposed Question	
<p>Given the following conditions:</p> <ul style="list-style-type: none"> <li>The plant is at 100% power.</li> <li>A rupture of the charging line has occurred.</li> <li>Charging Pumps Header Isolation Valve (CVC 209) is isolated</li> <li>Letdown is isolated.</li> <li>Pressurizer level is 48% and lowering slowly.</li> </ul> <p>The CRS should direct aligning charging pump discharge to....</p>	
A	HPSI Header B and use Hot Leg Injection.
B	HPSI Header B and use Cold Leg Injection.
C	HPSI Header A and use Hot Leg Injection.
D	HPSI Header A and use Cold Leg Injection.
<b>Answer</b>	D
Explanation	
<p>D is correct; OP-901-112 directs if normal charging path can NOT be re-established to align charging pump discharge to HPSI Header A and use Cold Leg Injection.</p> <p>A, B are incorrect; no procedural guidance exists for raising PZR level using Aux spray and RCP seal injection.</p> <p>C is incorrect; CVCS system interconnection is through HPSI Header A.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
32	R06032	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	OP-902-002 TG-OP-902-002	K/A	3.2-006-A3.05
Ref Supplied	N/A	Imp. Rating	4.2
Cognitive Level	2	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-PPE02	18	

Proposed Question	
<p>Plant conditions are as follows:</p> <ul style="list-style-type: none"> <li>• A Large Break LOCA has occurred</li> <li>• An RAS has occurred two hours ago</li> <li>• HPSI Pump A Header Pressure is fluctuating between 500 and 700 psia</li> <li>• HPSI Pump B Header Pressure is fluctuating between 650 and 700 psia</li> </ul> <p>Based on these conditions, the operator should...</p>	
A	throttle down on ONE HPSI flow control valve at a time until pressure fluctuations subside.
B	throttle down on ALL HPSI flow control valves until pressure fluctuations subside.
C	secure HPSI Pump A.
D	secure HPSI Pump B.
<b>Answer</b>	C
Explanation	
<p>C is correct; Step 45 of OP-902-002 directs verifying no more than one HPSI pump operating with fluctuating parameters. The TG for Step 45 directs securing the most affected pump.</p> <p>A and B are incorrect; throttling FCVs could reduce fluctuations; however, Step 45 of OP-902-002 directs verifying no more than one HPSI pump operating with fluctuating parameters.</p> <p>D is incorrect; the TG for Step 45 directs securing the most affected pump.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
33	R06033	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	OP-902-002, OP-902-009 Att. 3-B SD-SI	K/A	3.2-013 A1.01
Ref Supplied	OP-902-009 Att. 3-B	Imp. Rating	4.0
Cognitive Level	2	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-PPE02	17	

Proposed Question	
<p>Plant conditions are as follows:</p> <ul style="list-style-type: none"> <li>• A Small Break LOCA has occurred</li> <li>• RCS Temperature is 430°F</li> <li>• RCS Pressure is 950 psia</li> <li>• A controlled plant cooldown is in progress to establish shutdown cooling conditions</li> </ul> <p>The Safety Injection Tanks should _____ in order to...</p>	
A	remain aligned for injection; ensure availability of a borated water source.
B	remain aligned for injection; protect the plant against a Large Break LOCA.
C	be isolated; ensure that the steam generators remain effective heat sinks.
D	be isolated; protect the plant against pressurized thermal shock.
<b>Answer</b>	C
Explanation	
<p>C is correct. Step 46 of OP-902-002 directs isolating the SITs when &lt; 1000 psia under controlled conditions. The TG for this step states that it is to avoid gas binding the SGs.</p> <p>A and B are incorrect. The SD states that SITs are used to supply borated water to the reactor vessel during the blowdown phase of a LB LOCA. The TG for this step states that this protection is NOT required below 1000 psia.</p> <p>D is incorrect. The SITs would inject a large volume of cold water into the RCS if pressure were reduced far enough, but this is NOT mentioned as a major concern in the TG.</p>	
Comments	



Q#	QID	New	Modified	Direct from Bank
34	R06034	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	SD-CC	K/A	3.8-008-K2.02
Ref Supplied	N/A	Imp. Rating	3.0*
Cognitive Level	2	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-CC00	03	

Proposed Question	
<p>Plant conditions are as follow:</p> <ul style="list-style-type: none"> <li>• Plant is at 100% power.</li> <li>• CCW Pumps A and AB are operating.</li> <li>• CCW Pump AB is replacing B with AB assignment switch in the "B" position.</li> <li>• CCW Pump B is in standby</li> <li>• AB bus is powered from the A train.</li> <li>• A loss of the 2A electrical bus occurs.</li> <li>• All equipment responds per design.</li> </ul> <p>What is the status of the CCW pumps one minute later, assuming NO operator actions are taken?</p>	
A	Only CCW pump A is running
B	Only CCW pump B is running
C	CCW Pumps A and B are running
D	CCW Pumps A and AB are running
<b>Answer</b>	A
Explanation	
<p>A is correct; the 3A bus normally receives power from the 2A bus and will lose power in this case. EDG A will start and restore power to the 3A and 3AB buses (AB bus is aligned to A). The A CCW will auto start when the 3A bus is restored, but the 3AB CCW Pump will NOT auto start since its assignment switch is in the "B" position.</p> <p>B and C are incorrect; B CCW pump will NOT auto start with AB assignment switch in the B position</p> <p>D is incorrect; The A CCW will auto start when the 3A bus is restored, but the 3AB CCW Pump will NOT auto start since its assignment switch is in the "B" position.</p>	

<b>Comments</b>

Q#	QID	New	Modified	Direct from Bank
35	R06035	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	SD-PLC, OP-901-120	K/A	3.3-010-K3.03
Ref Supplied	N/A	Imp. Rating	4.0
Cognitive Level	2	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-PLC	07	

Proposed Question	
Selected Pressurizer pressure controller INPUT has failed to 2500 psia. Assuming NO operator actions, Pressurizer pressure will _____; resulting in _____	
A	Rise, a CPC RCS Pressure Aux Trip.
B	Lower, Safety Injection Actuation Signal.
C	Rise, a Pressurizer Pressure HI Reactor Trip.
D	Lower, ALL Pressurizer Heaters energizing.
Answer	B
Explanation	
B is correct; pressure control input failing to 2500 psia will result in heaters being de-energized and spray valves opening. If left unchecked, pressure will lower until the SIAS setpoint is reached. A and C are incorrect; RCS pressure will lower. D is incorrect; pressurizer heaters will NOT energize.	

Comments

Q#	QID	New	Modified	Direct from Bank
36	R06036	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	SD-PPS Figure 04	K/A	3.7-012-A3.04
Ref Supplied	N/A	Imp. Rating	2.8*
Cognitive Level	2	10 CFR 55.41(b)	6
Learning Objective	WLP-OPS-PPS00	01	

Proposed Question	
Which combination of Reactor Trip Circuit Breakers (TCBs) being OPEN will DIRECTLY result in the full insertion of ALL CEAs?	
A	TCB-2, TCB-3, TCB-6, TCB-8
B	TCB-3, TCB-4, TCB-5, TCB-6
C	TCB-3, TCB-4, TCB-7, TCB-8
D	TCB-5, TCB-6, TCB-7, TCB-8
<b>Answer</b>	A
Explanation	
A is correct. TCBs-2 & 8 de-energize half the CEAs and TCBs-3&6 de-energize the other half.	
B is incorrect. De-energizes half of the CEAs.	
C and D are incorrect. Both halves remain energized.	

Comments

Q#	QID	New	Modified	Direct from Bank
37	R06037	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	SD-CPC	K/A	3.7-012-K6.09
Ref Supplied	N/A	Imp. Rating	3.6
Cognitive Level	1	10 CFR 55.41(b)	6
Learning Objective	WLP-OPS-CPC00	07	

Proposed Question	
With the plant at 100% power, which ONE of the following conditions will result in an immediate reactor trip?	
A	CEANOP 2 is entered on all CPCs and CEAC 1 fails.
B	CEANOP 3 is entered on all CPCs and CEAC 1 fails.
C	CEANOP 2 is entered on all CPCs and RG 5 CEAs are at 100" withdrawn and RG 6 CEAs are at 102" withdrawn.
D	CEANOP 3 is entered on all CPCs and RG 5 CEAs are at 100" withdrawn and RG 6 CEAs are at 102" withdrawn.
Answer	C
Explanation	
<p>C is correct. CEANOP 2 is a manual input that tells CPCs that CEAC 2 is inoperable. CEAC 1 is in operation and will send an out-of-sequence penalty factor of 8, which will result in CPC DNBR &amp; LPD trip signals to RPS.</p> <p>A is incorrect. CEAC 2 is inoperable. CEAC 1 failing will send a large penalty factor of 7 to the LPD &amp; DNBR trips, but it has a 90 minute time delay.</p> <p>B is incorrect. CEANOP 3 tells CPCs that both CEAC 1 and 2 are inoperable. CEAC 1 failing is inconsequential.</p> <p>D is incorrect. When CEANOP 3 is entered into CPCs, the CPCs sets all target CEA positions to ARO.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
38	R06038			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	6650-A OPS	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	10CFR50 APPENDIX B	K/A	3.2-013-K3.01
Ref Supplied	N/A	Imp. Rating	4.4
Cognitive Level	1	10 CFR 55.41(b)	2
Learning Objective	WLP-OPS-PPE02	02	

Proposed Question	
In the event of a LOCA; which ONE of the following is ensured assuming no malfunction of the ECCS system occurs.	
A	Fuel Centerline Temperature will NOT exceed 2200°F.
B	Coolable core geometry will be maintained.
C	Maximum H2 generation will be less than or equal to 0.1% of the H2 generated if all fuel cladding were to react.
D	Maximum cladding oxidation shall NOT exceed 1.7% of the total cladding thickness before oxidation.
Answer	B
Explanation	
B is correct; Coolable core geometry is the only correct 10CFR50 ECCS Acceptance Criteria A ,C and D are incorrect; peak clad temperature will NOT exceed 2200°F, max H2 generation will NOT exceed 1%, and max clad oxidation will NOT exceed 17%.	

Comments

Q#	QID	New	Modified	Direct from Bank
39	R06039			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	2508-A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	T.S 3.6.2.2, 3.0.3	K/A	3.5-022-A2.01
Ref Supplied	TS 3.6.2.2	Imp. Rating	2.5
Cognitive Level	2	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-CCS	06	

Proposed Question	
<p>The following initial conditions exist:</p> <ul style="list-style-type: none"> <li>Plant is in MODE 1.</li> <li>CFC B is out of service for breaker maintenance.</li> <li>CFC D has just tripped on overcurrent.</li> </ul> <p>What Technical Specification action is required?</p>	
A	NO Tech Spec action required.
B	Restore at least ONE of the inoperable fans to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours.
C	Restore BOTH of the inoperable fans to OPERABLE status within 72 hours or be in at least HOT STANDBY within the next 6 hours.
D	Within 1 hour, action shall be initiated to place the unit in at least HOT STANDBY within the next 6 hours.
<b>Answer</b>	B
Explanation	
<p>B is correct; with B and D CFC inoperable, TS 3.6.2.2 action statement is NOT met - no operable containment fan for that train.</p> <p>A is incorrect; action must be taken to restore one train to operable within 72 hours,</p> <p>C and D are incorrect; only one fan per train is required for operability. TS 3.0.3 is NOT required, "A" train of containment cooling is operable.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
40	R06040		X	

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	5982-A	Level	RO
NRC Exam History	2002 NRC RO Makeup	Tier/Group	2/1
Tech References	SD-CC	K/A	3.5-022-A4.04
Ref Supplied	N/A	Imp. Rating	3.1
Cognitive Level	1	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS- CCS00	04	

Proposed Question	
<p>Containment Fan Coolers B, C, and D are running in Fast. Panel B Annunciator F-1, TRN A CNTMT COOLER VLV POWER LOST, goes into alarm. The BOP reports Containment Fan Cooler A and C CCW Containment Isolation Valves (all four) indicate no power. The RAB watch reports breaker CCS-EBKR-60A-17 is in the trip-free position. Actual valve position for CFC A is _____; actual valve position for CFC C is _____.</p>	
A	Closed; Closed
B	Open. Closed
C	Closed; Open
D	Open; Open
<b>Answer</b>	D
Explanation	
<p>D is correct; CFC TCV CC-835A and the 4 CFC Train A isolation valves for CFC A and CFC C are energized to close from circuit 17 of PDP-60A. (CC-835A position is only available on the PMC.) A is incorrect; plausible, if fail-close AOV. B is incorrect; sequence makes this choice plausible. C is incorrect; plausible, if fail as-is MOV.</p>	

Comments
Original Q asked for expected flow. K/A is for monitoring CCS valves.

Q#	QID	New	Modified	Direct from Bank
41	R06041	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	SD-CC	K/A	3.5-026-K1.02
Ref Supplied	N/A	Imp. Rating	4.1
Cognitive Level	1	10 CFR 55.41(b)	8
Learning Objective	WLP-OPS-CC00	05	

Proposed Question	
A CSAS has occurred; CC-963-A, SHUTDOWN HEAT EXCHANGER A CCW FLOW CONTROL will _____ and can be overridden to _____.	
A	OPEN, STPT
B	OPEN, CLOSE
C	CLOSE, STPT
D	CLOSE, OPEN
<b>Answer</b>	A
Explanation	
A is correct; CC-963A goes full open in response to a CSAS actuation, and can be overridden by taking C/S to open then to setpoint.	
B is incorrect; Close can NOT be used until CSAS is reset.	
C and D are incorrect; CC-963A goes full open in response to a CSAS actuation.	

Comments

Q#	QID	New	Modified	Direct from Bank
42	R06042	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	OP-005-004	K/A	3.4-039-K5.01
Ref Supplied	N/A	Imp. Rating	2.9
Cognitive Level	2	10 CFR 55.41(b)	14
Learning Objective	WLP-OPS-MS00	08	

Proposed Question	
A pressure surge resulting from a rapid change in fluid momentum in the Main Steam system can be prevented by which ONE of the following?	
A	Ensuring < 250 psid across MS-124A, Main Steam Isolation Valve, prior to opening.
B	MS-119A MSIV 1 Upstream Drip Pot Startup Drain is cycled during startup of the Main Steam system.
C	Locally throttling Open MS-1246A, MSIV 1 Bypass Line Downstream Isolation valves, after MSIVs are opened.
D	Verifying SBCS control switches are in manual with setpoint adjusted to zero prior to pressurizing main steam system.
Answer	B
Explanation	
B is correct; upstream drip pot startup drain is cycled during startup to remove condensate from main steam system.	
A is incorrect; OP-005-004 requires <100 psid prior to opening MSIV.	
C is incorrect; bypass line drains are opened prior to MSIVS opened.	
D is incorrect; SBCS are verified to be in AUTO prior to pressurizing main steam system.	

Comments

Q#	QID	New	Modified	Direct from Bank
43	R06043			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	5648-A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	OP-901-201, SD-FWC	K/A	3.4-059-A2.03
Ref Supplied	N/A	Imp. Rating	2.7
Cognitive Level	1	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-PPO20	03	

Proposed Question	
<p>The plant is at 12% power when a S/G level control channel deviation occurs due to a failed level instrument on the #1 S/G.</p> <p>In accordance with OP-901-201 "Steam Generator Level Control System Malfunction", the BOP will manually adjust the _____ to maintain #1 S/G level in the program band.</p>	
A	A Startup Feedwater Regulating Valve Controller.
B	A Main Feedwater Regulating Valve Controller.
C	A Main Feedwater Pump Speed Controller.
D	FWCS Master Controller.
<b>Answer</b>	A
Explanation	
<p>A is correct; At low power, OP-901-201 directs manually adjusting S/U reg valve controller to maintain S/G water level.</p> <p>B is incorrect; MFW reg valve would NOT be used due to finer control being within capacity of S/U reg valve to maintain S/G level at 12% power.</p> <p>C and D are incorrect; OP-901-201 directs manually adjusting feed reg valve position to control S/G level, adjusting speed controller(s) would affect level on both S/Gs.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
44	R06044			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	2338-A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	OP-902-006, SD-EFW	K/A	3.4-061-K1.03
Ref Supplied	N/A	Imp. Rating	3.5
Cognitive Level	2	10 CFR 55.41(b)	4
Learning Objective	WLP-OPS-EFW	05	

Proposed Question	
<p>EFW Pump AB has tripped due to mechanical overspeed.</p> <p>Which ONE of the following actions will allow the Stop Valve to be reopened from the Control Room, without causing another overspeed?</p>	
A	Close both MS-401A and MS-401B, then close and reopen MS-416.
B	Close MS-416 to remotely reset the overspeed trip, reopen MS-416 slowly.
C	Close MS-401A, MS-401B, and MS-416, reset the trip locally, then reopen MS-416.
D	Close Governor Valve MS-217 locally, Reset the overspeed trip locally, then reopen MS-416.
<b>Answer</b>	<b>C</b>
Explanation	
<p>C is correct; Must reset mechanical trip locally, and must isolate steam or overspeed may reoccur.</p> <p>A and B are incorrect: Must reset mechanical trip locally. Electrical trip IS reset by closing MS-416.</p> <p>D is incorrect; the governor valve is hydraulically operated and closes as turbine speed rises.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
45	R06045	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	SD-ID	K/A	3.6-062-K4.10
Ref Supplied	N/A	Imp. Rating	3.1
Cognitive Level	2	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-ID00	04	

Proposed Question	
<p>Given the following:</p> <ul style="list-style-type: none"> <li>SUPS A Manual Bypass Switch is in the NORMAL position.</li> <li>An overcurrent condition occurs on the inverter and clears.</li> </ul> <p>SUPS A loads are being supplied by _____ input and will be supplied by _____ input 30 seconds from now</p>	
A	BYPASS, BYPASS
B	BYPASS, NORMAL
C	EMERGENCY, NORMAL
D	EMERGENCY, EMERGENCY
Answer	B
Explanation	
<p>B is correct; Static transfer switch will transfer to BYPASS on an Overcurrent condition and transfer back to NORMAL when the overcurrent condition clears with a 30 second time delay.</p> <p>A is incorrect; transfer switch will transfer back in 30 seconds.</p> <p>C is incorrect; SUPS will transfer to BYPASS on overcurrent condition.</p> <p>D is incorrect; EMERGENCY is only aligned in the event NORMAL and BYPASS are unavailable.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
46	R06046			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	82-B	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	OP-500-003, SD-DC	K/A	3.6-063-K4.04
Ref Supplied	N/A	Imp. Rating	2.6?
Cognitive Level	1	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-DC	06	

Proposed Question	
<p>The following conditions exist in the plant:</p> <ul style="list-style-type: none"> <li>• 100% power, steady-state operations.</li> <li>• The AB bus is aligned to the A side.</li> <li>• No equipment is OOS.</li> <li>• The BATTERY CHGR SA1 TROUBLE annunciator comes in on CP-35 in the Control Room.</li> <li>• The RAB Watch is sent to the A Switchgear to investigate.</li> </ul> <p>Which ONE of the following could be a source of the annunciator?</p>	
A	The Hi Voltage light is lit with output voltage indicating 134 VDC.
B	A Low Voltage Shutdown occurred at 124 VDC.
C	The Lo Voltage light is lit with output voltage indicating 134 VDC.
D	A High Voltage Shutdown occurred at 144 VDC.
<b>Answer</b>	D
Explanation	
<p>D is correct; the high voltage shutdown occurs at 144 VDC which will generate annunciator alarm.</p> <p>A is incorrect; setpoint for hi voltage is 142 VDC.</p> <p>B is incorrect; Low voltage generates an alarm but NOT a shutdown.</p> <p>C is incorrect; low voltage alarm setpoint is 128 VDC which is below current voltage.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
47	R06047			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	35-A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	SD-SDC	K/A	3.4-005-A4.01
Ref Supplied	N/A	Imp. Rating	3.6*
Cognitive Level	2	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-REQ13	01	

Proposed Question	
The Low Pressure Safety Injection (LPSI) Pump Minimum Flow Recirculation Valve must be _____ prior to placing the Shutdown Cooling System in service to...	
A	open; ensure minimum flow through the LPSI Pump to the Chemical and Volume Control System.
B	open; ensure minimum flow through the LPSI Pump to the Refueling Water Storage Pool.
C	closed; prevent loss of Reactor Coolant System inventory to the Chemical and Volume Control System.
D	closed; prevent loss of Reactor Coolant System inventory to the Refueling Water Storage Pool.
Answer	D
Explanation	
D is correct. SD-SDC p 8 confirms this.	
B is incorrect. SD-SDC p 9 confirms that the Minimum Flow Recirculation Valve is closed when aligned to RWSP.	
A and C are incorrect; Recirc valve flows to the RWSP, NOT the VCT.	

Comments

Q#	QID	New	Modified	Direct from Bank
48	R06048	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	SD-EDG, OP-009-002	K/A	3.6-064-K4.02
Ref Supplied	N/A	Imp. Rating	3.9
Cognitive Level	1	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-EDG00	02	

Proposed Question	
<p>Given the following conditions:</p> <ul style="list-style-type: none"> <li>EDG A is currently running loaded IAW OP-903-068, Emergency Diesel Generator and Subgroup Relay Operability Verification.</li> <li>EDG B is in standby</li> <li>A SIAS has occurred with NO Loss of offsite power</li> </ul> <p>A(n) _____ trip signal will trip.....</p>	
A	low engine lube oil pressure; neither EDG A nor EDG B
B	low engine lube oil pressure; EDG A but NOT EDG B
C	engine overspeed; neither EDG A nor EDG B
D	engine overspeed; EDG A but NOT EDG B
<b>Answer</b>	A
Explanation	
<p>A is correct; SIAS signal will shift both EDGs to emergency mode, and block low oil pressure trip.</p> <p>B is incorrect; valid trip for normal mode but defeated in emergency mode.</p> <p>C and D are incorrect; Engine overspeed will cause an automatic shutdown in all modes.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
49	R06049			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	6142-A	Level	RO
NRC Exam History	2000 NRC SRO	Tier/Group	2/1
Tech References	OP-901-401	K/A	3.7-073-A2.02
Ref Supplied	N/A	Imp. Rating	2.7
Cognitive Level	1	10 CFR 55.41(b)	11
Learning Objective	WLP-OPS-PPO40	03	

Proposed Question	
<p>CROAI 'B' South (0200.6) went into alarm due to a failed detector. Which ONE of the following actions will result?</p>	
A	Both CR Emergency Filtration Units running.
B	CR Toilet Exhaust Fan 'B' off, and CR Toilet Exhaust Fan 'A' running.
C	RAB Normal Ventilation secured automatically.
D	Kitchen/Conference Room Exhaust fan secured automatically.
<b>Answer</b>	D
Explanation	
<p>D is correct; Verify Kitchen/Conference Room Exhaust fan off IAW with OP-901-401. A is incorrect; Only B CR Emergency Filtration Unit is running. B is incorrect; Both A and B Toilet Exhaust Fans turn off. C is incorrect; RAB Normal Ventilation will NOT automatically secure on CROAI signal.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
50	R06050			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	5884-A	Level	RO
NRC Exam History	2002 NRC exam	Tier/Group	2/1
Tech References	OP-901-402	K/A	3.7-073-G2.4.48
Ref Supplied	N/A	Imp. Rating	4.0
Cognitive Level	1	10 CFR 55.41(b)	12
Learning Objective	WLP-OPS-PPO40	03	

Proposed Question	
<p>During normal plant operation at 100% power, the main control room receives multiple RAB and Plant Stack Process Radiation Monitor alarms indicating high general area and high airborne activity. Required response to this condition includes:</p>	
A	Direct Security department to verify all RAB external doors closed, and start either CVAS train.
B	Secure RAB normal ventilation, and order all personnel to evacuate the building.
C	Secure both Waste Gas compressors, and isolate all Waste Gas decay tanks.
D	Request I&C department to verify proper operation of the Radiation Monitoring system.
<b>Answer</b>	A
Explanation	
<p>A is correct; having security close all external doors, and starting one train of CVAS is directed by OP-901-402.</p> <p>B is incorrect; RAB normal ventilation will NOT be secured, and personnel are directed to proceed to a Radiation Control Point.</p> <p>C is incorrect; waste gas compressors are NOT directed to be secured or WGDT isolated. Evolutions in progress are directed to be evaluated.</p> <p>D is incorrect; multiple rad monitors is indicative of actual high radiation, and verifying proper operation would NOT be appropriate.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
51	R06051			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	7045-A OPS	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	OP-003-027	K/A	3.4-076-A1.02
Ref Supplied	N/A	Imp. Rating	2.6*
Cognitive Level	2	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-TC00	04	

Proposed Question	
As the Plant ramps to 100% power, the operator maintains TCW temperature and pressure constant by throttling the TCV _____ and throttling the PCV _____.	
A	OPEN, OPEN.
B	CLOSED, CLOSED.
C	OPEN, CLOSED.
D	CLOSED, OPEN.
Answer	C
Explanation	
C is correct: ramping up raises heat load. TCV will have to open which will raise pressure requiring PCV to be throttled closed.	
A, B and D are incorrect; opening PCV will raise pressure, closing TCV will raise temperature,	

Comments

Q#	QID	New	Modified	Direct from Bank
52	R06052			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	2291-A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	OP-003-016	K/A	3.8-078-K2.01
Ref Supplied	N/A	Imp. Rating	2.7
Cognitive Level	1	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-AIR00	03	

Proposed Question	
Which ONE of the following is the power supply to IA Compressor A?	
A	21A Bus
B	22A Bus
C	31A Bus
D	32A Bus
Answer	C
Explanation	
C is correct; IA compressor A is powered from 31A. A, B and D are incorrect. Station Air A is powered by the 21 bus. 22A and 32A busses exist but do NOT power IA compressors.	

Comments

Q#	QID	New	Modified	Direct from Bank
53	R06053	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	SD-AIR	K/A	3.8-078-G2.1.28
Ref Supplied	N/A	Imp. Rating	3.2
Cognitive Level	1	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-AIR00	04	

Proposed Question	
The Instrument Air System is designed such that...	
A	Instrument Air to Containment receives an isolation signal from an SIAS.
B	all safety-related components using Instrument Air are designed to fail-closed.
C	Containment isolation valves required to be closed can be maintained closed for a maximum of 10 days.
D	Nitrogen Backup accumulators on selected valves will provide for 10 hours of operation following a SBO.
<b>Answer</b>	D
Explanation	
D is correct; Nitrogen accumulators provide for 10 hours of operation following a LOCA concurrent with Loss of all AC to allow for natural circ cooldown.	
A is incorrect; CIAS isolates instrument air to containment.	
B is incorrect; safety related valves with go to FAIL SAFE condition on a loss of instrument air.	
C is incorrect; essential air maintains a 30 backup supply.	

Comments

Q#	QID	New	Modified	Direct from Bank
54	R06054			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	2542-A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	TS 1.9, TS 3.9.4, TS 3.6.1.1, OP-010-006	K/A	3.5-103-K3.01
Ref Supplied	N/A	Imp. Rating	3.3*
Cognitive Level	2	10 CFR 55.41(b)	9
Learning Objective	WLP-OPS-REQ	04	

Proposed Question	
<p>Initial Conditions are as follows:</p> <ul style="list-style-type: none"> <li>Plant is in MODE 6</li> <li>Core Alterations are in progress, a fuel bundle is currently being lowered into the core</li> <li>S/G #1 upper manways are removed for inspections</li> <li>While making a plant tour, an NAO reports that one of the #1 S/G safety valves has been removed by maintenance and taken back to the shop. A Containment closure impairment has NOT been written for this condition.</li> </ul> <p>Based on the above information, required response to this condition is:</p>	
A	Install S/G #1 safety valve within one hour.
B	Install S/G #1 upper manways within one hour.
C	Immediately suspend core alterations, place fuel bundle into the core.
D	Immediately suspend core alterations, leave fuel bundle in it's current position.
<b>Answer</b>	C
Explanation	
<p>C is correct; with S/G manways and safety removed pathway exist from containment to atmosphere with no closure impairment identified. LCO action is to immediately suspend core alterations this does NOT preclude placing bundle in safe location of which Reactor vessel is the preferred location.</p> <p>A and B are incorrect; while this action may be operationally valid and is directed for modes 1-4 per TS 3.6.1.1, it is NOT required in mode 6 and is overridden by suspending core alterations to minimize the possibility of a release.</p> <p>D is incorrect; immediately suspending core alterations is required BUT leaving a bundle suspended is nonconservative.</p>	

<b>Comments</b>

Q#	QID	New	Modified	Direct from Bank
55	R06055			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	1316-A	Level	RO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	SD-CB	K/A	3.5-103-G2.1.27
Ref Supplied	N/A	Imp. Rating	2.8
Cognitive Level	1	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-CB00	04	

Proposed Question	
The purpose of the Containment Vacuum Relief System is to:	
A	Minimize external pressure on the Containment vessel during an inadvertent actuation of the Containment Spray system.
B	Minimize external pressure on the Shield Building during an inadvertent actuation of the Containment Spray system.
C	Minimize internal pressure on the Containment vessel by venting the annulus space to containment.
D	Minimize internal pressure on the Shield Building by venting the annulus space to containment.
<b>Answer</b>	A
Explanation	
<p>A is correct; the containment vacuum relief system allows venting annulus between the shield building and the containment vessel to reduce pressure differential across containment vessel that would result from inadvertent actuation of containment spray.</p> <p>B and D are incorrect; the shield building external pressure is at atmospheric pressure, by venting pressure from the annulus DP across shield building would increase. Annulus negative pressure system maintains annulus at a vacuum within limits.</p> <p>C is incorrect; containment pressure is reduced by periodic venting to maintain limits</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
56	R06056	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/2
Tech References	SD-CED	K/A	3.1-001-K3.02
Ref Supplied	N/A	Imp. Rating	3.4*
Cognitive Level	2	10 CFR 55.41(b)	6
Learning Objective	WLP-OPS-CED00	01	

Proposed Question	
<p>Plant conditions are as follows:</p> <ul style="list-style-type: none"> <li>• A reactor startup is in progress.</li> <li>• Reactor Power is approaching the Point of Adding Heat.</li> <li>• The High Log Power Trip has been bypassed.</li> <li>• Regulating Group CEAs are being withdrawn in Manual Sequential.</li> </ul> <p>Which automatic protective feature will actuate FIRST in response to a continuous withdrawal of the CEA groups?</p>	
A	Automatic CEA Withdrawal Prohibit (AWP)
B	CEA Withdrawal Prohibit (CWP)
C	High Linear Power Trip
D	High Pressurizer Pressure Trip
<b>Answer</b>	B
Explanation	
<p>B is correct. A continuous withdrawal of a CEA group would cause RCS pressure to rise. 2 of 4 High Pressurizer Pressure Pre-Trips (actuate below 2350 PSIA) cause a CWP.</p> <p>A is incorrect. AWP's only affect CEAs when in the Auto Sequential mode. This mode is only used for a short while following a Reactor Power Cutback.</p> <p>C is incorrect. High Linear Power Trip actuates at 108% power.</p> <p>D is incorrect. High Pressurizer Pressure Trip actuates at 2350 PSIA.</p>	

Comments



Q#	QID	New	Modified	Direct from Bank
57	R06057			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	2631A	Level	RO
NRC Exam History	N/A	Tier/Group	2/2
Tech References	OP-902-003	K/A	3.2-002-A4.02
Ref Supplied	N/A	Imp. Rating	4.3
Cognitive Level	1	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-PPE05	4	

Proposed Question	
<p>ALL offsite power was lost one hour ago causing a trip from extended full power operations. Offsite power has NOT been regained.</p> <p>Which ONE of the following is an indication of Inadequate Natural Circulation in this condition?</p>	
A	Loop delta-T is 65°F
B	RCS hot and cold leg temperatures are decreasing
C	RCS subcooling is 30°F as sensed on Representative CET
D	Representative CET temperature indicate 545°F and RCS hot leg temperature indicates 539°F
Answer	A
Explanation	
<p>A is correct; Adequate natural circulation criteria is Core delta T &lt; 58°F.</p> <p>B is incorrect; hot leg and cold leg temperatures ARE stable or trending down.</p> <p>C is incorrect; RCS minimum subcooling IS &gt; 28°F.</p> <p>D is incorrect; TH and CET delta t IS &lt;10°F.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
58	R06058		X	

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	60-A	Level	RO
NRC Exam History	2004 NRC SRO/ RO	Tier/Group	2/2
Tech References	PDP Vol. 2 Fig 1 & Fig 3	K/A	3.2-011-A1.04
Ref Supplied	PDP Vol. 2 Fig 1 & Fig 3	Imp. Rating	3.1
Cognitive Level	2	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-PLC00	09	

Proposed Question	
<p>Plant conditions are as follows:</p> <ul style="list-style-type: none"> <li>The plant is operating steady state at 75% power.</li> <li>Tavg is being maintained on the program.</li> <li>A Pressurizer Level Control system malfunction has occurred, requiring Pressurizer Level Control to be placed in Manual.</li> </ul> <p>The CRS wants Pzr level to be restored to program level prior to placing the pressurizer level controller back in Auto. What is your target level?</p>	
A	45.0%
B	46.5%
C	49.0%
D	51.5%
<b>Answer</b>	C
Explanation	
<p>C is correct; 75% power corresponds to 564°F Tave On Fig 1. Corresponds to 49% PZR level on Fig 3.</p> <p>A is incorrect; 45% corresponds to Tave of 559.5°F.</p> <p>B is incorrect; 46.5% corresponds to Tave of 561°F.</p> <p>D is incorrect; 51.5% corresponds to Tave of 567°F.</p>	

Comments
Original had power at 55%. 43% was correct answer.

Q#	QID	New	Modified	Direct from Bank
59	R06059	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/2
Tech References	SD-NI	K/A	3.7-015-K6.03
Ref Supplied	N/A	Imp. Rating	2.6
Cognitive Level	1	10 CFR 55.41(b)	2
Learning Objective	WLP-OPS-INI	05	

Proposed Question	
<p>The Excore NI system has just experienced a BF3 detector failing low. This will result in ____ OOS for that channel.</p>	
A	Boron Dilution monitor
B	65% Turbine Trip/Rx Trip bistable
C	Rx Reg and SBCS ENI input
D	Axial Shape Index
<b>Answer</b>	A
Explanation	
<p>A is correct; BF3 is the source range excore NI, and it inputs to the Boron Dilution monitor. B and D are incorrect; these inputs are from fission chamber safety power channels. C is incorrect; this input is from UIC control power channels.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
60	R06060	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/2
Tech References	T.S. 3.4.8.1	K/A	3.7-016-G2.1.33
Ref Supplied	N/A	Imp. Rating	3.4
Cognitive Level	2	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-TS04	01	

Proposed Question					
Assuming Heatup/Cooldown rates remain constant, which conditions result in a Technical Specification entry?					
		08:45	09:00	09:15	09:30
1.	RCS Cold Leg Temperature	350°F	360°F	370 °F	380°F
2.	RCS Cold Leg Temperature	350°F	370°F	390 °F	410°F
3.	RCS Cold Leg Temperature	500°F	480°F	460 °F	440°F
4.	RCS Cold Leg Temperature	500°F	470°F	440 °F	410°F
	A	1 and 2			
	B	1 and 3			
	C	2 and 4			
	D	3 and 4			
<b>Answer</b>		C			
Explanation					
C is correct; 2 and 4 BOTH exceed the 60°F and 100 °F/hr limits.					
A, B, and D are incorrect; 1 will NOT exceed the heatup limit, 3 will NOT exceed the cooldown.					

Comments

Q#	QID	New	Modified	Direct from Bank
61	R06061			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	6067	Level	RO
NRC Exam History	2003 NRC Exam	Tier/Group	2/2
Tech References	TS 3.1.3.3	K/A	3.1-014-A2.07
Ref Supplied	N/A	Imp. Rating	2.6
Cognitive Level	1	10 CFR 55.41(b)	10
Learning Objective	WLP-OPS-TS04	01	

Proposed Question	
<p>Given the following conditions;</p> <ul style="list-style-type: none"> <li>• The Plant is in MODE 3</li> <li>• Shutdown Bank A is being withdrawn.</li> <li>• CEA Pulse Counter for CEA 28 reads 22 inches</li> <li>• Reed Switch Position Transmitter 1 (RSPT 1) for CEA 28 is OOS</li> <li>• Reed Switch Position Transmitter 2 (RSPT 2) for CEA 28 reads 22 inches</li> </ul> <p>Which ONE of the following is the appropriate action if RSPT 2 were to fail for CEA 28?</p>	
A	Restore one channel within 1 hour.
B	Immediately open the Reactor Trip Breakers.
C	Position CEA 28 to its' fully withdrawn position.
D	Stop withdrawing CEAs and verify Shutdown margin within 1 hour.
<b>Answer</b>	B
Explanation	
<p>B is correct; in mode 3 with no rod position indication for any CEA NOT fully inserted immediately trip the reactor.</p> <p>A , C and D are incorrect; MODES 1 &amp; 2: TS 3.1.3.2 applies - 2/3 RPIS channels required, CEA pulse counter and 1 RPST operable. if NOT restore in 6 hours, or fully withdrawn position while maintaining specifications of 3.1.3.1 and 3.1.3.6.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
62	R06062			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	1367-B	Level	RO
NRC Exam History	N/A	Tier/Group	2/2
Tech References	SD-FS	K/A	3.8-033-K4.04
Ref Supplied	N/A	Imp. Rating	2.7
Cognitive Level	1	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-FS00	03	

Proposed Question	
Which ONE of the following design features limits inadvertent draining of the Spent Fuel Pool?	
A	The Fuel Pool Cooling return line has holes drilled in the piping that act as an anti-siphon device.
B	The Fuel Pool Cooling pumps suction piping has holes drilled in the piping that act as an anti-siphon device.
C	All Fuel Pool piping systems, including pumps and valves, are located at or above the normal operating water level.
D	The Spent Fuel Pool CMU makeup valve automatically opens on a Spent Fuel Pool Low Level alarm.
<b>Answer</b>	A
Explanation	
A is correct; Fuel Pool cooling lines have siphon breaker holes drilled into the return line to prevent inadvertent draining of the SFP.	
B is incorrect; FP cooling suction piping is cut at the 40'6" elevation.	
C is incorrect; Fuel pool cooling return pipe extends to the 36'6" elevation.	
D is incorrect; CMU makeup to SFP is a manual valve.	

Comments

Q#	QID	New	Modified	Direct from Bank
63	R06063			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	1235-A	Level	RO
NRC Exam History	N/A	Tier/Group	2/2
Tech References	SD-SBC	K/A	3.4-041-A3.02
Ref Supplied	N/A	Imp. Rating	3.3
Cognitive Level	1	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-SBC00	05	

Proposed Question	
<p>The following plant conditions exist:</p> <ul style="list-style-type: none"> <li>Plant is at 100% power.</li> <li>Tavg at 573°F.</li> <li>RCS pressure is 2250 psia.</li> <li>Reactor Cutback is out of service.</li> <li>Reactor trip on turbine trip is enabled.</li> <li>A Turbine Trip occurs.</li> </ul> <p>The response of the steam bypass control system immediately following generation of the turbine trip signal will be: (assume all SBCS valves available)</p>	
A	All valves will quick open.
B	Only Valves 1 through 5 will quick open.
C	Only Valves 1 through 3 will quick open.
D	No valves will quick open.
<b>Answer</b>	B
Explanation	
<p>B is correct; with cutback out of service a turbine trip will result in a reactor trip which will generate a quick open signal to SBC valves. #6 bypass valve quick open signal will be blocked on a reactor trip.</p> <p>A, C, and D are incorrect; valves 1-5 will quick open on a trip from 100% and # 6 quick open will be blocked.</p>	

Comments



Q#	QID	New	Modified	Direct from Bank
64	R06064		X	

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	3058-A	Level	RO
NRC Exam History	N/A	Tier/Group	2/2
Tech References	T.S 3.11.2.5	K/A	3.9-071-K5.04
Ref Supplied	N/A	Imp. Rating	2.5
Cognitive Level	1	10 CFR 55.41(b)	13
Learning Objective	WLP-OPS-GWM	07	

Proposed Question	
<p>Chemistry has informed the Control Room that the in service Gas Decay Tank Oxygen concentration is reading 4.7% and the Hydrogen concentration is reading 57.7%.</p> <p>Per Technical Specifications, we must _____ suspend all additions of waste gas, and _____ reduce the concentration of _____ to <math>\leq 4\%</math>, and then take Action a.</p>	
A	Immediately / Immediately / Oxygen.
B	Within 1 hour / within 1 Hour. / Oxygen.
C	Within 1 hour / Immediately / Hydrogen.
D	Immediately / 1 Hour / Hydrogen.
<b>Answer</b>	A
Explanation	
<p>A is correct; TS Action b – with Oxygen concentration <math>&gt;4\%</math> and Hydrogen <math>&gt;4\%</math>, immediately suspend all additions of waste gases to the system and immediately reduce Oxygen level <math>&lt;4\%</math>.</p> <p>B, C, and D are incorrect; but plausible combinations.</p>	

Comments
Old Q only addressed time of TS, old values were 8, 24, and 48 hours.

Q#	QID	New	Modified	Direct from Bank
65	R06065	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	2/2
Tech References	SD-RMS	K/A	3.7-072-K1.05
Ref Supplied	N/A	Imp. Rating	2.8*
Cognitive Level	1	10 CFR 55.41(b)	11
Learning Objective	WLP-OPS-RMS00	01	

Proposed Question	
The Main Steam Line N-16 Radiation Monitor provides accurate leakrate indication between _____ gpm and _____ gpm and will alarm if leakrate exceeds _____ gpd/hr.	
A	15 / 300 / 15
B	30/ 300 / 15
C	15 / 150 / 30
D	30 / 150 / 30
Answer	D
Explanation	
D is correct; effective range of N-16 radmonitor is between 30-150 GPD and 30 GPD/hr change will generate an alarm.	
A, B, and C are incorrect; but plausible permutations of the correct answer.	

Comments

Q#	QID	New	Modified	Direct from Bank
66	R06066			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	1369-B	Level	RO
NRC Exam History	N/A	Tier/Group	3
Tech References	OI-024-000	K/A	2.1.10
Ref Supplied	N/A	Imp. Rating	2.7
Cognitive Level	1	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-TS04	01	

Proposed Question	
<p>A licensee has NOT stood the required number of proficiency watches prior to the end of the calendar quarter. Which one of the following correctly describes the 10CFR55 provision for the licensee to perform licensed duties during the next quarter?</p>	
A	The license must become inactive. 40 hours of under instruction watches shall be stood to return the license to active status.
B	The license must become inactive. Seven 8-hour or five 12-hour under instruction watches shall be stood to return the license to active status
C	Active status may be continued provided the remaining proficiency watches are stood during the first week of the following calendar quarter (2 watches maximum)
D	Active status may be continued provided the remaining proficiency watches are stood during the first week of the following calendar quarter (3 watches maximum)
Answer	A
Explanation	
<p>A is correct; failure to complete the required number of proficiency watches will result in inactivation of the license, which will require 40 hours under instruction to reactivate.</p> <p>B, C, and D are incorrect; five 12 hours watches are the required number of proficiency watches to maintain active status. There is no provision for reactivating a license in the first week of the quarter.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
67	R06067			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	WF3-NRC-1607-A	Level	RO
NRC Exam History	N/A	Tier/Group	3
Tech References	OP-010-004	K/A	2.1.25
Ref Supplied	Plant Data Book, Vol 2, Generator Capability Curve	Imp. Rating	2.8
Cognitive Level	2	10 CFR 55.41(b)	10
Learning Objective	WLP-OPS-PPN01		

Proposed Question	
<p>The following plant conditions exist:</p> <ul style="list-style-type: none"> <li>Hydrogen pressure is 45 psig.</li> <li>Generator load is 1180 MW.</li> <li>Generator excitation is 300 MVAR lagging (overexcited).</li> </ul> <p>Refer to the attached Generator Capability Curve. Which ONE of the following statements describes your MINIMUM REQUIRED action?</p>	
A	You must lower excitation by 20 MVAR.
B	You must lower generator load by 30 MW.
C	You must lower load by 60 MW, and lower excitation by 30 MVAR.
D	You may continue operation since the OP-010-004 admin limit is 400 MVAR out.
<b>Answer</b>	B
Explanation	
<p>B is correct; Reducing load by 30 MW will place the generator just below the 300 MVAR limit for 45 psig (1160 MW).</p> <p>A is incorrect; At 1180 MW, excitation must be lowered by at least 80 MVAR.</p> <p>C is incorrect; this is excessive power reduction.</p> <p>D is incorrect; OP-010-004 Admin limit is the more limiting of 400 MVAR out or the Curve limit. In this case the curve limit is more limiting.</p>	

<b>Comments</b>

Q#	QID	New	Modified	Direct from Bank
68	R06068	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	3
Tech References	OP-003-003	K/A	2.1.32
Ref Supplied	N/A	Imp. Rating	3.4
Cognitive Level	1	10 CFR 55.41(b)	5
Learning Objective	WLP-OPS-CD00	08	

Proposed Question	
Hotwell ____ level is limited to _____ to _____	
A	A, 36 inches, prevent Condensate Pump cavitation.
B	B, 36 inches, prevent elevated Dissolved Oxygen.
C	B, 60 inches and rising, prevent Condensate Pump trip.
D	A, 60 inches and rising, prevent FWPT blade damage.
Answer	D
Explanation	
<p>D is correct; Hotwell A level of 60" and rising will cause FP drain to Hotwell to close; preventing water from draining to Condenser and may result in FWPT blade damage.</p> <p>A is incorrect; maintain Hotwell &gt;32 inches to prevent condensate pump cavitation.</p> <p>B is incorrect; level is maintained as low as achievable between 32-35" to maintain Dissolved Oxygen.</p> <p>C is incorrect; Condensate Pump trip is at 18".</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
69	R06069	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	3
Tech References	RF-005-001	K/A	2.2.27
Ref Supplied	N/A	Imp. Rating	2.6
Cognitive Level	1	10 CFR 55.41(b)	13
Learning Objective	WLP-OPS-FHS00	08	

Proposed Question	
Loads in excess of _____ pounds are prohibited from travel over irradiated fuel assemblies in the _____.	
A	2000, Fuel Handling Building.
B	2000, Containment.
C	1600, Fuel Handling Building.
D	1600, Containment.
<b>Answer</b>	A
Explanation	
A is correct; RF-005-001 limits loads over irradiated fuel in the fuel handling building to 2000 pounds. B is incorrect; there is no restriction of 2000 pounds in containment, C and D are incorrect; 1600 pounds is minimum capacity limit for CEA mast.	

Comments

Q#	QID	New	Modified	Direct from Bank
70	R06070	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	3
Tech References	TS 3.1.2 .8, TS Fig 3.1-1 and 3.1-2	K/A	2.2.22
Ref Supplied	TS 3.1.2 .8, TS Fig 3.1-1 and 3.1-2	Imp. Rating	3.4
Cognitive Level	2	10 CFR 55.41(b)	8
Learning Objective	WLP-OPS-TS04	02	

Proposed Question	
The Borated Water Operability requirement in MODE 1 is satisfied by...	
A	BAMT B Tagged out / BAMT A 5100 ppm, 80% / RWSP 2600 ppm.
B	BAMT A Tagged out / BAMT B 5300 ppm, 83% / RWSP 2300 ppm.
C	BAMT A 5400 ppm, 30% / BAMT B 5400 ppm, 51% / RWSP 2300 ppm.
D	BAMT A 5200 ppm, 40% / BAMT B 5200 ppm, 37% / RWSP 2600 ppm.
Answer	B
Explanation	
<p>B is correct; BAMT B 5300 ppm @83 % figure 3.1-1 is in the acceptable region of the curve.</p> <p>A, is incorrect; BAMT A 80% @ 5100 ppm lies in the unacceptable region of curve 3.1-1</p> <p>C and D are incorrect; combined BAMTs of 81% and 77% @ 5400 ppm and 5300 ppm lie in the unacceptable region of curve 3.1-2</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
71	R06071			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	NRC-6105-A	Level	RO
NRC Exam History	2004 NRC Exam	Tier/Group	3
Tech References	ENS-RP-110	K/A	2.3.2
Ref Supplied	N/A	Imp. Rating	2.5
Cognitive Level	2	10 CFR 55.41(b)	12
Learning Objective	WLP-OPS-RAD02	07	

Proposed Question	
<p>A valve must be worked in the RCA. The dose rate in the area is 40 mrem/hr.</p> <p>Two options exist to complete the work.</p> <ul style="list-style-type: none"> <li>Option 1: Operator X can perform the assignment in seventy five (75) minutes alone.</li> <li>Option 2: Operators Y and Z, can perform the assignment in forty five (45) minutes together.</li> </ul> <p>Which ONE of the following options is preferable and consistent with the ALARA program?</p>	
A	Option 2 since the exposure per person is 18 mrem.
B	Option 2 since the exposure per person is 30 mrem.
C	Option 1 since Operator X exposure is 46 mrem.
D	Option 1 since Operator X exposure is 50 mrem.
<b>Answer</b>	D
Explanation	
<p>D is correct. <math>40 \times 1.25 = 50</math> mrem total exposure.</p> <p>A is incorrect. <math>40 \times 0.45 = 18</math> mrem. This represents a logical math error.</p> <p>B is incorrect. <math>40 \times 0.75 = 30</math> mrem. Total exposure is 60 mrem, which is inconsistent with the ALARA program.</p> <p>C is incorrect. <math>40 \times 1.15 = 46</math> mrem. This represents a logical math error.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
72	R06072			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	NRC-5913-A	Level	RO
NRC Exam History	2002 NRC Exam	Tier/Group	3
Tech References	ENS-RP-207	K/A	2.3.4
Ref Supplied	N/A	Imp. Rating	2.5
Cognitive Level	2	10 CFR 55.41(b)	12
Learning Objective	WLP-OPS-RAD02	06	

Proposed Question	
<p>A valve is to be repaired under the Planned Special Exposure (PSE) limits of ENS-RP-207. The radiation dose on contact at the valve is 25 rem/hour.</p> <p>The individual assigned, an employee of Atlantic Group, has never had any radiation exposure beyond normal annual limits.</p> <p>Shielding will be used to prevent TEDE dose in excess of Waterford 3 administrative limits.</p> <p>Considering only the exposure to the individual's hands, the maximum amount of time the person may be permitted to work on the valve is _____ minutes; and, in addition to normal PSE requirements, _____ authorization is required, because the individual is NOT an Entergy employee.</p>	
A	60; Atlantic Group Supervisor
B	60; Site Vice President
C	120; Atlantic Group Supervisor
D	120; Site Vice President
<b>Answer</b>	C
Explanation	
<p>C is correct. <math>25 \text{ r/hr} \times 2 \text{ hr} = 50 \text{ rem}</math>. 50 rem is the extremity limit for PSEs (step 5.3.2). Individual's employer is required (step 5.2.1).</p> <p>A and B are incorrect. 60 minutes is only 25 rem. 50 rem is the extremity limit for PSEs.</p> <p>D is incorrect. Site Vice President's authorization is required in ALL PSEs, NOT just those when the individual is NOT an Entergy employee.</p>	
Comments	

Q#	QID	New	Modified	Direct from Bank
73	R06073			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	5723-N	Level	RO
NRC Exam History	2003 SRO	Tier/Group	3
Tech References	OP-901-414	K/A	2.3.11
Ref Supplied	N/A	Imp. Rating	2.7
Cognitive Level	2	10 CFR 55.41(b)	13
Learning Objective	WLP-OPS-PPO40	03	

Proposed Question	
<p>Given the following conditions:</p> <ul style="list-style-type: none"> <li>• SG 1 is in wet layup conditions after a Steam Generator Tube Rupture in SG 1</li> <li>• SG 2 is being discharged to Circ Water through the Blowdown system</li> <li>• SG 1 will be discharged to Circ Water following completion of SG 2 discharge</li> <li>• SG 1 discharge permit has NOT been prepared and samples have NOT been taken of SG 1 contents</li> </ul> <p>During the release the ATC notices that SG 1 level is lowering, Blowdown Containment Isolation Valves, BD-102A and BD-103A are open.</p> <p>What action should be taken for these conditions?</p>	
A	Close BD-303, BD to CW or Waste Pond Isolation, to secure the release.
B	Close BD-102A and BD-103A, S/G 1 Blowdown Containment Isolations, to secure the release of S/G 1.
C	Close BD-109A, S/G 1 Blowdown Flow Control Vlv.
D	Sample S/G 1 and release both S/Gs simultaneously.
<b>Answer</b>	A
Explanation	
<p>A is correct. This is the isolation valve for the release path per OP-901-414.</p> <p>B is incorrect. This is NOT mentioned in OP-901-414.</p> <p>C is incorrect. OP-901-414 states to verify BD-103 closed and close BOTH BD-109A and B.</p> <p>D is incorrect. OP-901-414 isolates the release path prior to sampling.</p>	

<b>Comments</b>

Q#	QID	New	Modified	Direct from Bank
74	R06074			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	NRC-2909-A	Level	RO
NRC Exam History	N/A	Tier/Group	3
Tech References	OP-100-017	K/A	2.4.17
Ref Supplied	N/A	Imp. Rating	3.1
Cognitive Level	1	10 CFR 55.41(b)	10
Learning Objective	WLP-OPS-PPE01	13	

Proposed Question	
When used in the EOPs, continuously applicable steps should be monitored at all times and ONLY performed...	
A	after completing applicable hold point steps.
B	when the instruction step can NOT be completed
C	after having been presented in the EOP.
D	when a specific plant condition is met.
<b>Answer</b>	D
Explanation	
D is correct. Meets conditions of step 5.8.1.	
A is incorrect. Step 5.8.2 allows taking continuously applicable steps prior to completing hold points.	
B is incorrect. This is a contingency action (step 5.9.1).	
C is incorrect. Allowed to bypass this condition for continuously applicable steps (step 5.8.1).	

Comments

Q#	QID	New	Modified	Direct from Bank
75	R06075	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	RO
NRC Exam History	N/A	Tier/Group	3
Tech References	OP 500-011 OP-500-010 OP-901-520	K/A	2.4.45
Ref Supplied	N/A	Imp. Rating	3.3
Cognitive Level	2	10 CFR 55.41(b)	7
Learning Objective	WLP-OPS-PPO20	04	

Proposed Question	
<p>Assume each of the following alarms are valid with the plant at 100% power:</p> <ul style="list-style-type: none"> <li>• TOXIC GAS DETECTED CHANNEL 1 (Cabinet L, C-9)</li> <li>• SG 1 FW ISOL VLV AIR RSVR PRESS LO (Cabinet M, N-3)</li> </ul> <p>Of these alarms _____ should be addressed FIRST because...</p>	
A	TOXIC GAS DETECTED CHANNEL 1; Control Room Isolation must be manually initiated.
B	TOXIC GAS DETECTED CHANNEL 1; Control Room Habitability is in question.
C	SG 1 FW ISOL VLV AIR RSVR PRESS LO, FW-184A may fail closed.
D	SG 1 FW ISOL VLV AIR RSVR PRESS LO, TS 3.7.1.6 requires a 1 hour action.
<b>Answer</b>	B
Explanation	
<p>B is correct. TOXIC GAS DETECTED CHANNEL is an entry condition for TOXIC chemical release which has immediate operator actions due to control room Habitability.</p> <p>A is incorrect. Control room isolation will occur automatically from BRGM exceeding their setpoint.</p> <p>C and D are incorrect; Loss of IA will cause FW184A to fail as-is and require TS 3.7.1.6 entry, but OP-901-520 requires immediate action.</p>	
Comments	

Q#	QID	New	Modified	Direct from Bank
76	S06001	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	OP-902-009, App. 1	K/A	4.4-E02 EA2.1
Ref Supplied	N/A	Imp. Rating	3.7
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-PPE01	12	

Proposed Question	
<p>A reactor trip has occurred. The following conditions exist:</p> <ul style="list-style-type: none"> <li>SIAS, CIAS, CSAS, MSIS, and EFAS-1 have actuated</li> <li>Pressurizer level is 0%</li> <li>Pressurizer pressure is 830 psia and lowering</li> <li>S/G 1 pressure is 770 psia and rising</li> <li>S/G 2 pressure is 400 psia and lowering</li> <li>S/G 1 level is 70% WR and slowly lowering</li> <li>S/G 2 level is 10% WR and slowly rising</li> <li>Main Steam Line radiation monitors are normal post-trip values</li> <li>Containment Building radiation monitors are slowly rising</li> </ul> <p>A(n) _____ is in progress, and the most appropriate procedure to enter is _____.</p>	
A	LOCA; OP-902-002, Loss of Coolant Accident Recovery
B	ESD; OP-902-004, Excess Steam Demand Recovery
C	LOCA and SGTR; OP-902-008, Functional Recovery Procedure
D	ESD and SGTR; OP-902-008, Functional Recovery Procedure
<b>Answer</b>	D
Explanation	
<p>D is correct due to SG low pressure, SG 2 level rising w/o EFAS-2, and CB RM activity</p> <p>A is plausible due to CB RM activity, but incorrect due to SG low pressure</p> <p>B is plausible due to SG low pressure, but incorrect due to SG 2 level rising w/o EFAS-2</p> <p>C is plausible due to CB RM activity and SG low pressure, but incorrect due to SG 2 level rising w/o EFAS-2</p>	

<b>Comments</b>

Q#	QID	New	Modified	Direct from Bank
77	S06002	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	OP-902-000, OP-902-009, Att 2-A	K/A	4.1-E11 Gen. 2.4.1
Ref Supplied	OP-902-009, Att 2-A	Imp. Rating	4.6
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-PPE01	10	

Proposed Question					
The plant is initially at 100% power when a loss of coolant accident occurs. Which ONE of the following conditions will allow you to maintain 2 RCPs in service, but will NOT allow you to operate 4 RCPs?					
		<b>RCS Temp</b>	<b>RCS Press</b>	<b>Cntmt Press</b>	
	A	570°F	1650 psia	17.5 psia	
	B	560°F	1600 psia	17.6 psia	
	C	550°F	1550 psia	17.7 psia	
	D	540°F	1500 psia	17.8 psia	
<b>Answer</b>	B				
Explanation					
All answers are based on OP-902-000 steps 4 and 8.					
B is correct. ATT. 2-A with no CSAS allows RCP operation, but step 4 limits RCP operation to two if <1621psia.					
A is incorrect. Att. 2-A with no CSAS allows the operation of all 4 RCPs.					
C and D are incorrect due to step 8 requirement to trip all RCPs following CSAS.					

Comments

Q#	QID	New	Modified	Direct from Bank
78	S06003	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	TS 3.7.4 and OI-037-000 Att. 6.1	K/A	4.2-A26 Gen. 2.2.17
Ref Supplied	TS 3.7.4 and OI-037-000 Att. 6.1	Imp. Rating	3.5
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-ORA	06	

Proposed Question	
<p>The following conditions exist:</p> <ul style="list-style-type: none"> <li>Plant is at 100% power</li> <li>Dry Cooling Tower (DCT) Fan 10A is Out of Service for corrective maintenance.</li> <li>Work is in progress on DCT Fan 10A, and is expected to be complete in 4 hours.</li> <li>All other A and B Train DCT Fans are Operable.</li> <li>The B Train DCT Fan Missile Shield is Inoperable due to discovery that the holddown bolts were not adequately torqued per design requirements.</li> <li>Work Planning has indicated that torquing all of the holddown bolts on the missile shield should take approximately 2 hours.</li> <li>The qualitative assessment of the Equipment Out of Service program is Green for all systems.</li> <li>Due to limited resources of maintenance personnel, Mechanical Maintenance personnel are in the process of restoring DCT Fan 10A. They are expected to perform the missile shield repair once complete.</li> </ul> <p>The National Weather Service announces that a severe thunderstorm is predicted to affect St. John and St. Charles Parishes in approximately 4 hours. A tornado watch is predicted to affect St. John Parish only.</p> <p>Under the above conditions, the SM should direct the Mechanical Maintenance personnel to....</p>	
A	complete the repair of DCT Fan 10A first since work is already in progress on this fan.
B	complete the repair of DCT Fan 10A first to prevent entry into TS 3.7.4 one hour action.
C	repair the B Train DCT Fan Missile Shield first because it takes less time to complete.
D	repair the B Train DCT Fan Missile Shield first because 9 DCT Fans Inoperable.
<b>Answer</b>	<b>D</b>

**Explanation**

D is correct. The qualitative assessment of OI-037, Table 4, states to assume all equipment under the missile barrier OOS. 9 of 15 DCT Fans reside under the missile shield.

A is incorrect. With a thunderstorm in progress, completion of this fan is not a priority.

B is incorrect. TS 3.7.4 only requires a 1-hour action for a Tornado Watch.

C is incorrect. Time for completion takes less priority of possibly losing the B Train Ultimate Heat Sink.

**Comments**

Q#	QID	New	Modified	Direct from Bank
79	S06004		X	

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	5855-A	Level	SRO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	OI-038-000; OP-902-008 Safety Function RC-2; OP-902-009 App. 13	K/A	4.2-A40 AA2.05
Ref Supplied	N/A	Imp. Rating	4.5
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-PPE08	09	

Proposed Question	
<p>Plant conditions are as follows:</p> <ul style="list-style-type: none"> <li>• A MSLB has occurred</li> <li>• 3 CEAs remain fully withdrawn</li> <li>• SIAS, CIAS, MSIS, CSAS have occurred</li> <li>• SG #2 has blown dry</li> <li>• CET temperature is 450°F</li> <li>• RCS pressure has been stabilized at 1550 psia</li> <li>• Pressurizer level continues to rise</li> </ul> <p>Which ONE of the following conditions allows securing ALL Charging Pumps?</p>	
A	All HPSI Throttle Criteria are met
B	Reactor power is $2.4 \times 10^{-3}\%$ and dropping
C	Pressurizer level is approaching 80%
D	RCS is borated to refueling concentration
<b>Answer</b>	D

**Explanation**

D is correct. OI-038-000 step 5.4.2 states that Emergency Boration should continue until refueling concentration is met.

A and C are incorrect. OI-038-000 step 5.4.31 for HPSI Throttle Criteria states that at least one charging pump must remain in operation unless this creates a challenge to the pressurizer safety valves.

B is incorrect. Reactor power must be below  $10^{-4}\%$  to meet the Reactivity Control Safety Function in OP-902-008.

**Comments**

Q#	QID	New	Modified	Direct from Bank
80	S06005	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	OP-902-006 SF 6	K/A	4.2-A54 AA2.06
Ref Supplied	N/A	Imp. Rating	4.3
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-PPE06	08	

Proposed Question	
<p>The crew has entered OP-902-006 for a Loss of Main Feedwater. The reactor operator has taken manual control of EFW and Steam Bypass Control. The following conditions exist.</p> <ul style="list-style-type: none"> <li>• SG 1 level is 75% NR and slowly lowering</li> <li>• SG 2 level is 45% NR and slowly lowering</li> <li>• RCS T<sub>cold</sub> is 540 °F and slowly rising</li> </ul> <p>The CRS should direct the reactor operator to _____ EFW flow to SG 1 and _____ EFW flow to SG 2. With no adjustments made to Steam Bypass flow, these EFW flow adjustments should have a(n) _____ effect on RCS temperature.</p>	
A	maintain; raise; undesired
B	maintain; raise; desired
C	raise; maintain; undesired
D	raise; maintain; desired
<b>Answer</b>	B
Explanation	
<p>B is correct; OP-902-006 Safety Function 6 standards require maintain SG levels 50-70% NR and T<sub>cold</sub> stable or lowering. SG 1 level is already lowering to the desired band. SG 2 level must be raised. Increasing EFW flow will lower T<sub>cold</sub> which is desired.</p> <p>A is incorrect; increasing EFW flow will lower T<sub>cold</sub> which is desired.</p> <p>C and D are incorrect; SG 2 level is too low already.</p>	
Comments	

Q#	QID	New	Modified	Direct from Bank
81	S06006	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	1/1
Tech References	OP-902-005 TGOP-902-005	K/A	4.1-E55 Gen. 2.4.47
Ref Supplied	N/A	Imp. Rating	3.7
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-PPE05	07	

Proposed Question	
<p>Plant conditions are as follows:</p> <ul style="list-style-type: none"> <li>• A Station Blackout has occurred with the plant initially at 100% power.</li> <li>• No AC sources of power have been restored.</li> <li>• A 20°F/Hr cooldown is in progress.</li> <li>• Both Atmospheric Dump Valves (ADVs) are 30% open.</li> <li>• Emergency Feedwater Pump AB is supplying each Steam Generator 150 GPM flow.</li> <li>• Subcooled margin is 32°F and slowly lowering.</li> <li>• RCS Tc is 405°F and slowly lowering.</li> </ul> <p>The CRS should direct throttling the ADVs _____ in order to prevent losing _____ margin.</p>	
A	closed; shutdown
B	closed; subcooled
C	open; shutdown
D	open; subcooled
<b>Answer</b>	A
Explanation	
<p>A is correct. Basis for step 18 is that C/D must be secured prior to 400°F to prevent loss of reactivity control safety function. W3 has calculated that SDM is maintained down to 400°F.</p> <p>B is incorrect. The action is correct, but Reactivity control is why we stop cooldown at 400°F. This action will not prevent losing subcooled margin.</p> <p>C and D are incorrect. This action will cause temperature to lower faster and drop below 400°F. Also, reactivity control is a higher safety function than is inventory control.</p>	

<b>Comments</b>

Q#	QID	New	Modified	Direct from Bank
82	S06007	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	1/2
Tech References	OP-901-102	K/A	4.2-A1 AA2.04
Ref Supplied	N/A	Imp. Rating	4.3
Cognitive Level	2	10 CFR 55.43(b)	6
Learning Objective	WLP-OPS-PP010	04	

Proposed Question	
<p>Initial conditions are as follows:</p> <ul style="list-style-type: none"> <li>Plant is stable at 50% power.</li> <li>Group P CEAs and RG 6 CEAs are inserted to 120" for axial shape control</li> <li>RG 5 CEAs are inserted to 130" for axial shape control</li> </ul> <p>RG 5 CEAs continue to withdraw when the reactor operator releases the shim switch. The reactor operator places the CEDMCS Mode Select switch to Off in accordance with OP-901-102, CEA or CEDMCS Malfunction. RG 5 CEAs stop outward motion at 145".</p> <p>The most appropriate method to match Tavg and Tref is to....</p>	
A	reduce turbine load.
B	raise turbine load.
C	borate the RCS.
D	dilute the RCS.
<b>Answer</b>	C
Explanation	
<p>C is correct. This action would match Tavg and Tref by lowering power, which is a conservative action, and meets the intent of OP-901-102, section E<sub>3</sub>, step 3.</p> <p>A and D are incorrect. These actions would cause a greater deviation between Tavg and Tref.</p> <p>B is incorrect. This action would effectively match Tavg and Tref, but raising power to do so is a non-conservative method.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
83	S06008		X	

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	2922-A	Level	SRO
NRC Exam History	N/A	Tier/Group	1/2
Tech References	TS 3.7.1.4 Basis	K/A	4.2-A37 Gen. 2.1.34
Ref Supplied	N/A	Imp. Rating	2.9
Cognitive Level	1	10 CFR 55.43(b)	2
Learning Objective	WLP-OPS-TS04	04	

Proposed Question	
The limitation on secondary system specific activity ensures that the resultant off-site dose will be acceptable. This dose projection includes a _____ primary to secondary leak on the affected S/G with...	
A	540 gpd, 1 microcurie/milliliter primary activity.
B	540 gpd, a concurrent loss of offsite power.
C	1.0 gpm, 1 microcurie/milliliter primary activity.
D	1.0 gpm, a concurrent loss of offsite power.
Answer	B
Explanation	
B is correct. Matches basis for TS 3.7.1.4.	
A and C are incorrect. Primary activity is not mentioned in the basis.	
C and D are incorrect. 1 gpm P-S leakage is the old TS value.	

Comments
This question has been modified to match the change in the TS basis from 1.0 gpm to 540 gpd.

Q#	QID	New	Modified	Direct from Bank
84	S06009			X

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	6093-A	Level	SRO
NRC Exam History	2004 NRC Exam	Tier/Group	1/2
Tech References	OP-901-220	K/A	4.2-A51 AA2.02
Ref Supplied	N/A	Imp. Rating	4.1
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-PPO20	03	

Proposed Question	
<p>Given the following plant conditions:</p> <ul style="list-style-type: none"> <li>Reactor Power is 100%</li> <li>Condenser vacuum is 20.4 inches Hg and lowering 0.2 inches/minute</li> </ul> <p>Which of the following should be done at this time?</p>	
A	Commence a rapid downpower until vacuum recovers to > 25 inches HG.
B	Trip the reactor and verify the turbine tripped
C	Trip Feedwater Pump Turbines A and B.
D	Verify Main Steam Isolation Valves closed.
<b>Answer</b>	B
Explanation	
<p>B is correct. This matches step 5 of OP-901-220.</p> <p>A is incorrect. This rate of decline will not allow a downpower prior to reaching 20" Hg vacuum where the procedure requires a reactor trip.</p> <p>C is incorrect. The Feedwater Pumps trip at 14" Hg</p> <p>D is incorrect. This action is required below 14" Hg per step 5a of OP-901-220.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
85	S06010	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	1/2
Tech References	SD-RMS EP-002-030 EN-RP-207	K/A	4.2-A61 Gen. 2.3.1
Ref Supplied	N/A	Imp. Rating	3.0
Cognitive Level	1	10 CFR 55.43(b)	4
Learning Objective	WLP-OPS-EP02	08	

Proposed Question	
<p>With refueling operations in progress, a failure of a steam generator nozzle dam has resulted in an unisolable leak, causing level in the Reactor Cavity and Spent Fuel Pool to lower. Area radiation monitors in the Fuel Handling Building (FHB) are all reading <math>7.5 \times 10^3</math> mR/hr. This reading has been validated as accurate according to Radiation Protection surveys and calculations. The TSC has determined the need to enter the +46 FHB and close the Transfer Tube Isolation Valve, FHS-201.</p> <p>Of the following, what is the maximum time each team member may remain in this high dose field WITHOUT exceeding Emergency Radiation Exposure Guidelines?</p>	
A	30 minutes
B	45 minutes
C	1 hour and 15 minutes
D	1 hour and 30 minutes
<b>Answer</b>	C
Explanation	
<p>EP-002-030 Section 5.2 limits emergency exposure for accident-mitigating activities to a TEDE of <u>10 rem</u>. (EN-RP-207, Planned Special Exposure, limits PSEs to 5 rem.)</p> <p>C is correct. <math>(7.5 \text{ rem}) \times (1.25 \text{ hours}) = 9.375 \text{ rem}</math></p> <p>A is incorrect. <math>(7.5 \text{ rem}) \times (.5 \text{ hours}) = 3.75 \text{ rem}</math></p> <p>B is incorrect. <math>(7.5 \text{ rem}) \times (.75 \text{ hours}) = 5.625 \text{ rem}</math></p> <p>D is incorrect. <math>(7.5 \text{ rem}) \times (1.5 \text{ hours}) = 11.25 \text{ rem}</math></p>	
Comments	

Q#	QID	New	Modified	Direct from Bank
86	S06011		X	

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	113-B	Level	SRO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	TS 3.1.2.9, COLR 3.1.2.9	K/A	3.1-004 Gen. 2.1.33
Ref Supplied	TS 3.1.2.9, COLR 3.1.2.9	Imp. Rating	4.0
Cognitive Level	2	10 CFR 55.43(b)	2
Learning Objective	WLP-OPS-CVC00	08	

Proposed Question	
<p>Given the following:</p> <ul style="list-style-type: none"> <li>The plant has recently entered Mode 5.</li> <li>Pressurizer level is at 50% Cold Cal.</li> <li>The last OP-903-090 "Shutdown Margin" calculated a Keff of 0.962.</li> <li>Charging Pump A is de-energized and isolated.</li> <li>Charging Pump B is in operation.</li> <li>Charging Pump AB is in Standby.</li> </ul> <p>Startup channel #1 has just failed high. WHAT action(s) is(are) required to meet the Tech Spec Limiting Condition for Operation?</p>	
A	Isolate all Primary Makeup Water flowpaths to the RCS.
B	Isolate all Primary Makeup Water flowpaths to the RCS and isolate Charging Pump AB.
C	Determine RCS boron concentration within 1 hour and every 1.5 hours thereafter.
D	Determine RCS boron concentration within 1 hour and every 1.5 hours thereafter, and isolate Charging Pump AB.
<b>Answer</b>	B
Explanation	
<p>B is correct. This keeps the facility within the LCO of TS 3.1.2.9.b.</p> <p>A and C are incorrect. TS 3.1.2.9.b.2 refers to the COLR. COLR requires 2 charging pump breakers to be racked out for 0.962 Keff.</p> <p>D is incorrect. This keeps the facility within the Action Statement, but not the LCO.</p>	
Comments	
Old question only required PMU isolated since two Charging pumps were already racked out.	

Q#	QID	New	Modified	Direct from Bank
87	S06012	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	OP-901-111; HP-001-213; OP-901-131	K/A	3.5-007 Gen. 2.3.10
Ref Supplied	N/A	Imp. Rating	3.3
Cognitive Level	2	10 CFR 55.43(b)	4
Learning Objective	WLP-OPS-PPO10	04	

Proposed Question	
<p>The following plant conditions exist:</p> <ul style="list-style-type: none"> <li>• The plant is at 100% power.</li> <li>• Pressurizer Safety Valve, RC-317B, is leaking at 1.5 gpm.</li> <li>• Quench Tank temperature and pressure are both rising.</li> </ul> <p>To limit radiation levels in the Containment atmosphere, the CRS should direct _____; and, to guard against personnel exposure in the Containment, the SM should limit the time maintenance personnel spend _____.</p>	
A	starting a fourth Containment Fan Cooler; in the reactor cavity.
B	starting a fourth Containment Fan Cooler; at elevations above the +46 elevation.
C	filling and draining the Quench Tank; in the reactor cavity.
D	filling and draining the Quench Tank; at elevations above the +46 elevation.
<b>Answer</b>	D
Explanation	
<p>D is correct. The Quench Tank must be cooled to prevent rupturing the rupture disc. This is directed in OP-901-111, step 14. HP-001-213 allows limited entry to the +46 elevation.</p> <p>A and B are incorrect. Starting all CFCs is only allowed during a SDC Malfunction (OP-901-131).</p> <p>C is incorrect. HP-001-213 forbids entry into the reactor cavity while in MODE 1.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
88	S06013	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	OP-901-504, SD-SDC, SD-CC, SD-PPS	K/A	3.2-013 A2.06
Ref Supplied	N/A	Imp. Rating	4.0
Cognitive Level	2	10 CFR 55.43(b)	2
Learning Objective	WLP-OPS-PPO50	03	

Proposed Question	
<p>Plant conditions are as follows:</p> <ul style="list-style-type: none"> <li>• A plant cooldown is in progress</li> <li>• RCS Temperature is 300°F and slowly lowering</li> <li>• Pzr Pressure is 350 psia and stable</li> <li>• RCPs 1B and 2B are running</li> <li>• SDC Train A is in operations</li> </ul> <p>Following an inadvertent _____, the CRS should prioritize....</p>	
A	CSAS; securing High Pressure Safety Injection flow to prevent lifting LTOPs.
B	RAS; restoring cooling flow to the RCPs to prevent seal damage.
C	SIAS; securing High Pressure Safety Injection flow to prevent lifting LTOPs.
D	CIAS; restoring cooling flow to the RCPs to prevent seal damage.
<b>Answer</b>	C
Explanation	
<p>C is correct; HPSI and Charging Pumps start on SIAS, and would pressurize RCS to LTOP lift setpoint if not secured.</p> <p>A is incorrect; CSAS does not send a start signal to the HPSI pumps.</p> <p>B and D are incorrect; CSAS isolates CCW to RCPs.</p>	

Comments

Q#	QID	New	Modified	Direct from Bank
89	S06014	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	SD-EFW TS 3.7.1.2 & 3.8.1.1	K/A	3.4-061 A2.03
Ref Supplied	TS 3.7.1.2 & 3.8.1.1	Imp. Rating	3.4
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-EFW00	08	

Proposed Question		
<p>Plant conditions are as follows:</p> <ul style="list-style-type: none"> <li>Plant power is 100%.</li> <li>1 hour ago, EDG A was declared OOS. Appropriate Tech Spec Actions have been addressed.</li> <li>A component failure has just resulted in a loss of DC power to the AB EFW Pump Steam Supply Valves (MS-401A and MS-401B).</li> </ul> <p>Under these conditions the maximum time allowed before the plant must be in Hot Standby is _____ hours from now.</p>		
A	7	
B	8	
C	30	
D	78	
<b>Answer</b>	B	

**Explanation**

B is correct; TS 3.8.1.1 (Action "d") states that the AB EFW Pump must be Operable within 2 hours or be in HSB within the next 6 hours ( $2 + 6 = 8$ ).

A is incorrect; TS 3.8.1.1 (Action "d") states that the AB EFW Pump must be Operable within 2 hours or be in HSB within the next 6 hours ( $2 + 6 = 8$ ). An operator that assumed this is from the time of the EDG failure would subtract 1 hour from the 8 hour calculation.

C is incorrect; TS 3.7.1.2 (Action "b") allows 24 hours for restoration or be in HSB within the next 6 hours ( $24 + 6 = 30$ ).

D is incorrect; TS 3.7.1.2 (Action "d") allows 72 hours for restoration or be in HSB within the next 6 hours ( $72 + 6 = 78$ ). Both EFW Turbine Steam Supply Valves (MS-401A AND MS-401B) are powered from bus AB-DC-S and will fail closed without power.

**Comments**

Q#	QID	New	Modified	Direct from Bank
90	S06015	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	2/1
Tech References	OP-901-310	K/A	3.6-062 A2.12
Ref Supplied	N/A	Imp. Rating	3.6
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-PPO30	01	

**Proposed Question**

The following plant conditions exist:

- The plant was shutdown 3 days ago for a refueling outage
- RCS temperature is 195°F
- SDC Train A is in service
- SDC Train B is in standby
- AB electrical buses are aligned to the A side
- AB CCW Pump is replacing B (B CCW Pump is OOS)
- Essential Chiller A shaft seizes, and its breaker fails to trip

Which action should be performed FIRST in order to maintain the plant in Mode 5?

A	Align the AB electrical buses to the B side.
B	Send an operator and electrician to the A3 electrical bus.
C	Ensure at least one CCW pump is running.
D	Place SDC Train B in service.

**Answer** A

**Explanation**

A is correct. OP-901-310, Loss of Train A Safety Bus, directs aligning the AB bus to the B side. This needs to be done first so that the AB CCW Pump can be restarted followed by placing SDC Train B in service.

B is incorrect. This is a good action to restore the A3 Bus; however, it will take longer than swapping the AB Buses, and decay heat will heat the plant into Mode 4.

C is incorrect. Must restore power to the A or AB Bus before any CCW pumps can be started.

D is incorrect. Cannot place SDC Train B in service without CCW to remove the heat.

<b>Comments</b>

Q#	QID	New	Modified	Direct from Bank
91	S06016		X	

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	5879-A	Level	SRO
NRC Exam History	2002	Tier/Group	2/2
Tech References	OP-901-405	K/A	3.8-034 A2.01
Ref Supplied	N/A	Imp. Rating	4.4
Cognitive Level	2	10 CFR 55.43(b)	7
Learning Objective	WLP-OPS-PPO40	04	

Proposed Question	
<p>During refueling operations, a spent fuel bundle is dropped to the Refueling Cavity floor, resulting in numerous area and effluent radiation alarms.</p> <p>What action contained in OP-901-405, Fuel Handling Incident, has the HIGHEST priority to minimize an uncontrolled release?</p>	
A	Start Airborne Radioactivity Removal System.
B	Ensure FHB exterior and Cargo Train Bay doors closed.
C	Close the Personnel and Escape Air Locks.
D	Close and secure the Equipment Hatch.
<b>Answer</b>	D
Explanation	
<p>D is correct. This is part of the Containment Closure Checklist referenced early in OP-901-405. Closing the Equipment Hatch needs to be performed within 30 minutes. This is the most important step in limiting the release of radioactivity to the environment.</p> <p>A is incorrect. This is referenced late in OP-901-405 and is less effective in limiting the release of radioactivity to the environment than bottling the Containment.</p> <p>B is incorrect. This is referenced early in OP-901-405, but it is ineffective for a dropped assembly in the Containment.</p> <p>C is incorrect. This is part of the Containment Closure Checklist referenced early in OP-901-405. Closing the Personnel and Escape Air Locks need to be complete within 1.5 hours.</p>	
Comments	

Q#	QID	New	Modified	Direct from Bank
92	S06017	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	2/2
Tech References	CE-002-002	K/A	3.8-056 Gen. 2.1.34
Ref Supplied	CE-002-002 pp 3-9	Imp. Rating	2.9
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-CHM02	18	

Proposed Question	
<p>Plant conditions are as follows:</p> <ul style="list-style-type: none"> <li>• A condenser tube leak occurred 2 hours ago.</li> <li>• Condensate Pump Discharge dissolved oxygen had peaked at 40 ppb.</li> <li>• A plant downpower is in progress.</li> <li>• After isolating the A2 Waterbox, dissolved oxygen dropped to 25 ppb and is currently lowering at 2 ppb per hour.</li> <li>• The plant is currently at 82% power.</li> </ul> <p>What is the correct course of action for this condition?</p>	
A	Continue the downpower to < 5% power.
B	Continue the downpower to < 30% power.
C	Return to 100% power.
D	Remain at 82% power.
<b>Answer</b>	D
Explanation	
<p>D is correct. Meets the guidelines of Action Level 2 in CE-002-002.</p> <p>A is incorrect. Action Level 3 requires downpower to &lt; 5%.</p> <p>B is incorrect. Action Level 2 does not require continuing the downpower if below Action 2 levels, unless 1 week above Action 1 Levels exceeded.</p> <p>C is incorrect. Action Level 2 does not allow restoring power until Action Level 1 values are met.</p>	
Comments	

Q#	QID	New	Modified	Direct from Bank
93	S06018	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	2/2
Tech References	SD-FP; OP-009-004	K/A	3.8-086 A2.04
Ref Supplied	N/A	Imp. Rating	3.3
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-FP00	01	

Proposed Question	
<p>Plant conditions are as follows:</p> <ul style="list-style-type: none"> <li>Plant is in Mode 4 in preparation for a refueling outage</li> <li>The crew is responding to an inadvertent CIAS, caused by an error in I&amp;C testing.</li> <li>The charcoal filter for the B Airborne Radioactivity Removal System (ARRS) catches fire.</li> <li>The BOP operates the pull station for E13B.</li> <li>The fire brigade leader reports that the B ARRS charcoal unit continues to burn with no water flow to the unit.</li> </ul> <p>In response to this condition, the CRS should direct the.....</p>	
A	fire brigade leader to locally actuate the deluge system for the B ARRS charcoal unit.
B	fire brigade leader to spray down the B ARRS charcoal unit with local fire hoses.
C	BOP to place the control switch for FP-601B, Reactor Bldg Fire Main Hdr B FPM-2 Cntmt Isolation, to Close and then to Open.
D	BOP to operate the pull station for FPM-2, Reactor Bldg Fire Main Hdr B.
<b>Answer</b>	C
Explanation	
<p>C is correct. FP-601B closed on the CIAS. The valve must be taken to Close and then to Open to override the signal.(SD pp23-24)</p> <p>A is incorrect. The AARS charcoal unit is not locally activated. Plausible because other units (SBVS and CVAS) do require local actuation.</p> <p>B is incorrect. The CIAS has isolated Fire Protection to the Containment.</p> <p>D is incorrect. FPM-2 receives an actuation when the pull station for E13B is actuated. The CIAS has isolated Fire Protection to the Containment.</p>	

<b>Comments</b>

Q#	QID	New	Modified	Direct from Bank
94	S06019	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	3
Tech References	OP-901-523; WLP-OPS-PP052	K/A	2.1.6
Ref Supplied	N/A	Imp. Rating	4.3
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-PPO52	02	

Proposed Question	
<p>The site is under attack from armed adversaries. The Control Room Staff has entered the Security Event Offnormal, and taken the following actions:</p> <ul style="list-style-type: none"> <li>• Tripped the Reactor</li> <li>• Manually initiated EFAS 1 and 2</li> <li>• Placed Pressurizer Spray Valves in BOTH</li> <li>• Placed Control Room Ventilation in ISOLATE</li> <li>• Entered OP-902-000, Standard Post Trip Actions</li> </ul> <p>Security has JUST informed the SM that:</p> <ul style="list-style-type: none"> <li>• The Control Room is the current target of attack</li> <li>• Adversaries have entered the Turbine Building</li> <li>• The Security Force is defending the Control Room Envelope entrance</li> </ul> <p>The SM should...</p>	
A	direct the crew to perform the Immediate Operator Actions of OP-901-502, Control Room Evacuation, and establish communications with Security after reaching the Remote Shutdown Panel.
B	coordinate with Security to evacuate the Control Room, and directly enter OP-901-502 E <sub>1</sub> , Control Room Evacuation with Fire.
C	notify Security of an immediate Control Room Evacuation, and directly enter OP-901-502 E <sub>2</sub> , Control Room Evacuation.
D	direct Security to defend the Control Room staff, direct the NAOs to take cover, and continue with Standard Post Trip Actions.
<b>Answer</b>	<b>B</b>

**Explanation**

B is correct. Step 9 of OP-901-523 directs these actions, and WLP-OPS-PPO52 provides elaborating information on safety precautions.

A is incorrect; OP-901-502 Immediate actions are not performed in a security event. OPS must coordinate with Security prior to CR evacuation.

C and D are incorrect; OP-901-523 directs entry into E<sub>1</sub>, Fire section of OP-901-502.

**Comments**

Q#	QID	New	Modified	Direct from Bank
95	S06020	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	3
Tech References	OP-902-002; OI-038-000	K/A	2.1.7
Ref Supplied	N/A	Imp. Rating	4.4
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-PPE02	19	

Proposed Question	
<p>The following conditions exist:</p> <ul style="list-style-type: none"> <li>• The plant has experienced a LOCA.</li> <li>• Containment pressure is 16.2 psia and trending down.</li> <li>• Containment temperature is 201°F and trending down.</li> <li>• All systems operated per design.</li> <li>• You have implemented the procedure step for Throttling HPSI Flow.</li> </ul> <p>Which ONE of the following requires raising HPSI flow to the RCS?</p>	
A	RCS Subcooling is 31°F and dropping very slowly.
B	PZR level is 21% and stable.
C	All S/Gs are capable of steaming; with SG 1 NR level 61%, SG 2 NR level 62%, and EFW is raising both in MANUAL.
D	QSPDS Reactor Vessel Level 5 and below indicate covered, but levels above that are still uncovered.
<b>Answer</b>	<b>B</b>
Explanation	
<p>B is correct. OI-038-000 requires Harsh Containment values to be used <math>\geq 200^\circ\text{F}</math>. Harsh Containment value for PZR level must be <math>\geq 23\%</math> to throttle HPSI flow.</p> <p>A, C and D are incorrect; HPSI Throttle criteria are satisfied with these step values with Harsh Containment Conditions. A - RCS subcooling required is <math>28^\circ\text{F}</math> / C – Both S/Gs have level 60-80% NR / D – RVLMS Rx Vessel level 5 is NOT voided.</p>	
Comments	

Q#	QID	New	Modified	Direct from Bank
96	S06021	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	3
Tech References	EN-OP-102	K/A	2.2.13
Ref Supplied	N/A	Imp. Rating	3.8
Cognitive Level	1	10 CFR 55.43(b)	2
Learning Objective	ELP-OPS-CLR	07	

Proposed Question	
If plant conditions require the removal of a danger tag, _____ may perform Alternate Release Authorization. One procedural condition required for this authorization is...	
A	only the SM; a knowledgeable Tagout Holder ensures the release will not be detrimental to the plant or personnel.
B	only the SM; the Tagout/Work Order Holder cannot be contacted or cannot break away from his/her current responsibility.
C	the SM or designee; a knowledgeable Tagout Holder ensures the release will not be detrimental to the plant or personnel.
D	the SM or designee; the Tagout/Work Order Holder cannot be contacted or cannot break away from his/her current responsibility.
<b>Answer</b>	C
Explanation	
C is correct. The SM may designate someone to perform this function (step 5.14), and part c of this step discusses the knowledgeable Tagout Holder.	
A is incorrect. The SM may designate someone to perform this function (step 5.14).	
B and D are incorrect. The conditions of step 5.14 state that the Tagout/Work Order Holder must not be on site.	

Comments

Q#	QID	New	Modified	Direct from Bank
97	S06022		X	

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	3989-A	Level	SRO
NRC Exam History	N/A	Tier/Group	3
Tech References	RF-005-001	K/A	2.2.28
Ref Supplied	N/A	Imp. Rating	3.5
Cognitive Level	2	10 CFR 55.43(b)	7
Learning Objective	WLP-OPS-REQ04	04	

Proposed Question	
<p>The following conditions exist:</p> <ul style="list-style-type: none"> <li>The plant is in Mode 6</li> <li>Refueling activities are in progress</li> <li>Initial startup count rate is 16 cps</li> <li>The current move sequence is to remove a CEA from a spent fuel assembly and insert it into a new fuel assembly.</li> </ul> <p>During the withdrawal of the CEA from the fuel assembly seated in the core, the Control Room Communicator reports that startup count rate is 34 cps and slowly rising.</p> <p>The Fuel Handling Supervisor should direct the Refueling Crew to _____ and then . . .</p>	
A	insert the CEA in the spent assembly; secure core alterations and determine need for evacuation.
B	insert the CEA in the spent assembly; analyze the condition prior to securing core alterations.
C	complete the CEA movement to the new assembly; secure core alterations and determine need for evacuation.
D	stop the CEA movement; analyze the condition prior to securing core alterations and determine need for evacuation.
<b>Answer</b>	A

**Explanation**

A is correct. Reinserting the CEA is conservative and allowed by Precaution 3.16. Precaution 3.17 states to secure core alterations and determine need for evacuation.

B is incorrect. Core alterations must be secured and need for evacuation must be determined. Rx Engineering is responsible for analyzing the situation.

C is incorrect. Do not complete the movement, Precaution 3.17 requires stopping core alterations.

D is incorrect; Reinserting the CEA is conservative and allowed by Precaution 3.16. . Rx Engineering is responsible for analyzing the situation.

**Comments**

Q#	QID	New	Modified	Direct from Bank
98	S06023	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	3
Tech References	OP-007-004; SD-LWM	K/A	2.3.3
Ref Supplied	N/A	Imp. Rating	2.9
Cognitive Level	1	10 CFR 55.43(b)	4
Learning Objective	WLP-OPS-LWM00	04	

Proposed Question	
The _____ must weigh the needs of the station against increased radiological dose rates in areas surrounding the Waste Storage Tank prior to authorizing the tank to be filled above _____.	
A	Duty Plant Manager; 75%
B	Duty Plant Manager; 50%
C	SM/CRS; 75%
D	SM/CRS; 50%
Answer	D
Explanation	
D is correct; consistent with Limitation 3.2.5 of OP-007-004. A and B are incorrect; 3.2.5 specifies SM/CRS. C is incorrect; 3.2.5 specifies 50%	

Comments

Q#	QID	New	Modified	Direct from Bank
99	S06024	X		

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	N/A	Level	SRO
NRC Exam History	N/A	Tier/Group	3
Tech References	OP-002-010	K/A	2.3.9
Ref Supplied	N/A	Imp. Rating	3.4
Cognitive Level	1	10 CFR 55.43(b)	4
Learning Objective	WLP-OPS-HVR00	06	

Proposed Question	
<p>Given the following:</p> <ul style="list-style-type: none"> <li>The plant entered MODE 5 eleven hours ago in preparation for Refueling.</li> <li>Containment Purge has been running for the past nine hours.</li> <li>Containment Airborne Radioactivity Removal system is NOT in operation.</li> <li>A momentary spike on the Containment Purge Valve Isolation radiation monitor has JUST isolated Containment Purge. No other rad monitors indicate an abnormal condition.</li> </ul> <p>The CRS should FIRST direct the...</p>	
A	ATC to align & start ARRS.
B	ATC to reinitiate Containment Purge.
C	BOP to notify RP of the loss of Containment Purge.
D	BOP to notify Work Control and request an I&C Technician.
<b>Answer</b>	C
Explanation	
<p>C is correct; OP-002-010 Step 6.5.14 requires immediate RP notification.</p> <p>A is incorrect; ARRS operation is at the discretion of the SM/CRS, but is not the first priority due to Step 6.5.14 requirement.</p> <p>B is incorrect; purge for &lt;10 hours is considered a batch release. A new permit would be required.</p> <p>D is incorrect; while this is a good practice, it is NOT the FIRST direction due to Step 6.5.14 requirement.</p>	
Comments	

Q#	QID	New	Modified	Direct from Bank
100	S06025		X	

Question Information		Examination Outline Cross-Reference	
Previous Bank QID	06734	Level	SRO
NRC Exam History	N/A	Tier/Group	3
Tech References	EP-001-001 Att. 7.1 p15	K/A	2.4.29
Ref Supplied	EP-001-001 Att. 7.1 p15	Imp. Rating	4.0
Cognitive Level	2	10 CFR 55.43(b)	5
Learning Objective	WLP-OPS-PPO52	04	

Proposed Question	
<p>The NRC notifies the Control Room that a commercial aircraft leaving Dallas International Airport has left its designated flight path and Waterford 3 is within current flight path of a Track of Interest. The current time is 1400, and the estimated arrival time of the airborne threat is 1440.</p> <p>Assuming this information is validated _____ should immediately be declared. In addition, a Site Area Emergency should be declared...</p>	
A	no classification; after 1410.
B	an Unusual Event; after 1410.
C	an Unusual Event; on impact within the Protected Area.
D	an Alert; on impact within the Protected Area.
<b>Answer</b>	C
Explanation	
<p>C is correct; UE per HU1, and SAE per HS1b.</p> <p>A and B are incorrect; SAE not required until impact in protected area.</p> <p>D is incorrect; Alert required after 1410 if threat still imminent, but this was not given in the stem.</p>	

Comments