Waterford 3 Examination Question

Examination Question Number 1

QUESTION ID: 5622 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Verifying proper RCS pressure control after a reactor trip
AUTHOR: bcoble **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 4/30/1999
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/20/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-902-000	09	00	2/12/2001
OI-038-000	01	01	8/23/2001
OP-902-009	1.1	00	12/13/2002

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-4-49	4.0	4.0	W-3-LP-OPS-PPE01	9

QUESTION

The following conditions exist:

- The plant tripped on low Steam Generator Pressure
- SG #1 Pressure is 600 psia and lowering
- SG # 2 Pressure is 770 psia and steady
- All four (4) RCPs are running
- RCS Pressure is 1600 psia and lowering
- RCS Temperature is 530 °F and lowering
- Containment Pressure is 14.8 psia and steady

The proper action for the PNPO to take at this point would be to:

A. Trip all four (4) Reactor Coolant Pumps

B. Trip 1A and 1B Reactor Coolant Pumps

C. Trip 1A and 2A Reactor Coolant Pumps

D. Trip 2A and 2B Reactor Coolant Pumps

ANSWER

C

COMMENTS

Provide a copy of OP-902-009 Attachment 2A, RCS Pressure and Temperature Limits for closed reference exams
A is incorrect because OP-902-009, Attachment 2A, RCS Pressure and Temperature Limits Graph is met and the given containment pressure does not indicate a CSAS has occurred.
B is incorrect because this would reduce flow and heat transfer to S/G 1 and would affect normal spray pressure control capability.
C is correct because the criteria for securing two RCPs (RCS Pressure < 1621 psia) per OP-902-000 is satisfied. 1A and 2A are the preferred pumps to secure for trip two/leave two per OI-38, Emergency Operating Procedure Operations Expectations/Guidance.
D is incorrect because this would reduce flow and heat transfer to S/G 2.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 10

Waterford 3 Examination Question

Examination Question Number 2

QUESTION ID: 5687 **N** **STATUS:** Revision **LAST USED**

DESCRIPTION: PZR tailpipe temperature of open PZR Safety Valve
AUTHOR: avest **REVISION** 2 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/4/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** SYSTEM
RCS THEORY
REFERENCE: **REVISION:** **CHANGE:** **DATE:**

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A8-AK2.01	2.7*	2.7	W-3-LP-OPS-TYH04	21

QUESTION

Given the following plant conditions and assumptions:

- A PZR Safety Valve lifts prematurely at 2250 psia and then reseats at 2200 psia
- Quench Tank pressure is 15 psig and steady
- Assume ambient heat losses are negligible and the steam quality in the pressurizer is 100%

Determine the expected temperature downstream of the PZR Safety Valve.

A. 212°F

B. 250°F

C. 636°F

D. 652°F

ANSWER

B

COMMENTS

Modified from 1997 Waterford III SRO examination
Supply examinees with copy of CE Steam tables with Mollier Diagram
For conditions given, isenthalpic expansion of fluid across the safety valve results in a saturated mixture at 15 psig (30 psia)
A is incorrect; saturation temperature for 30 psia is 250°F. Answer A is the result of using saturation temperature of 15 psia instead of 15 psig.
B is correct; saturation temperature for 30 psia is 250°F.
C is incorrect; saturation temperature for 30 psia is 250°F. Answer C is the result of using saturation temperature for safety reseat pressure
D is incorrect; saturation temperature for 30 psia is 250°F. Answer D is the result of using saturation temperature for the initial pressure in the pressurizer

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 7

Waterford 3 Examination Question

Examination Question Number 3
QUESTION ID: 1988 **N** **STATUS:** Revision **LAST USED**

DESCRIPTION: Diagnose problem with Natural circ flow following LOCA
AUTHOR: avest **REVISION** 2 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 7/5/1996
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/20/2003
TYPE: MULTIPLE CHOICE **TIME:** 4 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-902-002	09	00	4/12/2001

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
000009.EA2.37	4.2	4.5	W-3-LP-OPS-PPE02	11

QUESTION

Reactor Coolant Pumps were secured following a Small Break LOCA. Which of the following conditions would indicate a problem with single phase natural circulation flow after flow has been established?

A. Steam Generator pressures are rising

B. T-hot is 490ºF, Representative CET Temp is 498ºF

C. RCS sub cooling margin is 30°F and constant

D. RCS loop delta temperature is 50°F and lowering

ANSWER

A

COMMENTS

A is correct because S/G pressures rising is indicative of T-cold and/or T-hot rising which does not meet single phase natural circulation criteria per OP-902-002.
B is not correct because the delta T is < 10ºF which meets single phase natural circulation criteria per OP-902-002, but is a viable distractor because the delta T is part of the acceptance criteria of OP-902-002.
C is incorrect because the subcooled margin is > 28ºF which meets single phase natural circulation criteria per OP-902-002, but is a viable distractor because the subcooled margin is part of the acceptance criteria of OP-902-002.
D is incorrect because the delta T is < 58ºF which meets single phase natural circulation criteria per OP-902-002, but is a viable distractor because the delta T is part of the acceptance criteria of OP-902-002.

Cognitive Level: Comprehension/Analysis **Tier/Group: 1/ 1** **Question Source:** Bank
10CFR Part 55 Content: 41. 14

Examination Question Number 4

QUESTION ID: 16 **N** **STATUS:** Revision **LAST USED**

DESCRIPTION: LPSI flow requirements following LB-LOCA
AUTHOR: avest **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 7/5/1996
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/20/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-902-009	1.1	00	12/13/2002

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.1-E11-EA1.13	4.1*	4.2	W-3-LP-OPS-PPE02	23

QUESTION

Select the combination of Reactor Coolant System pressure and Low Pressure Safety Injection Train A flow that would be acceptable during the injection phase of a large LOCA.

A. 175 psia 500 gpm

B. 125 psia 2600 gpm

C. 100 psia 2800 gpm

D. 50 psia 3600 gpm

ANSWER

B

COMMENTS

Provide examinee with current copy of OP-902-009, Attachment 2C
A, C and D are incorrect because the flows are less than required for the given pressure.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 7

Examination Question Number 5

QUESTION ID: 4596 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: RCP trip requirements
AUTHOR: NRC **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 1/14/1998
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/20/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPO RCP **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-901-130	02	02	1/25/2001

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A15/17-AK2.10	2.8*	2.8	W-3-LP-OPS-RCP00	10,13

QUESTION

Which of the following requires tripping the reactor and securing the affected RCP, per OP-901-130, RCP Malfunction?

A. RCP motor amps indicate 350 amps.

B. Motor bearing temperature is 250 °F.

C. RCP seal bleedoff temperature is 195 °F.

D. RCS seal bleedoff flow is 3 gpm.

ANSWER

B

COMMENTS

A is incorrect because pumps amps is not called out in the procedure as a shutoff criteria and the given pumps amps is not high. The distractor is viable because high current flow is not desirable and may cause high motor winding temperatures.
B is correct per OP-902-130 Section E3, Step 4. The reactor and affected RCP shall be tripped if motor bearing temperature exceeds 225 ºF.
C is incorrect because OP-901-130 requires a downpower to be in progress before using controlled bleedoff temperature, as a trip criteria. Additionally, the value given in the distractor does not meet the trip criteria. The distractor is viable because the procedure does use controlled bleedoff temperature partially as a trip criteria.
D is incorrect because OP-901-130 does not use this parameter as a trip criteria. The distractor is viable because the value given in the distractor is abnormally high and would cause elevated controlled bleedoff temperatures, which is a trip criteria when combined with additional conditions.

Cognitive Level: Memory **Tier/Group:** 1/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 7

Examination Question Number 6

QUESTION ID: 41 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: CVCS response to Charging Pump trip
AUTHOR: RJC **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 8/29/1995
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/4/2003
TYPE: MULTIPLE CHOICE **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CVC **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-901-112	02	03	10/18/2001

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A22-AK3.04	3.2	3.4	W-3-LP-OPS-PPO10	3

QUESTION

The plant status is as follows:

- Reactor power is 100%.
- Charging Pump B is running.
- Charging Pump A and AB control switches are in AUTO.
- Standby Charging Pump Selector Switch is in the AB-A position.
- Charging Pump B trips and no operator actions are taken.

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

A. Charging Pump A will be the first pump to start on Pressurizer level deviation.

B. Charging Pump AB will auto-start due to a detected fault on Charging Pump B

C. Letdown will divert to the Holdup Tanks due to high temperature downstream of the Letdown Heat Exchanger.

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

ANSWER

D

COMMENTS

A is incorrect AB will be the first charging pump to start.

Bis incorrect charging pump AB will start on pressurizer level deviation.

C is incorrect Letdown diverts on high level.

D is correct CVC 101 will isolate at 470°F downstream of the Regenerative Heat Exchanger.

Cognitive Level: Memory **Tier/Group:** 1/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 5

Examination Question Number 7
QUESTION ID: 5672 **N** **STATUS:** Revision **LAST USED**

DESCRIPTION: Time to exceed 200 degrees after a loss of Shutdow n cooling
AUTHOR: avest **REVISION** 2 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/20/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPO SDC **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-901-131	02	00	1/8/2002		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
4.2-A25-AA1.12	3.6	3.5	W-3-LP-OPS-REQ21		3

QUESTION

The plant is in Mode 5 preparing to perform refueling. RCS level is at midloop. The reactor was shutdown 96 hours ago. RCS temperature is 128°F. The running LPSI pump trips. Determine the time to reach Mode 4 conditions. (Round times to the nearest whole minute)

A. 8 minutes

B. 10 minutes

C. 12 minutes

D. 14 minutes

ANSWER

C

COMMENTS

Supply examinee with Attachment 2 of OP-901-131
A is incorrect because it assumes a heatup rate equivalent to 2 days shutdown.
B is incorrect because it assumes a heatup rate equivalent to 3 days shutdown.
C is correct per 4 days shutdown using attachment 2 of OP-901-131.
D is incorrect because it assumes a heatup rate equivalent to 6 days shutdown.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 1 **Question Source:** Modified
10CFR Part 55 Content: 41. 7

Examination Question Number 8

QUESTION ID: 3300 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: actions to be performed if CCW header AB flow is lost for >3 min per OP-901-510
AUTHOR: whardin **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 8/23/1994
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/15/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CC PPO **CATEGORY:** Procedure

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-901-510	04	02	8/6/2002

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A26-AA2.06	2.8*	3.1*	W-3-LP-OPS-PPO50	4

QUESTION

If Component Cooling Water flow has been lost to the AB Header due to system leakage and can NOT be restored within 3 minutes, then, in accordance with OP-901-510, Component Cooling Water System Malfunction, the following will be performed with the exception of:

A. tripping the reactor.

B. securing all Reactor Coolant Pumps.

C. securing operating boric acid concentrators.

D. securing operating CEDM fans.

ANSWER

D

COMMENTS

A, B and C are all incorrect because they are part of the step in OP-901-510 for loss of CC flow to the AB loop for > three minutes.
D is correct because the CEDM fans will remain running without CC flow to continue to cool the CEDM Coils.

Cognitive Level: Memory **Tier/Group:** 1/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 10

Examination Question Number 9

QUESTION ID: 6039 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to monitor Pressurizer heater operation during a PPC Malfunction
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/22/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPC PPO **CATEGORY:** PROCEDURE SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-901-120	02	02	2/23/2000

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A27-AA1.01	4.0	3.9	WLP-OPS-PPO10	4

QUESTION

Given the following conditions:

- Pressurizer Pressure Channel Y is failed high at 2500 psia
- Pressurizer Pressure Channel X indicates 2080 psia and steady
- Pressurizer Pressure Channel Selector Switch is in Y
- Pressurizer Low Level Heater Cutout Switch is in BOTH
- Pressurizer Pressure Controller is in MANUAL and output is 100%
- Pressurizer Spray Valve Controller is in MANUAL and output is 0%

Verifying Backup heaters in operation and resetting the Proportional heaters can be accomplished after performing which of the following actions?

A. The Pressurizer Pressure Channel Selector Switch and Pressurizer Level Channel Selector Switch are both placed in X.

B. The Pressurizer Pressure Channel Selector Switch and Pressurizer Low Level Heater Cutout Switch are both placed in X.

C. The Pressurizer Pressure Controller output is manually lowered to < 67%.

D. The Pressurizer Pressure Controller is returned to the AUTO mode.

ANSWER

B

COMMENTS

A is incorrect because this action determines which instrument feeds into the pressurizer pressure controller, but does not isolate the affected bistables from the heater control circuitry.
B is correct because this action isolates the affected bistables from the heater control circuitry.
C and D are incorrect because the high pressure bistable for Channel Y has not been isolated from the heater control circuitry and the pressurizer pressure controller only affects proportional heater firing after the breakers have been reclosed.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 7

Examination Question Number 10
QUESTION ID: 6066 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Ability to determine/interpret Occurrence of reactor/Turbine trip during ATWS
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/4/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-902-000	09	00	2/12/2001

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.1-E29-EA2.09	4.4	4.5	WLP-OPS-PPE01	09

QUESTION

Given the following conditions;

- The Reactor was manually tripped using Reactor Trip pushbuttons due to exceeding DNBR low setpoint.
- All CEAs are inserted.
- RCS temp is 530°F and dropping rapidly.
- All Throttle and Governor valves indicate open.
- Depressing Manual Turbine Trip and THINK pushbuttons failed to close Throttle and Governor valves

Which of the following methods is outlined in the Reactor Trip entry procedure for this condition?

A. Lower Governor Valve limit to 0% using DEH.

B. Dispatch NAO to locally trip Main Turbine.

C. Depress Diverse Reactor Trip System pushbuttons.

D. Close MSIVs on both main steam lines.

ANSWER

D

COMMENTS

A is incorrect OP-902-000 immediate action is to close both MSIVs
B is incorrect OP-902-000 immediate action is to close both MSIVs
C is incorrect OP-902-000 immediate action is to close both MSIVs
D is correct OP-902-000 immediate action is to close both MSIVs

Cognitive Level: Memory **Tier/Group:** 1/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 8

Examination Question Number 11
QUESTION ID: 6043 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Use of Steam tables during a Steam Generator Tube Rupture
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/22/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:	
OP-902-007	10	00	4/12/2001	
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**
4.1-E38-EK1.01	3.1	3.4	WLP-OPS-PPE07	9

QUESTION

A Steam Generator Tube Rupture has occurred in S/G 1 with a concurrent loss of offsite power. S/G 1 has been isolated at a pressure of 600 psia. The CRS orders an RCS pressure reduction to 50 psi above S/G 1 pressure.

Assuming the ruptured S/G remains at 600 psia, what is the highest RCS temperature allowed, in order to maintain 28 ºF subcooled margin AND meet the CRS' instructions?

A. 466 ºF using T-hot Loop 1

B. 466 ºF using Representative CET Temperature

C. 458 ºF using T-hot Loop 1

D. 458 ºF using Representative CET Temperature

ANSWER

B

COMMENTS

Provide examinee with a copy of steam tables.
A is incorrect because CET temperatures should be used when on natural circulation.
B is correct because it is 28 ºF below the saturation temperature for 650 psia.
C is incorrect because it is 28ºF below the saturation temperature for existing S/G pressure and CET temperatures should be used when on natural circulation.
D is incorrect because it is 28ºF below the saturation temperature for existing S/G pressure.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 10

Waterford 3 Examination Question

Examination Question Number 12
QUESTION ID: 6044 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Steam Line Rupture Containment Temperature and Pressure Considerations
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/23/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
OI-038-000	01	01	8/23/2001

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A40-AK3.06	3.4	3.9	WLP-OPS-PPE01	4

QUESTION

OP-902-004, Excess Steam Demand Recovery, has a step to verify no more than two RCPs running if T-cold is < 500 ºF [515 ºF]. The bracketed value would only be used when:

A. Containment Pressure is $\geq$ 16.4 psia

B. Containment Pressure is > 17.7 psia

C. Containment Temperature is $\geq$ 120 ºF

D. Containment Temperature is $\geq$ 200 ºF

ANSWER

D

COMMENTS

A is incorrect because 200 ºF is called out in OI-038-000, however, this value is used to determine actions to be taken in OP-902-000, Standard Post Trip Actions.
B is incorrect because 200 ºF is called out in OI-038-000, however, this value is used to determine actions to be taken in OP-902-000, Standard Post Trip Actions.
C is incorrect because 200 ºF is called out in OI-038-000, however, this value is used to determine actions to be taken in OP-902-000, Standard Post Trip Actions.
D is correct per OI-038-000, Emergency Operating Procedure Expectations/Guidance

Cognitive Level: Memory **Tier/Group:** 1/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 5

Examination Question Number 13
QUESTION ID: 6045 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Recognition of entry conditions for Loss of Main Feedwater
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/23/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: FW PPE **CATEGORY:** PROCEDURE SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-902-009	1.1	00	12/13/2002

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-4-4	4.0	4.3	WLP-OPS-PPE01	12

QUESTION

Given the following conditions:

- Main Turbine was tripped due to high vibration
- The reactor was tripped and condenser vacuum was broken per OP-901-210, Turbine Trip
- Standard Post Trip Actions have been completed

Assuming no other malfunctions have occurred and the plant responded as designed, determine which Emergency Operating Procedure needs to be implemented.

A. OP-902-001, Reactor Trip Recovery

B. OP-902-003, Loss of Offsite Power/Loss of Forced Circulation Recovery

C. OP-902-006, Loss of Main Feedwater Recovery

D. OP-902-008, Functional Recovery

ANSWER

C

COMMENTS

A is incorrect because OP-902-001 will not support loss of main feedwater events. The steps of OP-901-210 require breaking vacuum which trips the main feedwater pumps.
B is incorrect because OP-901-210 does not perform steps that would cause a loss of power.
C is correct because main feedwater is lost as a result of breaking vacuum.
D is incorrect because an Optimal Procedure, OP-902-006, can be diagnosed.

Cognitive Level: Memory **Tier/Group:** 1/ 1 **Question Source:** New
10CFR Part 55 Content: 41.10

Waterford 3 Examination Question

Examination Question Number 14

QUESTION ID: 6049 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge for reasons for battery capacity during Station Blackout
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/27/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: DC PPE **CATEGORY:** PROCEDURE SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-901-313	02	00	10/23/2002

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.1-E55-EK3.01	2.7	3.4	WLP-OPS-PPE05	03

QUESTION

A Station Blackout occurred at 0630. Assuming all systems functioned as designed and all appropriate actions are taken, when would you expect the 125 VDC AB battery to reach its' design limit and which load will most affect the mitigation of a Station Blackout regarding maintaining secondary heat sink?

A. 0830, EFW AB speed control power.

B. 0830, EFW FCV DC control power.

C. 1030, EFW AB speed control power.

D. 1030, EFW FCV DC control power.

ANSWER

C

COMMENTS

A is incorrect due to design rating for battery being 4 hours based on load profiles.
B is incorrect due to design rating for battery being 4 hours based on load profiles and EFW FCVs failing open on loss of power.
C is correct to design rating for battery being 4 hours based on load profiles and EFW AB governor failing open and the pump tripping on overspeed.
D is and EFW FCVs failing open on loss of power.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 1 **Question Source:** New
10CFR Part 55 Content: 41.8

Examination Question Number 15

QUESTION ID: 5443 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: OP-901-311, Sequencer Lockout
AUTHOR: avest **REVISION** 5 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 1/7/1999
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/2/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: EDG **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-901-311	02	03	3/13/2002

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A56-AA2.38	3.7*	3.8	W-3-LP-OPS-PPO30	03

QUESTION

The plant is at 100% power when the ACCW pump B motor shorts phase to phase and the breaker does not trip. The B2 to B3 Tie Breaker opens on undervoltage. EDG B starts and the output breaker closes. The EDG B Sequencer Lockout light illuminates. All of the following are true **EXCEPT**:

A. The ACCW pump B breaker should be racked out per OP-901-311, Loss of 4160 Safety Bus B.

B. The Sequencer will stop the automatic loading process after the 17 Second Load Block is reached.

C. CCW to the Spent Fuel Pool can be restored with only one CCW pump running.

D. The Sequencer will automatically reset when the Sequencer Lockout condition clears.

ANSWER

D

COMMENTS

A is incorrect because OP-901-311 does require racking out components with protective flags.
B is incorrect because if the fault was large enough to cause an undervoltage condition while connected to the normal source, then the undervoltage condition would still exist with the EDG connected and the sequencer would lock out after 17 seconds.
C is incorrect because OP-901-311 allows this action.
D is correct the sequencer must be manually reset after a lockout condition. OP-901-311 requires that this step be performed after racking out the breaker.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 1 **Question Source:** Modified
10CFR Part 55 Content: 41. 7

Examination Question Number 16

QUESTION ID: 6048 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Coordination of personnel activities outside the control room during loss of TGB-DC
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/23/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: DC PPO ED **CATEGORY:** PROCEDURE SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-901-313	02	00	10/23/2002		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**	
2-1-8	3.8	3.6	WLP-OPS-PPO30	6	

QUESTION

Which of the following live bus transfers will be performed locally by an NAO as a result of a loss of the TGB-DC battery and busses, per OP-901-313, Loss of a 125 V DC Bus when the plant is at 100% power?

A. 1A bus from SUT A to UAT A

B. 1B bus from UAT B to SUT B

C. 2A bus from SUT A to UAT A

D. 2B bus from UAT B to SUT B

ANSWER

D

COMMENTS

A is incorrect because 1A bus is transferred from the Control Room and the bus is transferred from the UAT to the SUT.
B is incorrect because 1B bus is transferred from the Control Room.
C is incorrect because 2A bus is transferred from the UAT to the SUT.
D is correct per section E4 step 8 of OP-901-313.

Cognitive Level: Memory **Tier/Group:** 1/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 10

Waterford 3 Examination Question

Examination Question Number 17
QUESTION ID: 6069 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to operate /monitor loss of ACCW when backup for CCW
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/5/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: ACC **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-500-002	15	00	2/4/2003

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A62-AA1.03	3.6*	3.6	W-3-LP-OPS-CC00	02
			W-3-LP-OPS-CHW00	03

QUESTION

Essential Chiller A is running in Wet Tower mode. Which of the following would cause Essential Chiller A to trip?

A. SIAS, until restarted by Sequencer

B. ACCW Pump A motor trips on overcurrent

C. High CCW Heat Exchanger A outlet temperature

D. Output of controller for ACC-126A fails to 0%

ANSWER

B

COMMENTS

A is incorrect because SIAS provides an auto start signal to the chillers.
B is correct because in the Wet Tower Mode the ACCW system is supplying condenser water flow.
C is incorrect because CCW is not supplying the chillers and the chillers do not receive a trip signal directly from this condition, although damage could occur > 105 ºF.
D is incorrect because this would not cause condensing water flow to go below the trip setpoint. If ACC-126A were open and then went shut it would force more flow through the chiller condenser.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 7

Examination Question Number 18

QUESTION ID: 3380 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Loss of Instrument air and closing of the MFIV's
AUTHOR: avest **REVISION** 4 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 11/8/1994
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/2/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: FW PPO **CATEGORY:** Procedure System

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-901-511	04	03	7/3/2000

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A65-AK3.08	3.7	3.9	W-3-LP-OPS-FW00	3
			W-3-LP-OPS-PPO20	4

QUESTION

The Plant is operating at 54% power. Power escalation to 100% is in progress. An Instrument Air leak has developed and the location has not been identified. Instrument Air pressure continues to lower and a Reactor Trip is initiated by the Crew.

Alarms for Main Feedwater Isol Valves (FW 184A & B) Accumulator Press Lo and Air Reservoir Press Lo are in on CP-8 and plant conditions permit the closure of these valves.

Which of the following best describe why Both MFIVs should be shut?

A. Control of the Startup Feedwater Regulating valves will be unreliable.

B. The EFW valves have accumulators which will allow control of Feedwater flow to the Steam Generators.

C. The Main Feedwater Isolation valves fail As Is on loss of Instrument Air.

D. The Main Feedwater Regulating Valves fail As Is on loss of Instrument Air.

ANSWER

C

COMMENTS

A is incorrect The Main Feedwater Isolation valves fail As Is on loss of Instrument Air
B is incorrect The Main Feedwater Isolation valves fail As Is on loss of Instrument Air
C is correct The Main Feedwater Isolation valves fail As Is on loss of Instrument Air
D is incorrect The Main Feedwater Isolation valves fail As Is on loss of Instrument Air

Cognitive Level: Memory **Tier/Group:** 1/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 5

Waterford 3 Examination Question

Examination Question Number 19
QUESTION ID: 4288 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Basis for RWSP minimum temperature
AUTHOR: avest **REVISION** 4 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 6/27/1996
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/15/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: SI **CATEGORY:** PROCEDURE
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
TS 3.5.4

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A24-AK1.04	2.8	3.6	W-3-LP-OPS-SI00	6

QUESTION

Which of the following is the bases for the minimum temperature limit of Tech Spec 3.5.4 , Refueling Water Storage Pool?

A. Ensures that boron will not precipitate out of solution and ensures freezing will not occur in the RWSP.

B. Ensures HPSI Pump minimum NPSH remains satisfied at design flowrates with RWSP level approaching RAS setpoint.

C. Ensures that containment pressure remains within analyzed conditions under design base accident conditions.

D. Ensures the integrity of the RCS charging nozzles by preventing thermal shock conditions during a boration event.

ANSWER

A

COMMENTS

A is correct per the Tech Spec Bases for 3/4.5.4
B is incorrect because this part of the bases for the minimum boron concentration in 3.5.4.
C is incorrect because it is the bases for the maximum temperature in 3.5.4.
D is incorrect because the charging nozzles are designed for a finite number of cycles of thermal stress and this is not mentioned in the bases.

Cognitive Level: Memory **Tier/Group:** 1/ 2 **Question Source:** Bank
10CFR Part 55 Content: 41. 7

Examination Question Number 20
QUESTION ID: 6053 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Ability to operate or monitor Regen HX hi temp during PZR level control malfunction
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/29/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CVC PPO **CATEGORY:** SYSTEM
REFERENCE: **REVISION:** **CHANGE:** **DATE:**

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A28-AA1.04	2.7	2.8	wlp-ops-cvc00	03

QUESTION

Given the following:

- Letdown and charging are being restored following a pressurizer level malfunction.
- Regen HX Shell Outlet Temperature is 375 ºF
- Regen HX Tube Letdown Tube Outlet Temperature is 235 ºF.

Under these conditions, what is the initial letdown flow allowed on restoration and how quickly is flow allowed to be raised per OP-002-005, Chemical and Volume Control?

A. 16 gpm; 10 gpm/min

B. 36 gpm; 10 gpm/min

C. 16 gpm; 15 gpm/min

D. 36 gpm; 15gpm/min

ANSWER

B

COMMENTS

Provide pg. 17 of OP-002-005 to examinees
A is incorrect. OP-002-005 requires an initial flow limit of 36 gpm for shell temperature 351-400 °F. This answer would be selected if the wrong temperature were used to determine the limit.
B is correct. OP-002-005 requires an initial flow limit of 36 gpm for shell temperature 351-400 °F
C is incorrect. OP-002-005 requires an initial flow limit of 36 gpm for shell temperature 351-400 °F. This answer would be selected if the wrong temperature were used to determine the limit. Flow rate changes are limited to 10 gpm/min.
D is incorrect Flow rate changes are limited to 10 gpm/min.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 2 **Question Source:** New
10CFR Part 55 Content: 41.7

Waterford 3 Examination Question

Examination Question Number 21
QUESTION ID: 1387 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Boron Dilution Tech Spec ability to analyze maintenance activities on LCO status
AUTHOR: avest **REVISION** 5 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 3/13/1996
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/2/2003
TYPE: MULTIPLE CHOICE **TIME:** 2 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: ENI TS **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
TS 3.1.2			

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-2-24	2.6	3.8	W-3-LP-OPS-ENI00	11

QUESTION

The plant is in mode 3 (keff = .972) with all rods fully inserted in the core. The primary NPO is in the process of filling up the pressurizer to 50% using charging pumps "A" and "B" and VCT auto makeup. The "AB" charging pump is in standby. The secondary NPO has just completed OP-903-101, startup channel functional test, for startup channel 2 and determined that the associated dilution high alarm failed to actuate. WHAT actions, if any, must be taken due to the failure of the dilution alarm.

A. No actions are required since only the alarm part of the dilution monitor is out of service.

B. RCS boron should be determined within 1 hour, 1 charging pump needs to be made inoperable, and monitor RCS boron at 0.5 hour intervals.

C. RCS boron should be determined within 1 hour, 1 charging pump needs to be made inoperable, and monitor RCS boron at 2 hour intervals.

D. RCS boron should be determined within 1 hour, 2 charging pumps need to be made inoperable, monitor RCS boron at 12 hour intervals.

ANSWER

B

COMMENTS

T.S. 3.1.2.9 to be provided to examinee
A is incorrect TS 3.1.2.9 requires RCS boron should be determined within 1 hour, 1 charging pump need to be made inoperable, and monitor RCS boron at 0.5 hour intervals
B is correct RCS boron should be determined within 1 hour, 1 charging pump need to be made inoperable, and monitor RCS boron at 0.5 hour intervals
C is incorrect 1 operable charging pump would require 2 hour sampling frequency.
D is incorrect 0 operable charging pumps would require 12 hour sampling frequency.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 2 **Question Source:** Bank
10CFR Part 55 Content: 41. 10

Waterford 3 Examination Question

Examination Question Number 22
QUESTION ID: 4272 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: SGTL Conditions requiring Plant Shutdown.
AUTHOR: avest **REVISION** 7 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 6/27/1996
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/2/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPO **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-901-202	03	03	12/3/2002
TS 3.4.5			
TS 3.7.1			

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A37-AA2.10	3.2	4.1	W-3-LP-OPS-PPO20	5

QUESTION

WHICH of the following conditions exceeds the Technical Specification for RCS leakage AND is defined as IDENTIFIED LEAKAGE?

A. 0.5 gpm verified through both Reactor Vessel Head O-rings.

B. 0.6 gpm quantified primary to secondary leakage through S/G 2.

C. 7 gpm Controlled Bleedoff flowfrom Reactor Coolant Pump.

D. 9 gpm leakage through a Pressurizer Safety Valve seat.

ANSWER

B

COMMENTS

A is incorrect. This exceeds Technical Specification limits but is defined as pressure boundary leakage
B is correct. The limit is 720 gpd (0.5 gpm) through any one steam generator leakage. Primary ot secondary leakage is defined as identified leakage.
C is incorrect. Technical Specification defines controlled bleedoff as controlled leakage and does not give a limit for controlled leakage..states 1 gpm total and 720 gpd on any one steam generator leakage
D is incorrect. The value is below the 10 gpm limit for identified leakage. The safety valves discharge to the Quench Tank which is considered identified leakage.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 2 **Question Source:** Modified
10CFR Part 55 Content: 41. 10, 43. 2

Waterford 3 Examination Question

Examination Question Number 23

QUESTION ID: 6056 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of the reasons for loss of steam bypass capability during loss of condenser vacuum

AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/29/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: SBC **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-901-220	02	02	2/15/2000

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A51-AK3.01	2.8*	3.1*	W-3-LP-OPS-SBC00	02

QUESTION

The plant is experiencing a loss of condenser vacuum. Which of the following describe the value and reason when Steam Bypass Control System closes the Steam Bypass valves?

A. 14 INHG, overpressurization protection for main condenser.

B. 14 INHG, prevent overheating of last two stages of the LP turbine rotor.

C. 3.4 INHG, prevent overheating of last two stages of the LP turbine rotor.

D. 3.4 INHG, overpressurization protection for main condenser.

ANSWER

D

COMMENTS

A is incorrect, SBCS interlock setpoint is 3.4 INHG.
B is incorrect, SBCS interlock setpoint is 3.4 INHG to provide overpressurization protection for main condenser.
C is incorrect, 3.4 INHG provides overpressurization protection for main condenser.
D is correct, SBCS interlock setpoint is 3.4 INHG to provide overpressurization protection for main condenser.

Cognitive Level: Memory **Tier/Group:** 1/ 2 **Question Source:** New
10CFR Part 55 Content: 41. 5

Waterford 3 Examination Question

Examination Question Number 24

QUESTION ID: 4245 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Determine whether cause for CROAI alarm was actual or spike.
AUTHOR: evines **REVISION** 4 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 6/27/1996
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/2/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: HVC PPO **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-901-401	01	01	10/2/2002		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
4.2-A60-AA1.01	2.8	3.0	W-3-LP-OPS-PPO40		4

QUESTION

Control Room Outside Air Intake 200.1 alarmed, causing CR EFU A to start and CR Ventilation to go into the recirc mode. After entering the High Airborne Activity in the CR Off-Normal OP-901-401, the CR staff performed Att. 1: Airborne Activity Survey Results.

Which of the following would indicate that an actual radiation release was in progress if the YES block was checked on the survey sheet?

A. Alarm was due to electrical spike.

B. Similar monitors indicate same conditions.

C. Starting or stopping of equipment near Intake Ducts.

D. Work activity in progress in Intake Ducts.

ANSWER

B

COMMENTS

A is incorrect OP-901-401 att 1 lists similar monitors indicate similar conditions indicate radiation release.
B is correct OP-901-401 att 1 lists similar monitors indicate similar conditions indicate radiation release.
C is incorrect OP-901-401 att 1 lists similar monitors indicate similar conditions indicate radiation release.
D is incorrect OP-901-401 att 1 lists similar monitors indicate similar conditions indicate radiation release.

Cognitive Level: Memory **Tier/Group:** 1/ 2 **Question Source:** Bank
10CFR Part 55 Content: 41. 7

Waterford 3 Examination Question

Examination Question Number 25

QUESTION ID: 6057 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of reasons for EOP steps for loss of containment integrity
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/29/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CC **CATEGORY:** PROCEDURE
PPE
CCS

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-902-008	12	00	4/12/2001
TG-OP-902-008	12	00	4/16/2001
OP-902-009	1.1	00	12/13/2002

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A69-AK3.01	3.8*	4.2	WLP-OPS-PPE01	16

QUESTION

During a LOCA, Containment Fan Cooler A trips on overcurrent. The CRS directs overriding and closing the CCW Isolation valves CC-808A, CC822A for Containment Fan Cooler A. Why is this done?

A. To prevent steam formation in the CCW system.

B. To ensure that CCW flow is maintained to the opposite train.

C. To provide containment isolation for penetrations not in use.

D. To maximize CCW flow to running ESF loads.

ANSWER

C

COMMENTS

A is incorrect TG-OP-902-008 states that the reason for isolating CCW to a failed Containment fan cooler to isolate penetrations no longer is use.
B is incorrect TG-OP-902-008 states that the reason for isolating CCW to a failed Containment fan cooler to isolate penetrations no longer is use.
C is correct TG-OP-902-008 states that the reason for isolating CCW to a failed Containment fan cooler to isolate penetrations no longer is use.
D is incorrect TG-OP-902-008 states that the reason for isolating CCW to a failed Containment fan cooler to isolate penetrations no longer is use.

Cognitive Level: Memory **Tier/Group:** 1/ 2 **Question Source:** New
10CFR Part 55 Content: 41. 5

Waterford 3 Examination Question

Examination Question Number 26

QUESTION ID: 5713 **N** **STATUS:** Revision **LAST USED**

DESCRIPTION: Operational Characteristics of natural circ
AUTHOR: evines **REVISION** 2 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/5/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE SI RCS **CATEGORY:** PROCEDURE SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-902-002	09	00	4/12/2001		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
4.4-A13-AK2.2	3.4	3.6	W-3-LP-OPS-PPE05		1

QUESTION

All of the following represent operational characteristics important to single and/or two phase natural circulation **EXCEPT**:

A. initiating SG heat removal $\geq$ decay heat input to RCS

B. maintaining RCS pressure IAW 28 deg subcooled curve

C. maintaining Safety Injection flow IAW flow curves

D. initiating hot and cold leg injection 2-4 hours post LOCA

ANSWER

D

COMMENTS

A is incorrect, maintaining SG heat removal greater than heat input is important for natural circulation.
B is incorrect, maintaining RCS pressure IAW 28 deg subcooled curve important for natural circulation.
C is incorrect, maintaining Safety Injection flow IAW flow curves important for natural circulation.
D is correct, initiating hot and cold leg injection 2-4 hours post LOCA in not important for natural circulation

Cognitive Level: Memory **Tier/Group:** 1/ 2 **Question Source:** Bank
10CFR Part 55 Content: 41. 7

Examination Question Number 27

QUESTION ID: 6070 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to determine/interpret facility conditions and select appropriate procedures for RCS overcooling

AUTHOR: evines **REVISION** 2 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/5/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** PROCEDURE

REFERENCE:	**REVISION:**	**CHANGE:**	**DATE:**	
OP-902-000	09	00	2/12/2001	
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**
4.4-A11-AA2.1	2.9	3.3	WLP-OPS-PPE01	04

QUESTION

The crew is performing Standard Post Trip Actions during an Excess Steam Demand on SG 1 and are in the process of performing step 7 Verify Containment Isolation when the following is noted:

- RCS pressure is 1500 psia and rising.
- CET temperature is 450°F and slowly rising.

Determine the appropriate procedure to implement given these conditions.

A. OP-902-009, Standard Appendices, Appendix 13, RCS Temperature Stabilization.

B. OP-902-008, Safety Functional Recovery HR-1, RCS and Core Heat Removal via SG with SI not in operation.

C. OP-902-008, Safety Functional Recovery HR-2, RCS and Core Heat Removal via SG with SI in operation.

D. OP-902-004, Excess Steam Demand Recovery guidance for stabilizing RCS pressure and temperature.

ANSWER

A

COMMENTS

A is correct 902-000 must be completed prior to going to 902-004
B is incorrect no condition requiring transition to 902-008
C is incorrect no condition requiring transition to 902-008
D is incorrect post trip actions must be completed prior to transitioning to 902-004

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 2 **Question Source:** New
10CFR Part 55 Content: 41. 10

Waterford 3 Examination Question

Examination Question Number 28
QUESTION ID: 1368 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: RCP LIFT OIL PUMP INLK
AUTHOR: avest **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 10/5/1994
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/17/2003
TYPE: MULTIPLE CHOICE **TIME:** 3 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: RCP **CATEGORY:** SYSTEM
REFERENCE: **REVISION:** **CHANGE:** **DATE:**

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.4-003-A3.05	2.7*	2.6	W-3-LP-OPS-RCP00	06

QUESTION

Which of the following is an automatic interlock associated with a Reactor Coolant Pump (RCP) Oil Lift Pump?

A. The RCP will not start unless Oil Lift Pump has been running for two minutes.

B. The RCP Oil Lift Pump will de-energize when the RCP reaches 90% speed.

C. The RCP will not start unless oil lift pressure is greater than 400 psig.

D. The RCP Oil Lift Pump will stop when the RCP control switch is placed in STOP.

ANSWER

C

COMMENTS

A is incorrect, 2 minutes is a procedural requirement.
B is incorrect, oil lift control comes off RCP breaker. Lift oil pump stops immediately when RCP bkr closes if Lift Oil Pump C/S is in AUTO.
C is correct, oil lift pump interlock prevents RCP start until 400 psig oil pressure.
D is incorrect, oil lift pump stops when RCP bkr closes.

Cognitive Level: Memory **Tier/Group:** 2/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 3

Examination Question Number 29
QUESTION ID: 5864 **C** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of power supplies of charging pumps
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/27/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CVC **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-002-005	18	02	3/19/2002		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
3.2-004-K2.03	3.3	3.5	wlp-ops-cvc00		05

QUESTION

Given the following conditions:

- CEDM Fan C tripped and troubleshooting is in progress to determine the cause
- Electricians inadvertently actuate the Containment Penetration Secondary Protection feature associated with CEDM Fan C
- The AB buses are powered from the A side
- Charging Pump B is out of service with the breaker racked out and danger tagged

Determine the number of remaining available charging pumps.

A. 0

B. 1

C. 2

D. 3

ANSWER

A

COMMENTS

This question is a modified version of 5864-A
B, C, and D are incorrect because the secondary protection for CEDM Fan C breaker opens the 31A bus feeder breaker which powers Charging Pump A. If the AB buses were powered from the B side only one of the two remaining charging pump would be affected; however, the conditions given state that the 31AB bus is being powered from the A side. Since Charging Pump AB is powered from 31AB both of the remaining charging pumps lose power during this event. Therefore, A is correct.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 7

Examination Question Number 30
QUESTION ID: 6046 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to operate or monitor SDC pumps
AUTHOR: evines **REVISION** 2 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/23/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: RCS SDC **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-009-005	15	00	5/12/2003
TS 3.4.1			

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.4-005-A4.01	3.6*	3.4	WLP-OPS-SDC00	06

QUESTION

Given the following;

- The plant is in mode 5.
- Shutdown cooling is in service.
- The plant has been shutdown for 160 hours.
- RCS temperature is currently 150°F

Which of the following is the lowest value of flow(s) that meets or exceeds the requirements for heat removal and boron stratification prevention, per OP-009-005, Shutdown Cooling?

A. A train SDC flow is 2600 gpm, B train SDC is in standby.

B. A train SDC flow is 1500 gpm, B train SDC flow is 1400 gpm.

C. A train SDC is in standby, B train SDC flow is 3600 gpm.

D. A train SDC flow is 2000 gpm, B train SDC flow is 2100 gpm.

ANSWER

D

COMMENTS

OP-009-005 Precautions and limitations 3.1.3.2, 3.1.3.3
A is incorrect minimum required flow <175 hours is 4000 gpm
B is incorrect minimum required flow <175 hours is 4000 gpm
C is incorrect minimum required flow <175 hours is 4000 gpm
D is correct minimum required flow <175 hours is 4000 gpm

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 5

Waterford 3 Examination Question

Examination Question Number 31
QUESTION ID: 2399 **B** **STATUS:** Revision **LAST USED**
DESCRIPTION: Effect of degradation of ECCS on Fuel (ECCS Acceptance Criteria)
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/27/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: SI **CATEGORY:** PROCEDURE
TS SYSTEM
REFERENCE: **REVISION:** **CHANGE:** **DATE:**

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.2-006-K3.02	4.3	4.4	WLP-OPS-SI00	07
			WLP-OPS-TS01	03

QUESTION

All of the following will be met during design basis accidents, if Emergency Core Cooling Systems operate as designed, **EXCEPT**:

A. Peak Cladding Temperature will be < 2200°F.

B. Hydrogen generation from clad interaction will be $\leq$ 0.01 of maximum.

C. Long Term decay heat removal capability will be maintained.

D. Clad oxidation thickness will be $\leq$ 0.1 of initial clad thickness.

ANSWER

D

COMMENTS

A, B, and C are incorrect because all are part of ECCS acceptance criteria with correct values.
D is part of the ECCS acceptance criteria; however, 10% of the thickness is not the correct percent of oxidation. 17% is the correct number, which makes D the correct answer since the question is asking for the exception.

Cognitive Level: Memory **Tier/Group:** 2/ 1 **Question Source:** Modified
10CFR Part 55 Content: 41. 2

Waterford 3 Examination Question

Examination Question Number 32
QUESTION ID: 6013 **B** **STATUS:** Revision **LAST USED**
DESCRIPTION: Knowledge of physical connections and/ or cause effefect relationships between the Quench Tank and Containment
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/27/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: RCS **CATEGORY:** SYSTEM
REFERENCE: **REVISION:** **CHANGE:** **DATE:**

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.5-007-K1.01	2.9	3.1	W-3-LP-OPS-RCS00	06

QUESTION

A Steam Generator Tube Rupture has occurred that resulted in an automatic SIAS/CIAS. Which of the following could result in a Quench Tank Rupture Disc failure and rising containment pressure, due to automatic alignment to the Quench Tank?

A. RCP Control Bleedoff

B. RCP Vapor Seal Leak Off

C. Reactor Head Vent Header

D. Pressurizer Vent Header

ANSWER

A

COMMENTS

This question is a modified version of 6013A.
A is correct because RC-606, RCP Control Bleedoff Inside Containment Isolation Valve closes on a CIAS, redirecting RCP control bleedoff to the quench tank through a relief valve.
B is incorrect because RCP vapor seal leakoff is directed to the Reactor Drain Tank at all times.
C is incorrect because the Reactor head vent must be aligned to the quench tank manually.
D is incorrect because the Pressurizer vent must be aligned to the quench tank manually.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** Modified
10CFR Part 55 Content: 41. 2

Waterford 3 Examination Question

Examination Question Number 33
QUESTION ID: 4120 **N** **STATUS:** Revision **LAST USED**

DESCRIPTION: Response of CCW pump AB and system with SIAS and LOOP
AUTHOR: avest **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 7/5/1996
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/27/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CC **CATEGORY:** SYSTEM
REFERENCE: **REVISION:** **CHANGE:** **DATE:**

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.8-008-K2.02	3.0*	3.2*	W-3-LP-OPS-CC00	02
			W-3-LP-OPS-CC00	05

QUESTION

- CCW pumps B and AB are operating
- CCW pump AB is replacing A with AB assignment switch in the “A” position
- AB bus is powered from the B train
- SIAS occurs concurrently with a Loss of Offsite Power
- EDG A and B start and the sequencer is timed out
- All equipment responded per design

Which of the following describes the status of the CCW pumps?

A. CCW Pumps B & AB are running

B. CCW Pumps A & B are running

C. Only CCW pump B is running

D. All CCW pumps are running

ANSWER

C

COMMENTS

A is incorrect because CCW pump AB power is not aligned for an automatic start of CCW Pump AB.
B is incorrect because the AB Assignment switch position prevents an automatic start of CCW Pump A.
C is correct because CCW pump AB power is not aligned for an automatic start of CCW Pump AB and the AB Assignment switch position prevents an automatic start of CCW Pump A.
D is incorrect because CCW pump AB power is not aligned for an automatic start of CCW Pump AB and the AB Assignment switch position prevents an automatic start of CCW Pump A.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 7

Examination Question Number 34
QUESTION ID: 6071 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Determination of condition of fluid in PZR
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/6/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: RCS **CATEGORY:** SYSTEM
REFERENCE: **REVISION:** **CHANGE:** **DATE:**

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.3-010-K5.01	3.5	4.0	W-3-LP-OPS-TYH03	08

QUESTION

A large insurge of water occurred in the pressurizer due to a load rejection from 69% power. Which of the following conditions, if present after the insurge, would cause the greatest pressure drop if a reactor trip occurs?

A. Waterspace Temperature = 640 ºF; PZR Pressure = 2060 psia

B. Waterspace Temperature = 644 ºF; PZR Pressure = 2180 psia

C. Waterspace Temperature = 652 ºF; PZR Pressure = 2240 psia

D. Waterspace Temperature = 656 ºF; PZR Pressure = 2300 psia

ANSWER

B

COMMENTS

Provide a copy of steam tables to the examinee.
A is incorrect because the water space is at saturation temperature.
B is correct because the water space is subcooled.
C is incorrect because the water space is at saturation temperature.
D is incorrect because the water space is at saturation temperature.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 14

Examination Question Number 35
QUESTION ID: 1415 **B** **STATUS:** Revision **LAST USED**

DESCRIPTION: ability to operate and/or monitor in the control room PZR heaters
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/2/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PLC **CATEGORY:** SYSTEM
REFERENCE: **REVISION:** **CHANGE:** **DATE:**

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.3-010-A4.02	3.6	3.4	W-3-LP-OPS-PLC00	05

QUESTION

The pressurizer pressure controller is in the MANUAL mode. RCS pressure is 2225 psia and slowly lowering. To raise RCS pressure to 2250 psia you MUST,

A. Adjust pressure setpoint lower.

B. Adjust pressure setpoint higher.

C. Lower the controller output.

D. Raise the controller output.

ANSWER

C

COMMENTS

A is incorrect adjusting setpoint with controller in manual has no effect.
B is incorrect adjusting setpoint with controller in manual has no effect.
C is correct decreasing output energizes heaters.
D is incorrect increasing output deenergizes heaters and opens spray valves.

Cognitive Level: Memory **Tier/Group: 2/ 1** **Question Source:** Bank
10CFR Part 55 Content: 41. 7

Examination Question Number 36

QUESTION ID: 6000 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: PPS Trips
AUTHOR: avest **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/24/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: X **SIMULATOR SETUP**
PLANT SYSTEM: PPS **CATEGORY:** SYSTEM

REFERENCE:	**REVISION:**	**CHANGE:**	**DATE:**
TS 3.3.1			
OP-009-007	05	01	2/8/2001

NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**
3.7-012-A3.06	3.7	3.7	WLP-OPS-PPS00	9
			WLP-OPS-TS04	1

QUESTION

The plant is at 100%. CPC A LPD and DNBR bistables are in bypass for I&C Maintenance. I&C will be causing these bistables to trip and reset. While this is going on, CPC B fails and trips its LPD and DNBR bistables. What actions should the crew take as a result of this event? Assume I&C cannot restore CPC A within the next 2 hours.

A. Bypass CPC B LPD and DNBR bistables within 1 hour.

B. Remove CPC A bistable bypasses and bypass CPC B bistables within 1 hour.

C. Perform a warm restart of CPC B within 1 hour.

D. Force CPC B LPD and DNBR bistables to remain in trip within 1 hour.

ANSWER

D

COMMENTS

Based upon actual event in plant.
A is incorrect because this action will result in both channels out of bypass and could result in a reactor trip.
B is incorrect because this would also result in both channels being out of bypass with the possibility of a reactor trip occurring.
B is incorrect because it may not work depending on what the failure is and it is not the action required by TS 3.3.1.
D is correct. TS 3.3.1 requires that a second failed channel be placed in a tripped condition. This requires that take action to ensure that the channel will stay tripped and not rely on the failure to keep it in the trip condition.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 10

Examination Question Number 37

QUESTION ID: 6074 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to perform, without reference to procedures those actions which require immediate operation of system components and controls

AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003

APPROVAL: **APPROVAL DATE:**

REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/9/2003

TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1

QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**

SPECIAL REFERENCES: **SIMULATOR SETUP**

PLANT SYSTEM: PPS **CATEGORY:** PROCEDURE SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-902-000	09	00	2/12/2001

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-4-49	4.0	4.0	WLP-OPS-PPE01	10

QUESTION

Given the following:

- Containment Pressure is 17.5 psia on 8 of 8 digital indicators on CP-7
- The following red actuation lights are illuminated on the PPS ROMs on CP-7:
  - Channel A – MSIS, CSAS
  - Channel B – CIAS, SIAS, CSAS
  - Channel C – CIAS, CSAS
  - Channel D – CIAS, MSIS, CSAS

Which of the following must be actuated manually:

A. SIAS

B. MSIS

C. CIAS

D. CSAS

ANSWER

C

COMMENTS

A and B are incorrect because an automatic actuation occurred as indicated by at least two of the red actuation lights being extinguished. The setpoint for these actuations are 17.1 psia.
C is correct because only one actuation relay dropped out as indicated by three red actuation lights still illuminated. This does not meet the 2 of 4 logic required for the actuation. The setpoint for this actuation is 17.1 psia. If the automatic actuation does not occur as required, action shall be taken to manually initiate the actuation per OP-902-000, Standard Post Trip Actions.
D is incorrect because this actuation should not occur until 17.7 psia. Manual action may be taken with the CRS' permission at this point but it is not procedurally required.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 10

Waterford 3 Examination Question

Examination Question Number 38
QUESTION ID: 5700 **N** **STATUS:** Revision **LAST USED**

DESCRIPTION: Bypassing second channel of ESFAS
AUTHOR: avest **REVISION** 2 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/9/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPS **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-903-107	14	05	10/9/2002		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
3.2-013-K5.02	2.9	3.3	W-3-LP-OPS-PPS00		4

QUESTION

The plant is at 100% power. The Channel A PZR Press Lo trip bistable is in bypass due to Safety Channel A pressure transmitter failing low. Subsequently, Channel D PPS Functional Test is performed as scheduled. The SNPO depresses the trip channel bypass pushbutton for the Channel D PZR Press Lo trip bistable. What is the result of this action if the SNPO stops at this point?

A. Channel A and D are bypassed and trip logic is 1 out of 2.

B. Channel A and D are bypassed and trip logic is 2 out of 2.

C. Channel D does **NOT** bypass, Channel A is removed from bypass, a reactor trip and SIAS occur.

D. Channel D does **NOT** bypass, Channel A is removed from bypass, a reactor trip and SIAS do **NOT** occur.

ANSWER

D

COMMENTS

A is incorrect because placing two channel bypass pushbuttons in bypass for identical trip bistables results in neither bistable being bypassed. Logic would be two of four, requiring only one more trip signal to meet the trip logic.
B is incorrect because placing two channel bypass pushbuttons in bypass for identical trip bistables results in neither bistable being bypassed. Logic is two of four, requiring only one more trip signal to meet the trip logic.
C is incorrect because logic would be two of four, requiring an additional trip signal to meet the trip logic.
D is incorrect because placing two channel bypass pushbuttons in bypass for identical trip bistables results in neither bistable being bypassed. Logic would be two of four, requiring one more trip signal to meet the trip logic.

Cognitive Level: Memory **Tier/Group:** 2/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 7

Examination Question Number 39

QUESTION ID: 6079 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to predict impacts and use procedures to mitigate consequences of Rapid Depressurization

AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/10/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: SI **CATEGORY:** PROCEDURE

REFERENCE:	**REVISION:**	**CHANGE:**	**DATE:**		
OI-038-000	01	01	8/23/2001		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
3.2-013-A2.03	4.4	4.7	WLP-OPS-PPE01		04

QUESTION

A LOCA has occurred, RCS pressure is 1650 psia. OP-902-000 contingency actions are in progress. All of the following must be verified per OI-038-000 with the **EXCEPTION** of:

A. HPSI pump A and B running.

B. HPSI Train A and B Flow Control Valves open.

C. SIAS Trip Path lights are not illuminated on CP-7

D. SI 106A and B RWSP Outlet valves open.

ANSWER

D

COMMENTS

A is incorrect OI-038-000 states the expectation includes verifying all Safety Injection pumps running.
B is incorrect OI-038-000 states the expectation includes verifying all SI flow control valves open.
B is incorrect OI-038-000 states the expectation includes verifying SIAS Trip Path lights are not illuminated on CP-7
D is correct OI-038-000 does no require verifying SI 106 A,B open.

Cognitive Level: Memory **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 10

Examination Question Number 40

QUESTION ID: 2365 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Power Supplies to CFC's
AUTHOR: TPM **REVISION** 2 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 7/27/1995
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/4/2003
TYPE: Multiple Choice **TIME:** 1 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CCS **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-008-003	06	01	5/22/2003

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.5-022-K2.01	3.0*	3.1	W-3-LP-OPS-CCS00	04

QUESTION

Which of the following provide electrical power to the Containment Fan Coolers.

A. MCC 311A and MCC 311B

B. MCC 312A and MCC 312B

C. MCC 313A and MCC 313B

D. MCC 317A and MCC 317B

ANSWER

D

COMMENTS

Copied from WF3 9/6/96 NRC exam INPO exam Bank question # 3147
A is incorrect Power supplies for Containment Fan Coolers are MCC 317A,B
B is incorrect Power supplies for Containment Fan Coolers are MCC 317A,B
C is incorrect Power supplies for Containment Fan Coolers are MCC 317A,B
D is correct Power supplies for Containment Fan Coolers are MCC 317A,B

Cognitive Level: Memory **Tier/Group:** 2/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 8

Examination Question Number 41
QUESTION ID: 6068 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Ability to operate and/or monitor in the control room Containment Fan cooler dampers
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/4/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CCS **CATEGORY:** PROCEDURE
SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-008-003	06	01	5/22/2003		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
3.5-022-A4.03	3.2*	3.2*	W-3-LP-OPS-CCS00		05

QUESTION

Given the following:

- A LOCA is in progress.
- Containment pressure is 17.4 psia.
- An Operator is verifying ESFAS automatic actions per OP-902-009, Standard Appendices.

What is the expected position of the Containment Cooling System Safety Dampers and which ESFAS signal causes them to reposition?

A. Closed, SIAS

B. Closed, CSAS

C. Open, SIAS

D. Open, CSAS

ANSWER

C

COMMENTS

A is incorrect Containment Cooling Safety Dampers open on a SIAS
B is incorrect Containment Cooling Safety Dampers open on a SIAS
C is correct Containment Cooling Safety Dampers open on a SIAS
D is incorrect Containment Cooling Safety Dampers open on a SIAS

Cognitive Level: Memory **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 9

Examination Question Number 42

QUESTION ID: 6080 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to predict and/or monitor changes in containment pressure associated with Ctmt Spray controls

AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/10/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CS **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-009-001	11	00	4/7/2003		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**	
3.5-026-A1.01	3.9	4.2	WLP-OPS-CS00	03	
			WLP-OPS-CS00	04	

QUESTION

Given the following:

- A small break LOCA has occurred, SIAS has actuated.
- Containment pressure is 17.2 psig and slowly rising.
- All equipment operates as designed.
- The PNPO inadvertently takes each Containment Spray Pump hand switch to TRIP even though the pumps are NOT running.

How will the Containment Spray System respond if Containment Pressure rises to 18 psia?

A. CS 125A and B automatically OPEN, but the pumps must be manually started.

B. CS 125A and B automatically OPEN and the pumps will automatically start.

C. CS 125A and B remain CLOSED, and the pumps remain OFF. CS 125A and B must be manually opened and the CS pumps automatically start.

D. CS 125A and B remain CLOSED, and the pumps remain OFF. CS 125A and B must be manually opened and the CS pumps must be manually started.

ANSWER

A

COMMENTS

Modified from INPO bank question #1900 Palisades 6/14/99
A is correct CS 125A,B will automatically open but the CS pumps must be manually started.
B is incorrect CS 125A,B will automatically open but the CS pumps must be manually started.
C is incorrect CS 125A,B will automatically open but the CS pumps must be manually started.
D is incorrect CS 125A,B will automatically open but the CS pumps must be manually started.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 5

Waterford 3 Examination Question

Examination Question Number 43

QUESTION ID: 5740 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of cause and effects between Main and reheat steam system and RCS temperature

AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/11/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: MS **CATEGORY:** SYSTEM THEORY
REFERENCE: **REVISION:** **CHANGE:** **DATE:**

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.4-039-K1.04	3.1	3.1	WLP-OPS-MS00	02

QUESTION

The plant is operating at 90% when the PNPO notices T_{COLD} dropping and Power rising. Which of the following would give these indications?

A. Governor Valve 1 DEH valve position limit fails to 150%.

B. Main Steam crossover header pressure transmitter MS-IPT-1010 fails high.

C. EH-118, EH Emergency Trip Header Interface, fails open.

D. Atmospheric Dump Valve #1 setpoint failed to 800 psig.

ANSWER

D

COMMENTS

Question modified from 5740N.
A is in correct, # 1 governor valve is at 100% at 90 % power would have no effect.
B is incorrect, would not give permissive but no demand For Steam Bypass valve.
C is incorrect, interface valve open would cause turbine to trip lowering power.
D is correct, at 90% power steam pressure will be between 840-900 psig, dump valve setpoint at 800 psig would cause dump valve to open, lowering temperature.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** Modified
10CFR Part 55 Content: 41. 2

Waterford 3 Examination Question

Examination Question Number 44

QUESTION ID: 6082 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to predict impact of main steam rad monitor indication and use procedure to mitigate SGTR

AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003

APPROVAL: **APPROVAL DATE:**

REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/11/2003

TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1

QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**

SPECIAL REFERENCES: **SIMULATOR SETUP**

PLANT SYSTEM: MS RMS **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-902-007	10	00	4/12/2001

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.4-039-A2.03	3.4	3.7	WLP-OPS-PPE07	08

QUESTION

A Steam Generator Tube Rupture SGTR has occurred. OP-902-007 is in progress. The following conditions exist:

- SG1 level 81% WR, SG1 Pressure 1000 psia.
- SG2 level 80% WR, SG2 Pressure 1000 psia.
- PRM-ERE-5500A Main Steam Line 1 reads $2.3x10^{2}$ mR/hr.
- PRM-ERE-5500B Main Steam Line 2 reads $8.9x10^{-1}$ mR/hr.

Which of the following actions would be appropriate per OP-902-007?

A. Cool down RCS to 520 °F $T_{H,}$ Isolate SG1

B. Cool down RCS to 520 °F $T_{H,}$ Isolate SG2

C. Cool down RCS to 500 °F $T_{H,}$ Isolate SG1

D. Cool down RCS to 500 °F $T_{H,}$ Isolate SG2

ANSWER

A

COMMENTS

A is correct OP-902-007 requires RCS cooldown to 520 °F T_H then isolate SG1 based on main steam line rad monitor reading indicating SG1 being most affected.
B is incorrect OP-902-007 requires RCS cooldown to 520 °F T_H then isolate SG1 based on main steam line rad monitor reading indicating SG1 being most affected.
C is incorrect OP-902-007 requires RCS cooldown to 520 °F $T_{H.}$
D is incorrect OP-902-007 requires RCS cooldown to 520 °F $T_{H.}$

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 10

Examination Question Number 45

QUESTION ID: 1870 **B** **STATUS:** Revision **LAST USED**

DESCRIPTION: Predict results of loss of condensate pumps and use procedures to mitigate
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/9/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CD FW **CATEGORY:** PROCEDURE SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-901-101	04	02	3/25/2003		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**	
3.4-056-A2.04	2.6	2.8*	WLP-OPS-FWP00	02	
			WLP-OPS-PPE01	09	

QUESTION

Plant conditions are as follow:

- Reactor power is 18% following a Reactor Power Cutback due to a loss of the Main Turbine
- Both Steam Generator Feed Pumps are running
- All 3 Condensate Pumps are running

What would be the expected configuration of the Feedwater Pumps if SUT A feeder breaker to bus A1 were to trip and what procedure would be applicable as a result of this malfunction?

A. Both FWPTs would be operating; OP-901-101, Reactor Power Cutback.

B. Neither FWPT would be operating; OP-902-000, Standard Post Trip Actions.

C. FWPT A would be operating; OP-901-101, Reactor Power Cutback.

D. FWPT B would be operating; OP-902-000, Standard Post Trip Actions.

ANSWER

D

COMMENTS

This question has been modified from question 1870A.
A is incorrect because Only FWPT B would be running as a result of the condensate pump trip interlock and the Reactor would trip due to loss of 2 RCPs.
B is incorrect because FWPT B would still be running.
C is incorrect because FWPT A would trip as a result of the condensate pump trip interlock and the Reactor would trip due to loss of 2 RCPs.
D is correct because FWPT A would trip as a result of the condensate pump trip interlock and 2 RCPs trip causing a reactor trip.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** Modified
10CFR Part 55 Content: 41. 7

Waterford 3 Examination Question

Examination Question Number 46

QUESTION ID: 6084 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of the effect that a loss or malfunction of the Main Feedwater System will have on the AFW System

AUTHOR: avest **REVISION** 2 **REVISION DATE** 6/26/2003

APPROVAL: **APPROVAL DATE:**

REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/11/2003

TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1

QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**

SPECIAL REFERENCES: **SIMULATOR SETUP**

PLANT SYSTEM: AFW FW **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-003-035	00	02	10/1/2001

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.4-059-K3.02	3.6	3.7	WLP-OPS-AFW00	04

QUESTION

Given the following:

- The plant is at 1% power and holding
- The Auxiliary Feedwater Pump is running and supplying both S/Gs
- Both Startup Feed Regulating Valves are 50% open
- Feedwater pressure downstream of the HP heaters is 1330 psig
- AFW Flow to each S/G is 150E+03 lbm/hr
- AFW temperature is 70 ºF
- Condensate Storage Tank Level is 90%
- Auxiliary Feedwater Controller on CP-1 is in Manual

Startup Feed Regulating Valve 1 fails closed. What would be the response of the AFW system?

A. The AFW flow control and pressure control valves reposition to prevent an AFW pump trip.

B. The AFW pump would trip on low suction pressure after a 2 second time delay.

C. The AFW pump would trip on recirc/discharge flow low after a 5 second time delay.

D. The AFW pump would trip on high discharge pressure after a 0.75 second time delay.

ANSWER

D

COMMENTS

Provide a copy of OP-003-035 Section 9.0 to examinee.
A is incorrect because initial conditions state that the AFW controller is in manual.
B is incorrect because suction pressure would rise as flow is lowered by the failed valve.
C is incorrect because the flow to each S/G is greater than the trip setpoint for recirc/discharge flow low trip. Isolating flow to one S/G would cause pump discharge pressure to rise pushing more flow through the open SUFRV; therefore the flow would not drop to the trip setpoint.
D is correct because the pressure given in the stem is only 20 psi lower than the trip setpoint to begin with. The pressure at the pump discharge pressure switch is actually higher than the value given in the stem of the question because of head loss between detector locations. Cutting the flow by ~ 50% would raise the discharge pressure of the pump and a trip would occur.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 4

Waterford 3 Examination Question

Examination Question Number 47
QUESTION ID: 1222 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Preventing water hammer in EFW
AUTHOR: avest **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 2/14/1995
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/12/2003
TYPE: MULTIPLE CHOICE **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: EFW **CATEGORY:** SYSTEM
REFERENCE: **REVISION:** **CHANGE:** **DATE:**

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.4-061-K1.02	3.4	3.7	W-3-LP-FPFB-FBS04	4
			W-3-LP-OPS-EFW00	05

QUESTION

Emergency Feedwater System water hammer protection is provided by maintaining the discharge lines full of water directly from which of the following systems:

A. Main Feedwater

B. Blowdown System

C. Condensate Makeup

D. Component Cooling Water Makeup

ANSWER

A

COMMENTS

A is correct. A orificed line upstream of each of the Main Feedwater Isolation Valves keeps the EFW discharge lines pressurized and full of water.
B, C, and D are incorrect but each of the systems has a physical connection or interrelation with the EFW system.

Cognitive Level: Memory **Tier/Group:** 2/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 4

Waterford 3 Examination Question

Examination Question Number 48

QUESTION ID: 6078 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to and/or monitor changes in parameters associated with the AC electrical distribution system controls: Significance of EDG load limits

AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003

APPROVAL: **APPROVAL DATE:**

REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/10/2003

TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1

QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**

SPECIAL REFERENCES: X **SIMULATOR SETUP**

PLANT SYSTEM: ED EDG **CATEGORY:** PROCEDURE SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-009-002	18	01	12/3/2001

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.6-062-A1.01	3.4	3.8	W-3-LP-OPS-EDG00	08

QUESTION

Emergency Diesel Generator A is being loaded to 4.4 MW for governor troubleshooting. Load is currently 2.2 MW and has been there for 4 minutes. What is the minimum amount of time it should take before the next plateau is reached if the loading sequence load rate recommendations of OP-009-002, Emergency Diesel Generator are followed and what is the reason for these limitations?

A. 3 minutes to limit thermal stresses on the generator end.

B. 3 minutes to limit thermal stresses on the diesel engine.

C. 8 minutes to limit thermal stresses on the generator end.

D. 8 minutes to limit thermal stresses on the diesel engine.

ANSWER

D

COMMENTS

Provide Page 20 of OP-009-002 to the examinee.
A is incorrect because the hold time for this plateau is 10 minutes and the limitation is based on engine thermal stress.
B is incorrect because the hold time for this plateau is 10 minutes.
C is incorrect because the limitation is based on engine thermal stress.
D is correct because the hold time for this plateau is 10 minutes minus the 4 minutes that power has been at the plateau plus 2 minutes for a 1 MW change at 0.5 MW/minute.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 5

Examination Question Number 49

QUESTION ID: 6085 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to predict changes in parameters associated with DC for battery capacity: individual cell voltage

AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003

APPROVAL: **APPROVAL DATE:**

REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/11/2003

TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1

QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**

SPECIAL REFERENCES: **SIMULATOR SETUP**

PLANT SYSTEM: DC **CATEGORY:** PROCEDURE

REFERENCE:	**REVISION:**	**CHANGE:**	**DATE:**
TS 3.8.2			

NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**
3.6-063-A1.02	2.2	2.7*	W-3-LP-OPS-DC00	07

QUESTION

During 100% power operations, a routine inspection of battery 3A-S revealed that one the battery cells voltage was out of its' category A limits. Further troubleshooting indicates that another cell's voltage is 2.05 volts. Electrical maintenance has informed you that it will take 36 hours to correct the cell voltages. You should:

A. Verify All Category B values for Battery 3A-S are within allowable limits within 24 hours.

B. Demonstrate either the 3A1-S or 3A2-s Battery charger operable within one hour and every 8 hours thereafter.

C. Declare the battery inoperable and go to Mode 3 within 2 hours, Mode 5 in the following 30 hours.

D. Declare the battery inoperable and go to Mode 3 within 8 hours, Mode 5 in the following 30 hours.

ANSWER

D

COMMENTS

Provide T.S. 3.8.2.1. to examinee
A is incorrect with category B values outside their allowable limits per T.S 3.8.2.1 table 4.8-2 action (3) declare battery inoperable. T.S 3.8.2.1 ACTION a -restore to operable within 2 hours or be in Mode 3 in 6 hours and mode 5 in following 30 hours.
B is incorrect with category B values outside their allowable limits per T.S 3.8.2.1 table 4.8-2 action (3) declare battery inoperable. T.S 3.8.2.1 ACTION a -restore to operable within 2 hours or be in Mode 3 in 6 hours and mode 5 in following 30 hours.
C is incorrect with category B values outside their allowable limits per T.S 3.8.2.1 table 4.8-2 action (3) declare battery inoperable. T.S 3.8.2.1 ACTION a -restore to operable within 2 hours or be in Mode 3 in 6 hours and mode 5 in following 30 hours.
D is incorrect with category B values outside their allowable limits per T.S 3.8.2.1 table 4.8-2 action (3) declare battery inoperable. T.S 3.8.2.1 ACTION a -restore to operable within 2 hours or be in Mode 3 in 6 hours and mode 5 in following 30 hours.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 43. 2, 41. 8

Waterford 3 Examination Question

Examination Question Number 50

QUESTION ID: 2405 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Predict impacts on EDG system and use procedures: Operating unloaded, lightly loaded, and highly loaded

AUTHOR: avest **REVISION** 4 **REVISION DATE** 6/26/2003

APPROVAL: **APPROVAL DATE:** 1/18/1995

REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/10/2003

TYPE: Multiple Choice **TIME:** 2 **POINTS:** 1

QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE** X

SPECIAL REFERENCES: **SIMULATOR SETUP**

PLANT SYSTEM: EDG **CATEGORY:** PROCEDURE SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-009-002	18	01	12/3/2001

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.6-064-A2.06	2.9	3.3	W-3-LP-OPS-EDG00	09

QUESTION

A post maintenance break-in run for EDG B has been drafted by the System Engineer following major engine maintenance. You are assigned to review the proposed break-in run and resolve conflicts with the the normal operating procedure.

EDG B Break-in run:

1. Manually start EDG B and run for 5 minutes unloaded.
2. Synch, and load EDG B to 1.1 MW/1MVAR over 2 minutes and maintain this load for 2 hours.
3. Load EDG B to 2.2 MW/1 MVAR over 2 min and maintain this load for 4 hours.
4. Load EDG B to 3.3 MW/1MVAR over 2 min and maintain this load for 5 minutes.
5. Unload EDG B to 0.5 MW/1 MVAR and maintain this load for 15 minutes.
6. Unload EDG B to 0.1 MW/0.1 MVARs and open EDG B output breaker.
7. Place EDG B C/S to STOP and verify EDG B stops after 5 minutes.

Based on the above break-in run instructions and guidelines contained in OP-009-002, what change, if any, would you request prior to implementing.

A. No changes are necessary to the break-in run, all requirements of OP-009-002 are met.

B. Delete step 5 for unloading to 0.5 MW/1 MVAR and go directly to step 6 for unloading to 0.1 MW/1 MVAR.

C. Replace step 4 with a step to load EDG B in 0.5 MW increments every 20 minutes to between 4.0 and 4.4 MW/1 MVAR and hold for 4 hours.

D. Request a change to step 7 to delete the requirement to verify that EDG B runs for an additional 5 minutes after taking the C/S to stop.

ANSWER

C

COMMENTS

Provide OP-009-002 sections 6.3 - 6.5 to examinee.
A is incorrect because it is required to load the EDG to 4.0 MW for 4 hours if run < 2.2 MW for > 6 hours.
B is wrong because guidance in OP-009-002 section 6.4 states that step 5 should be performed (allows diesel cooldown) and no mitigating circumstances were given in the question to show a need not to perform the step.
C is correct because it is required to be performed anytime load is , 2.2 MW for 6 hours and the loading guidance is more conservative than the other guidance in the procedure.
D is incorrect because the cooldown cycle for EDG is required to be timed. Times less than 5 minutes indicate a malfunction of Emergency Mode Fuel Control solenoids.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** Modified
10CFR Part 55 Content: 41. 10

Examination Question Number 51
QUESTION ID: 6047 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Knowlege of LCO and safety limits for process radiation monitoring CR HVAC
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/23/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: ARM HVC **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
TS 3.3.3			

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-2-22	3.4	4.1	WLP-OPS-RMS	08

QUESTION

Control room intake monitors ARM-IRE-0200.1(Control room North isol. rad mon), and ARM-IRE-0200.5 (Control room North isol. rad mon) have been declared inoperable.

Which of the following actions are required for this condition?

A. Initiate control room emergency ventilation in recirc mode within 1 hour.

B. Manually close Emergency outside air intake dampers .

C. Initiate preplanned alternate method of sampling intake air within 8 hours.

D. Restore to operable status within 72 hours.

ANSWER

A

COMMENTS

T.S table 3.3-6 action 26
A is correct action 26 states that with less that 1 monitor/intake operable, place emergency vent in recirc mode within 1 hour.
B is incorrect action 26 states that with less that 1 monitor/intake operable, place emergency vent in recirc mode within 1 hour.
C is incorrect action 26 states that with less that 1 monitor/intake operable, place emergency vent in recirc mode within 1 hour.1/train in each intake
D is incorrect action 26 states that with less that 1 monitor/intake operable, place emergency vent in recirc mode within 1 hour.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 11

Waterford 3 Examination Question

Examination Question Number 52
QUESTION ID: 6083 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Knowledge of the effect that a malfunction of PRM will have on rRadioactive releases
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/11/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PRM **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-004-001	08	02	1/6/2003

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.7-073-K3.01	3.6	4.2	WLP-OPS-RMS	02

QUESTION

Which of the following Process Radiation Monitors will isolate an effluent release if a malfunction causing a spike above the high setpoint occurs?

A. SG Blowdown PRM-IRE-0100B

B. Component Cooling Water AB PRM-IRE-5700

C. FHB exhaust PIG PRM-IRE-5107A

D. Industrial Waste Sump PRM-IRE-6778

ANSWER

D

COMMENTS

A is incorrect, SGBD isolate on Circ water Rad Monitor High alarm.
B is incorrect, CCW AB does not have an auto function.
C is incorrect, FHB exhaust PIG does not have an auto function.
D is correct, Industrial Waste Sump auto diverts to LWM on high rad.

Cognitive Level: Memory **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 13

Examination Question Number 53
QUESTION ID: 5717 **N** **STATUS:** Revision **LAST USED**

DESCRIPTION: Auto Start of ACC pump due to loss of jockey pump
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/27/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: ACC **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-002-003	13	05	4/7/2003		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**	
3.4-076-K4.02	2.9	3.2	W-3-LP-OPS-CC00	3	
			W-3-LP-OPS-CC00	4	

QUESTION

Which of the following events/conditions will result in an automatic start of an ACCW pump?

A. Loss of power to MCC 313A

B. WCT Basin temperature exceeds 95°F

C. Sequencer test switch taken to the TEST position

D. Manual start of an Emergency Diesel Generator

ANSWER

A

COMMENTS

A is correct, Loss of power to MCC313A deenergizes jockey pump ACCW pumps auto starts when loop pressure less than 5 psig.
B is incorrect ACCW pump auto starts on CCW HX outlet temperature 100°F.
C is incorrect, Sequencer test switch taken to test will not cause ACCW pump to auto start.
D is incorrect Manual start of EDG does not cause auto start of ACCW pump.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 7

Examination Question Number 54
QUESTION ID: 5816 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Actions required for lowering IA pressure
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/18/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: IA **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-901-511	04	03	7/3/2000		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
3.8-078-A4.01	3.1	3.1	W-3-LP-OPS-PPO50		3

QUESTION

An Instrument Air leak has occurred in the Turbine Building. The CRS notes that instrument air receiver pressure IA-IPI-9700 indicates 60 psig on CP-1 and the PMC. What course of action should the CRS order?

A. Align Essential Air nitrogen banks 1, 2, 3, and 4 to their associated Instrument Air valves.

B. Commence a plant shutdown in accordance with OP-010-005, Plant Shutdown.

C. Commence a plant shutdown in accordance with OP-901-212, Rapid Plant Power Reduction.

D. Perform a manual reactor trip and go to OP-902-000, Standard Post Trip Actions.

ANSWER

D

COMMENTS

A is incorrect, OP-901-511 directs manual trip and refer to OP-902-000 if instrument Air pressure reaches 65 psig.
B is incorrect, OP-901-511 directs manual trip and refer to OP-902-000 if instrument Air pressure reaches 65 psig.
C is incorrect, OP-901-511 directs manual trip and refer to OP-902-000 if instrument Air pressure reaches 65 psig.
D is correct, OP-901-511 directs manual trip and refer to OP-902-000 if instrument Air pressure reaches 65 psig.

Cognitive Level: Memory **Tier/Group:** 2/ 1 **Question Source:** Bank
10CFR Part 55 Content: 41. 10

Waterford 3 Examination Question

Examination Question Number 55

QUESTION ID: 6081 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of containment system design features and/or interlocks which provide for vacuum breaker protection

AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/11/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CVR **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:	
OP-008-005	09	00	7/30/2001	
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**
3.5-103-K4.01	3.0*	3.7*	WLP-OPS-CB00	02

QUESTION

CVR-3033B, Containment/Annulus B DP Instrument Equalizing Valve was left open during the last calibration of Containment to Annulus D/P instruments CVR-IDPIS-5221A and B and CVR-IDPIS-5220A and B. Determine the effect of leaving this valve open.

A. CVR-101 would open at 8.5 inches of water differential pressure and CVR-201 would open at 10 inches of water differential pressure.

B. CVR-201 would open at 8.5 inches of water differential pressure and CVR-101 would open at 10 inches of water differential pressure.

C. Both CVR-101 and CVR-201 would open at 8.5 inches of water differential pressure.

D. Both CVR-101 and CVR-201 would open at 10 inches of water differential pressure.

ANSWER

B

COMMENTS

Provide examinee with a copy of OP-008-005, Pgs 10 and 14, and CWD Shts. 1130 and 1131.
A is incorrect because the primary instrument for CVR-101 is failed, while CVR-102 would not be affected.
B is A is incorrect because the primary instrument for CVR-101 is failed, while CVR-102 would not be affected.
C is incorrect because the primary instrument for CVR-101 is failed.
D is incorrect because it would take a failure of both the primary instruments to get this result.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 41. 9

Examination Question Number 56

QUESTION ID: 1576 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Bases of Rod insertion limit of reg groups for criticality prior to group 5 at 60"
AUTHOR: evines **REVISION** 4 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 8/15/1995
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/9/2003
TYPE: MULTIPLE CHOICE **TIME:** 1 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CED **CATEGORY:** PROCEDURE

REFERENCE:	**REVISION:**	**CHANGE:**	**DATE:**
TS BASES			
op-010-003	01	03	3/21/2003

NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**
3.1-001-K5.04	4.3	4.7	W-3-LP-OPS-CED00	8

QUESTION

OP-010-003 requires the operator to emergency borate and fully insert all CEAs if criticality is anticipated at or below 60 inches on Group 5.

This ensures adequate protection against the effects of _____ event.

A. a continuous CEA group withdrawal

B. a CEA Subgroup misalignment

C. an ejected CEA

D. an Individual CEA misalignment

ANSWER

C

COMMENTS

A is incorrect, criticality occurring below Group 5 CEAs at 60 inches (Transient insertion limit) would mean that you are not meeting shutdown margin requirements and that the effects of an ejected CEA would not be acceptable.
B is incorrect, criticality occurring below Group 5 CEAs at 60 inches (Transient insertion limit) would mean that you are not meeting shutdown margin requirements and that the effects of an ejected CEA would not be acceptable.
C is correct, criticality occurring below Group 5 CEAs at 60 inches (Transient insertion limit) would mean that you are not meeting shutdown margin requirements and that the effects of an ejected CEA would not be acceptable.
D is incorrect, criticality occurring below Group 5 CEAs at 60 inches (Transient insertion limit) would mean that you are not meeting shutdown margin requirements and that the effects of an ejected CEA would not be acceptable.

Cognitive Level: Memory **Tier/Group:** 2/ 2 **Question Source:** Bank
10CFR Part 55 Content: 41. 10

Waterford 3 Examination Question

Examination Question Number 57

QUESTION ID: 6072 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of Bus power supplies to Pressurizer heaters
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/9/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PLC **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:	
OP-001-001	16	04	4/12/2002	
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**
3.2-011-K2.02	3.1	3.2	WLP-OPS-PLC00	04

QUESTION

Which of the following is the power supply to the Proportional Heater Bank 2?

A. 480 VAC Bus 32A.

B. 480 VAC Bus 32B

C. 480VAC emergency bus 31A

D. 480VAC emergency bus 31B

ANSWER

B

COMMENTS

A is incorrect Proportional Heater Bank 2 is powered from 480 VAC 32B
B is correct Proportional Heater Bank 2 is powered from 480 VAC 32B
C is incorrect Proportional Heater Bank 2 is powered from 480 VAC 32B
D is incorrect Proportional Heater Bank 2 is powered from 480 VAC 32B

Cognitive Level: Memory **Tier/Group:** 2/ 2 **Question Source:** New
10CFR Part 55 Content: 41. 7

Examination Question Number 58
QUESTION ID: 6067 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Knowledge of one hour tech spec actions for Rod Position Indication
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/4/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CED **CATEGORY:** ADMIN
TS PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
TS 3.1.3			

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-1-11	3.0	3.8	W-3-LP-OPS-CED	09

QUESTION

Given the following conditions;

- The Plant is in mode 3
- Shutdown Bank A is being withdrawn.
- CEA Pulse Counter for CEA 28 reads 22 inches
- Reed Switch Position Transmitter 1 (RSPT 1) for CEA 28 is OOS
- Reed Switch Position Transmitter 2 (RSPT 2) for CEA 28 reads 22 inches

Which of the following is the appropriate action if RSPT 2 were to fail for CEA 28?

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.

ANSWER

B

COMMENTS

A is incorrect action required in mode 3 with less than 1 RSPT for any CEA not fully inserted is to immediately open Reactor Trip Breakers.
B is correct action required in mode 3 with less than 1 RSPT for any CEA not fully inserted is to immediately open Reactor Trip Breakers.
C is incorrect action required in mode 3 with less than 1 RSPT for any CEA not fully inserted is to immediately open Reactor Trip Breakers.
D is incorrect action required in mode 3 with less than 1 RSPT for any CEA not fully inserted is to immediately open Reactor Trip Breakers.

Cognitive Level: Memory **Tier/Group:** 2/ 2 **Question Source:** New
10CFR Part 55 Content: 41. 6

Examination Question Number 59

QUESTION ID: 3474 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Initiation Logic for RXC (NRC)
AUTHOR: avest **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 1/11/1995
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/18/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: RXC **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-004-015	08	00	5/31/2001

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.7-016-K4.03	2.8*	2.9*	W-3-LP-OPS-RXC00	1

QUESTION

WHICH ONE (1) of the following is the initiating parameter for a Reactor Power Cutback when a main feed pump trips?

A. Feedwater pump discharge pressure.

B. Feedwater pump control oil pressure.

C. Feedwater pump speed.

D. Feedwater pump flow.

ANSWER

B

COMMENTS

A is incorrect Feed pump initiating signal is control oil pressure at < 60 psig 2/2
B is correct Feed pump initiating signal is control oil pressure at < 60 psig 2/2
C is incorrect Feed pump initiating signal is control oil pressure at < 60 psig 2/2
D is incorrect Feed pump initiating signal is control oil pressure at < 60 psig 2/2

Cognitive Level: Memory **Tier/Group:** 2/ 2 **Question Source:** Bank
10CFR Part 55 Content: 41. 7

Waterford 3 Examination Question

Examination Question Number 60
QUESTION ID: 6073 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of the effect of malfunction of Hydrogen Recombiner
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/9/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: HRA **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-902-008	12	00	4/12/2001		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
3.5-028-K6.01	2.6	3.1	W-3-LP-OPS-HRA00		04

QUESTION

A LOCA has occurred. Both Hydrogen Recombiners have been placed in service per OP-902-002. Hydrogen Recombiner Heater output is 100%. Hydrogen Recombiner B temp cannot be raised above 800°F.

Which of the following limits will not be exceeded for the duration of the event?

A. 1% Containment Hydrogen Concentration

B. 2% Containment Hydrogen Concentration

C. 3% Containment Hydrogen Concentration

D. 4% Containment Hydrogen Concentration

ANSWER

D

COMMENTS

A is incorrect Hydrogen Recombiners Design Basis is to limit Containment Hydrogen conc. to less than 4 % with one Recombiner out of service.
B is incorrect Hydrogen Recombiners Design Basis is to limit Containment Hydrogen conc. to less than 4 % with one Recombiner out of service.
C is incorrect Hydrogen Recombiners Design Basis is to limit Containment Hydrogen conc. to less than 4 % with one Recombiner out of service.
D is incorrect Hydrogen Recombiners Design Basis is to limit Containment Hydrogen conc. to less than 4 % with one Recombiner out of service.

Cognitive Level: Memory **Tier/Group:** 2/ 2 **Question Source:** New
10CFR Part 55 Content: 41. 8

Examination Question Number 61
QUESTION ID: 4645 **C** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to monitor automatic operation of the containment purge system including isolation
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/27/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CAP HVR **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-002-010	14	01	6/11/2003		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
3.5-029-A3.01	3.3	4.0	W-3-LP-OPS-HVR00		01

QUESTION

Given the following:

- The plant is at 100% power.
- A containment purge is in progress per OP-002-010, RAB HVAC and Containment Purge.
- RAB Vent Mode selector switch is in CNTMT PURGE position.

WHICH one of the following automatically CLOSES CAP-203, Containment Purge Exhaust Inside Containment Damper?

A. CAP-203, Containment Purge Exhaust Inside Containment Damper, travels past the 52° OPEN position.

B. Containment to Ambient differential pressure is -8.5 inches water.

C. Outside air makeup flow rate drops below a predetermined limit.

D. A Hi-Hi alarm actuates on PRM-IRe-0100 (Containment Atmos. PIG Radiation Monitor).

ANSWER

B

COMMENTS

A is incorrect. CAP-203 automatically closes when containment differential pressure drops to <8.4 inches WG.
B is correct. CAP-203 automatically closes when containment differential pressure drops to <8.4 inches WG.
C is incorrect. CAP-203 automatically closes when containment differential pressure drops to <8.4 inches WG.
D is incorrect. CAP-203 automatically closes when containment differential pressure drops to <8.4 inches WG.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 2 **Question Source:** Modified
10CFR Part 55 Content: 41. 9

Examination Question Number 62
QUESTION ID: 4127 **N** **STATUS:** Revision **LAST USED**

DESCRIPTION: Actions that occur as a result of lo-lo level in the spent fuel pool
AUTHOR: avest **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 7/5/1996
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/18/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: FS **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-002-006	15	09	3/28/2003

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.8-033-A2.03	3.1	3.5	W-3-LP-OPS-FS00	03

QUESTION

Which of the following would occur as a DIRECT result of LO-LO spent fuel pool level (41.6 ft)?

A. Spent Fuel Pool Cooling Pumps trip

B. CMU to Spent Fuel Pool Makeup Valve opens

C. SFHM Hoist Up movement is disabled

D. Fuel Handling Building Isolation Actuation occurs

ANSWER

A

COMMENTS

A is correct Spent Fuel Pool Cooling Pumps trip at 41.6 ft
B is incorrect CMU to Spent Fuel Pool Makeup Valve does not open at 41.6 ft pool level
C is incorrect SFHM Hoist Up movement is not disabled at 41.6 ft pool level
D is incorrect Fuel Handling Building Isolation Actuation does not occur at 41.6 ft pool level

Cognitive Level: Memory **Tier/Group:** 2/ 2 **Question Source:** Bank
10CFR Part 55 Content: 41. 7

Examination Question Number 63
QUESTION ID: 6076 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Knowledge of Main Turbine design and interlocks which provide for Reactor trip
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/9/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: RXC **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-004-015	08	00	5/31/2001

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.4-045-K4.11	3.6	3.9	WLP-OPS-RXC00	05

QUESTION

Given the following:

- All four LOSS OF TURB BYPASS keyswitches are in OFF.
- The LOSS OF LOAD keyswitch is in the TURBINE TRIP position.
- The LOSS OF TURBINE TRIP keyswitch is in ENABLE.
- REACTOR POWER CUTBACK DEMAND 1 and 2 signals have been generated.

Which of the following describe the status of the Reactor and the Main Turbine.

A. Main Turbine tripped, Reactor tripped.

B. Main Turbine tripped, Reactor not tripped.

C. Main Turbine not tripped, Reactor not tripped.

D. Main Turbine not tripped, Reactor tripped.

ANSWER

A

COMMENTS

A is correct with switches in turbine trip position with reactor power cutback demand signals generated a turbine trip and reactor trip will occur.
B is incorrect with switches in turbine trip position with reactor power cutback demand signals generated a turbine trip and reactor trip will occur.
C is incorrect with switches in turbine trip position with reactor power cutback demand signals generated a turbine trip and reactor trip will occur.
D is incorrect with switches in turbine trip position with reactor power cutback demand signals generated a turbine trip and reactor trip will occur.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 2 **Question Source:** New
10CFR Part 55 Content: 41. 7

Examination Question Number 64

QUESTION ID: 6077 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of the physical connections and/or cause and effect between GWM and station ventilation

AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/10/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: GWM **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-007-003	14	00	1/11/2002		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
3.9-071-K1.06	3.1*	3.1	WLP-OPS-GWM00		12

QUESTION

Given the following:

- GDT A release is in progress.
- Containment purge in progress under continuous release permit.
- CONTAINMENT PURGE INTERRUPTED Annunciator is in alarm.

Which of the following is correct?

A. GDT A release must be manually secured due to Plant Stack flow change.

B. GDT A releases must be manually secured due to low Waste Gas Header flow.

C. GDT A release will be automatically isolated due to low Plant Stack flow.

D. GDT A release will be automatically isolated due to high Plant Stack activity

ANSWER

A

COMMENTS

A is correct OP-007-003 requires release be secured if Plant Vent flow changes.
B is incorrect waste gas header flow should not change.
C is incorrect no auto isolation for plant vent stack flow.
D is incorrect auto isolation for gas header high activity only.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 2 **Question Source:** New
10CFR Part 55 Content: 41. 13

Waterford 3 Examination Question

Examination Question Number 65

QUESTION ID: 5771 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Requirements to Discharge WCT to Circ Water
AUTHOR: dcassid **REVISION** 2 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/19/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: LWM **CATEGORY:** PROCEDURE
SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-007-004	16	04	6/10/2003
CE-003-512	00	02	1/17/2000

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.8-075-K1.02	2.9	3.1	W-3-LP-OPS-LWM00	8

QUESTION

- The plant is in Mode 5
- Main Condenser Waterboxes B1, B2, C1 and C2 are out of service to clean condenser tubes
- The LWM discharge flow instrument is inoperable.
- The LWM Rad Monitor is inoperable.
- The Low Level Trip of WCT Pump A is out of service

A Release Permit has been issued by the Shift Chemist to discharge WCT A to Circ Water. Which of the following must be done to approve release of WCT A?

A. Return one of the required Waterboxes to service.

B. Restore the LWM discharge flow instrument to operable.

C. Restore the Low Level Trip for WCT Pump A to service.

D. Restore the LWM radiation Monitor to operable.

ANSWER

A

COMMENTS

Supply applicable section of OP-007-004, Liquid Waste Management System and Att 11.4. To examinee.
A is correct C1,C2 or B2 water box is required for release.
B is incorrect flow instrument is not required to be operable local verification of flow is allowed.
C is incorrect no requirement for low level trip to be operable.
D is incorrect with LWM rad monitor inoperable independent sampling and verification required.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 2 **Question Source:** Bank
10CFR Part 55 Content: 41. 13

Examination Question Number 66
QUESTION ID: 4761 **B** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of Operations standards
AUTHOR: evines **REVISION** 4 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/19/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPA **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-100-001	19	00	6/12/2003		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
2-1-1	3.7	3.8	WLP-OPS-PPA00		01

QUESTION

Which of the following is prohibited by OP-100-001, Operations Standards and Expectations?

A. A makeup to the VCT performed by a non-licensed Level A NAO currently standing on the job training watches for Reactor Operator Class and supervised by the PNPO.

B. A Shutdown Cooling Purification valve lineup verified by a Level B NAO who has successfully completed Level A NAO classroom training.

C. An Essential Chiller A tagout performed by a Level A NAO trainee and supervised by a Level A NAO who also verifies the clearance.

D. Moving CEAs for ASI control performed by a Reactor Operator, whose license is inactive per the requirements of 10 CFR 55, under the supervision of an operator with an active license.

ANSWER

C

COMMENTS

A is incorrect non licensed operators may perform reactivity manipulations under supervision while in license class.
B is incorrect operators may perform lineups after successful completion of training on a particular system.
C is incorrect an unqualified watch stander may be the verifier but not initial positioner.
D is incorrect inactive licensed operators may manipulate controls under direct supervision.

Cognitive Level: Memory **Tier/Group:** 3 **Question Source:** Bank
10CFR Part 55 Content: 41. 10

Examination Question Number 67
QUESTION ID: 6058 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Ability to apply tech specs for a system SITs
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/2/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: SI TS **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
TS 3.5.1			

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-1-12	2.9	4.0	WLP-OPS-SI00	06

QUESTION

The plant is currently in mode 1 at 100% power. The following values are noted for the 1A and 1B Safety Injection Tanks (SIT).

	Pressure	level
1A	605 psig	38%
1B	665 psig	82%

Which of the following would be required to comply with operability requirements for both tanks?

A. Lower 1B SIT pressure to 575 psig.

B. Raise 1A SIT pressure to 675 psig.

C. Raise 1A SIT level to 50%.

D. Lower 1B SIT level to 50%.

ANSWER

C

COMMENTS

A is incorrect SIT operability requirements are 600-670 psig and 40-83.8%.
B is incorrect SIT operability requirements are 600-670 psig and 40-83.8%.
C is correct SIT operability requirements are 600-670 psig and 40-83.8%.
D is incorrect SIT operability requirements are 600-670 psig and 40-83.8%.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 3 **Question Source:** New
10CFR Part 55 Content: 41. 8, 43. 2

Examination Question Number 68

QUESTION ID: 6060 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to explain and apply system limits and precautions CVCS
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/2/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CVC **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:	
OP-002-005	18	02	3/19/2002	
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**
2-1-32	3.4	3.8	wlp-ops-cvc00	10

QUESTION

Given the following conditions:

- Letdown and charging in service.
- VCT oxygen concentration 3.15 % and steady.

Which of the following actions **AND** their reasons would be appropriate?

A. Reduce VCT oxygen concentration to = 3% to prevent an explosive mixture.

B. Reduce VCT oxygen concentration to = 3% to minimize corrosion.

C. Reduce VCT oxygen concentration to = 2% to prevent an explosive mixture.

D. Reduce VCT oxygen concentration to = 2% to minimize corrosion.

ANSWER

C

COMMENTS

A is incorrect because OP-002-005 states 2 % vice 3%.
B is incorrect because OP-002-005 states 2% and the bases is to prevent explosive mixtures.
C is correct per OP-002-005 precaution 3.1.9.
D is incorrect because the bases is to prevent explosive mixtures.

Cognitive Level: Comprehension/Analysis **Tier/Group: 3** **Question Source:** New
10CFR Part 55 Content: 41. 10

Examination Question Number 69
QUESTION ID: 5765 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Administrative Control of Temporary Alterations
AUTHOR: evines **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/3/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: ADM **CATEGORY:** PROCEDURE
SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:		
UNT-005-004	15	00	4/9/2001		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
2-2-11	2.5	3.4*	w-3-lp-ops-ppa00		2

QUESTION

All of the following apply to the administrative control of Temporary Alterations, with the EXCEPTION of:

A. The Shift Manager is responsible for authorizing the installation and removal of Temporary Alterations.

B. Jumpers, controlled per the Operating Procedure, to discharge Waste Condensate Tank A with the LWM Rad Monitor inoperable require a Temporary Alteration.

C. Caution Tags should be placed on any remote or local control switches affected by the Temporary Alteration.

D. Jumpers installed for troubleshooting a pump controller in accordance with specific work instructions and verifications do not require a Temporary Alteration.

ANSWER

B

COMMENTS

A is incorrect Shift Manager is responsible for authorizing installation and removal of Temporary Alterations.
B is correct actions covered under an approved procedure do not require temporary alterations.
C is incorrect caution tags should be placed on equipment affected by the temporary alteration.
D is incorrect actions covered under an approved procedure do not require temporary alterations.

Cognitive Level: Memory **Tier/Group:** 3 **Question Source:** Bank
10CFR Part 55 Content: 41. 10

Waterford 3 Examination Question

Examination Question Number 70
QUESTION ID: 3487 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: first core alteration knowledge of refueling administrative requirements
AUTHOR: evines **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 1/11/1995
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/3/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: FHS RF **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
RF-004-001	10	00	12/17/2002
RF-001-001	10	00	3/27/2003

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-2-26	2.5	3.7	W-3-LP-OPS-REQ04	4,7

QUESTION

Which of the following evolutions would be classified as a CORE ALTERATION?

A. De-tensioning and removing the reactor vessel head bolts.

B. Reactor vessel head removal/installation.

C. Engaging the Upper Guide Structure (UGS) lifting rig to the UGS.

D. Raising the Upper Guide Structure (UGS) thimble support plate.

ANSWER

D

COMMENTS

A is incorrect, De-tensioning and removing the reactor vessel head bolts is not considered a core alteration per RF-001-001.
B is incorrect, Reactor vessel head removavl/installation is not considered a core alteration per RF-001-001.
C is incorrect, Engaging the Upper Guide Structure (UGS) lifting rig to the UGS bolts is not considered a core alteration per RF-001-001.
D is correct, Raising the Upper Guide Structure (UGS) thimble support plate bolts is considered a core alteration per RF-001-001.

Cognitive Level: Memory **Tier/Group:** 3 **Question Source:** Bank
10CFR Part 55 Content: 41. 2, 43. 6

Waterford 3 Examination Question

Examination Question Number 71

QUESTION ID: 6061 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of tagging and clearance procedures high energy system
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/3/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPA **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-102	00	00	11/4/2002
UNT-005-003	17	00	8/5/2002

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-2-13	3.6	3.8	WLP-OPS-PPA00	01

QUESTION

Which of the following activities would require double valve isolation, if available, during 100 % power operation?

A. Replacing a drain valve on a Heater Drain Pump Discharge.

B. Packing replacement on a Station Air header Isolation valve.

C. Installation of a vent valve on TCW return piping.

D. Replacement of Oil Separator Sump Pump.

ANSWER

A

COMMENTS

A is correct; Heater Drain Pump Discharge header meets the High Energy system criteria 500 psig 200°F.
B is incorrect; Station Air header does not meet the High Energy system criteria.
C is in correct; TCW return piping not meet the High Energy system criteria.
D is incorrect; Oil Separator Sump Pump not meet the High Energy system criteria

Cognitive Level: Comprehension/Analysis **Tier/Group:** 3 **Question Source:** New
10CFR Part 55 Content: 41. 10

Examination Question Number 72
QUESTION ID: 5723 **N** **STATUS:** Revision **LAST USED**

DESCRIPTION: Actions for accidental discharge of tanks not on the discharge permit
AUTHOR: avest **REVISION** 2 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/19/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: BD PRM **CATEGORY:** SYSTEM

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-901-414	01	01	5/22/2003

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-3-11	2.7	3.2	W-3-LP-OPS-PPO40	3

QUESTIONS

Given the following conditions:

- SG 1 is in wet layup following a Steam Generator Tube Rupture in SG 1
- SG 2 is being discharged to Circ Water through the Blowdown system
- SG 1 will be discharged to Circ Water following completion of SG 2 discharge
- SG 1 discharge permit has not been prepared and samples have not been taken of SG 1 contents

During the release of SG 2, the PNPO notices that SG 1 level is lowering and Blowdown Containment Isolation Valves, BD-102A and BD-103A are open. What action should be taken for these conditions?

A. Close BD-303, BD to CW or Waste Pond Isolation.

B. Close BD-102A and BD-103A, S/G 1 Blowdown Containment Isolations.

C. Verify BD-109A, S/G 1 Blowdown Flow Control Vlv.

D. Sample S/G 1 and release both S/Gs simultaneously.

ANSWER

A

COMMENTS

A is correct. This is the isolation valve for the release path.
B is incorrect because the release of both S/Gs violates the release permit and the release must be secured.
C is incorrect because the release of both S/Gs violates the release permit and the release must be secured.
D is incorrect because the release of both S/Gs violates the release permit and the release must be secured.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 3 **Question Source:** Bank
10CFR Part 55 Content: 41. 11

Examination Question Number 73
QUESTION ID: 6063 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of the process for performing containment purge Tech Specs
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/3/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CAP TS **CATEGORY:** PROCEDURE
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
TS 3.6.1

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-3-9	2.5	3.4	W-3-LP-OPS-HVR00	07

QUESTION

The plant is in Mode 4, with Containment Purge in progress. Annual accumulated Containment Purge time for Tech Spec tracking is 65.2 hours. Which of the following conditions, requires you to secure Containment Purge?

A. The Containment Purge duration is 25.0 hours.

B. Ambient barometric pressure indicates 30.4 INHG.

C. Loss of the data link from Met Towers to PMC > 1 hour.

D. The plant changes modes from Mode 4 to Mode 3.

ANSWER

A

COMMENTS

Supply Tech Spec 3.6.1.7 and OP-002-010 pgs 5-6 and 17-21 to examinee
Copied from question 6759A in operations exam bank
A is correct containment purge operation limited to 90 hours in 365 day period.
B is incorrect containment purge operation limited to 90 hours in 365 day period.
C is incorrect containment purge operation limited to 90 hours in 365 day period.
D is incorrect containment purge operation limited to 90 hours in 365 day period.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 3 **Question Source:** Bank
10CFR Part 55 Content: 41. 9, 43. 2

Examination Question Number 74
QUESTION ID: 5852 **B** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of annunciators alarms and indications and use of response instructions
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/3/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CED **CATEGORY:** PROCEDURE
PPO SYSTEM

REFERENCE:	**REVISION:**	**CHANGE:**	**DATE:**
OP-500-008	17	00	2/10/2003
OP-901-102	03	02	8/7/2001

NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**
2-4-31	3.3	3.4	WLP-OPS-PPO10	01

Taken separately, which of the following conditions could indicate a need to enter OP-901-102, Section E2, Immovable CEA?

A. CEA GROUP MINOR DEVIATION ALARM.

B. CEA AUTO MOTION INHIBIT ALARM.

C. CEA WITHDRAWAL PROHIBIT ALARM.

D. CEA DISABLED ALARM.

ANSWER

A

COMMENTS

MODIFIED FROM QUESTION 5852A
A. is correct because even though a Stuck CEA may cause the alarm listed in C., the setpoint for A is 4" of deviation and is therefore most likely to be the first available indication of those listed.
B is incorrect because this alarm is cause by power dropping below the AMI setpoint
C is incorrect because the setpoint for the alarm is 5.5", thereby actuating after the Minor Deviation alarm listed in A.
D is incorrect as the CEA DISABLED possible causes; bkr in off, possible effects include dropped rod.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 3 **Question Source:** Bank
10CFR Part 55 Content: 41.6

Examination Question Number 75
QUESTION ID: 6064 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of emergency communications and techniques
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 6/3/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: EP **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
EP-002-010	28	03	5/9/2003

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-4-43	2.8	3.5	WLP-OPS-EP02	09

QUESTION

Which of the following are correct concerning emergency notifications and communications?

A. Waterford 1 and 2 shall be notified within 90 minutes of downgrading a classification via PABX.

B. Louisiana Department of Environmental Quality (LDEQ) shall be notified within 60 minutes of changing a classification via the industrial Hotline.

C. Waterford 1 and 2 shall be notified within 15 minutes of upgrading a classification via ENS.

D. Louisiana Department of Environmental Quality (LDEQ) shall be notified within 15 minutes of downgrading a classification via the Operational Hotline.

ANSWER

D

COMMENTS

A is incorrect because W1 and 2 are required to be notified within 15 minutes of declaration of or change in classification and PABX is the backup method to notify them. The Operational Hotline is normally used.
B is incorrect because LDEQ is a 15 minute notification and method for notification is the Operational Hotline.
C is incorrect because the ENS is only used to notify the NRC.
D is correct per EP-002-010, Notifications and Communications.

Cognitive Level: Memory **Tier/Group:** 3 **Question Source:** New
10CFR Part 55 Content: 41.10

Examination Question Number 76
QUESTION ID: 5958 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Reactor Trip Recovery
AUTHOR: avest **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/14/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** PROCEDURE
SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-902-009	1.1	00	12/13/2002		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
4.1-E7-EK3.01	4.0	4.6	WLP-OPS-PPE01		15

QUESTION

The reactor was at 100% power. Two CEAs fell into the core and the reactor was manually tripped. During Standard Post Trip Actions, the following items were reported:

- Feedwater Pump A tripped on low lube oil pressure.
- Startup Feedwater Regulating Valve B had to be manually placed to 20% open.
- Startup Transformer A differential current trip was detected and EDG A failed to start.
- Pressurizer Pressure dropped to a low value of 1950 psia and all Pressurizer Backup Heaters had to be manually started.

Assuming all other indications responded as expected for an uncomplicated trip. As CRS, which Emergency Operating Procedure would you transition to and why?

A. OP-902-001, Reactor Trip Recovery, because procedure supports loss of power to one train of offsite power.

B. OP-902-003, Loss of Offsite Power/Loss of Forced Circulation Recovery, due to loss of electrical busses.

C. OP-902-006, Loss of Main Feedwater Recovery, due to loss of the feedwater pump.

D. OP-902-008, Functional Recovery, due to not meeting all safety functions in OP-902-000.

ANSWER

A

COMMENTS

Provide examinee with current revision of OP-902-009,Standard Appendices, Appendix 1, Diagnostics Flowchart
B is wrong because the plant must lose all offsite power or all RCPs to reach it via diagnostics.
C is wrong because Feed pump B is still operating.
D is wrong because listed conditions do not require entry.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/1 **Question Source:** Modified
10CFR Part 55 Content: 43.5

Examination Question Number 77
QUESTION ID: 5572 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Determine if HPSI throttle criteria is met during a PZR STM space break.
AUTHOR: avest **REVISION** 2 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/15/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** PROCEDURE
SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-902-002	09	00	4/12/2001		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
4.2-A8-AA2.23	3.6	4.3	W-3-LP-OPS-PPE02		24

QUESTION

The following conditions exist:

- RCS Pressure is currently 1050 psia and stable.
- 100 gpm HPSI flow to each cold leg loop indicated on CP-8.
- Containment pressure and Quench Tank pressure are 25 psia and rising together.
- T-cold, T-hot, and Representative CET temperatures indicate 545 °F.
- QSPDS levels 1 through 6 indicate voided on QSPDS 1 and 2
- Vessel Plenum level on CP-7 reads 40%
- SG 1 level is cycling between 68 and 71% WR
- SG 2 level is 57% WR and dropping slowly
- Pressurizer level is 100%.

Which course of action should you order?

A. Stop one HPSI pump and throttle flow on the other train.

B. Stop Both HPSI pumps one pump at a time.

C. Continue to allow full HPSI flow into the RCS.

D. Restore Letdown to service and attain Pzr level 33 - 60%.

ANSWER

C

COMMENTS

Pressurizer Safety valve is failed open, plenum level and subcooled margin are not met.
Ref. OP-902-002 Pgs. 21 and 37.
A and B would be viable options per step 23 of OP-902-002, if HPSI Throttle criteria were met.
D is a viable option for reducing pressurizer level if a true excess inventory condition exists per step 28 of OP-902-002.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/1 **Question Source:** Modified
10CFR Part 55 Content: 43. 5

Waterford 3 Examination Question

Examination Question Number 78

QUESTION ID: 6059 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Small Break LOCA Knowledge of Symptom Based EOP mitigation strategies
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/2/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** PROCEDURE
SRO LEVEL

REFERENCE:	**REVISION:**	**CHANGE:**	**DATE:**
OP-902-002	09	00	4/12/2001

NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**
2-4-6	3.1	4.0	WLP-OPS-PPE02	18

QUESTION

Given the following:

- Containment Pressure = 18.0 psia
- S/G 1 pressure = 800 psia; S/G 2 pressure = 780 psia
- S/G 1 level = 70% WR; S/G 2 Level = 68% WR
- EFAS-1 and 2 were manually initiated and controllers are in Auto
- Representative CET temperature is 380ºF
- RCS pressure = 250 psia
- RVLMS indicates 0% head level and 100% plenum level
- RAS has occurred
- LOCA occurred at 1520; Current time is 1800

Which of the following actions would be appropriate at this time?

A. Reset Containment Spray Actuation Signal to minimize corrosion of containment components and H2 generation.

B. Align one train of Shutdown Cooling for operation and commence RCS cooldown.

C. Restart one Reactor Coolant Pump in each loop to maximize heat removal capability.

D. Depressurize the S/Gs to restore them as a heat sink and cool the RCS to restore subcooled margin.

ANSWER

D

COMMENTS

A is incorrect because RAS has occurred and containment pressure is above CSAS setpoint.
B is incorrect because Shutdown Cooling entry conditions are not met.
C is incorrect because RCP operating curves are not met and CSAS has isolated CCW to the RCP seals for greater than 10 minutes.
D is correct because subcooled margin is < 28ºF and the S/Gs are currently hotter than the RCS so they must be steamed to get them to equilibrium conditions with the RCS before the RCS can be cooled down.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 1 **Question Source:** New
10CFR Part 55 Content: 43. 5

Examination Question Number 79

QUESTION ID: 6035 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Appropriate procedure for rising containment sump level SDC malfunction
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/20/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: X **SIMULATOR SETUP**
PLANT SYSTEM: PPO **CATEGORY:** PROCEDURE
SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-901-131	02	00	1/8/2002
OP-901-111	01	05	6/14/2001

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A25-AA2.03	3.6	3.8	WLP-OPS-PPO10	01
			WLP-OPS-REQ21	01

QUESTION

Given the following;

- The plant is in Mode 5.
- Shutdown cooling is in operation.
- RCS level currently at 15 feet 1 inch and lowering.
- Containment Sump and Safety Injection Sump levels rising.

Which of the following procedures would be fully implemented at this time?

A. OP-901-111, Reactor Coolant System Leak.

B. OP-901-131, Shutdown Cooling Malfunction.

C. OP-902-002, Loss of Coolant Accident Recovery.

D. OP-902-008, Functional Recovery Procedure.

ANSWER

B

COMMENTS

A is incorrect because OP-901-111 step 1 transitions to OP-901-131
B is Correct because OP-901-111 step 1 transitions to OP-901-131
C is incorrect because OP-902-002 would not be implemented in Mode 5
D is incorrect because OP-902-008 would not be implemented in Mode 5

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 1 **Question Source:** New Bank Modified
10CFR Part 55 Content: 43. 5

Examination Question Number 80

QUESTION ID: 2894 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: NRC notifications
AUTHOR: avest **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 9/22/1997
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/2/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: EP **CATEGORY:** PROCEDURE
PPA SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:
EP-001-020	26	01	4/20/2003
UNT-006-010	17	02	5/23/2002

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-4-41	2.3	4.1	W-3-LP-EP-SS	64

QUESTION

Which one of the following events requires a notification to the NRC via ENS within ONE hour?

A. Exposure of .5 REM to the hands of a Radiation Technician while handling special nuclear material.

B. The reactor failed to trip automatically when TWO RC pressure instruments exceeded their reactor trip setpoint.

C. An unplanned reactor trip occurs from 100% power, due to failure of a main feedwater pump turbine.

D. One train of HPSI is inoperable for two hours due to inadvertently isolating a train while hanging clearance tags.

ANSWER

B

COMMENTS

A is incorrect, the threshold for a 1 hour report to the NRC for Personnel exposure to extremeities is >250 Rad UNT 006-010 7.3.1
B is correct this is an Alert requiring 1 hour notification
C is incorrect, 4 hour report to NRC UNT 006-010 7.2.8
D is incorrect, 8 hour report to NRC UNT 006-010 7.3.12

Cognitive Level: Memory **Tier/Group:** 1/ 1 **Question Source:** Bank
10CFR Part 55 Content: 43. 5

Examination Question Number 81
QUESTION ID: 6036 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Determine magnitude of offsite dose during SGTR using atmospheric dump valves
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/20/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: EP **CATEGORY:** PROCEDURE
SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:		
EP-002-050	15	03	3/31/1998		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
4.1-E38-EA2.14	3.3*	4.6	WLP-OPS-EP02		22

QUESTION

Given the following conditions;

- A tube rupture has occurred in S/G 1
- The main condenser is not available.
- A cooldown using the Atmospheric Dump Valves is required.
- MSL 1 Radiation Monitor reads 20 mR/hr.
- Met. Tower data;
  - Wind Speed = 1.8 m/sec
  - Differential Temp = -0.75 ºC

Using the Nomogram, determine the projected TEDE dose at the exclusion area boundary for a 2 hour event duration.

A. 50 mrem

B. 100 mrem

C. 160 mrem

D. 200 mrem

ANSWER

B

COMMENTS

Provide examinee with copy of EP 002-050 sect 3.0 and nomogram (D-EP-004)
A is incorrect because this value is the result of not multiplying the dose rate by the 2 hr duration
B is correct.
C is incorrect because this value is the result of using the assumed flowrate for a S/G safety vice the Atmospheric Dump Valve.
D is incorrect because this value is the result of using the wrong stability class (D vs. C).

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 1 **Question Source:** New
10CFR Part 55 Content: 43. 5

Waterford 3 Examination Question

Examination Question Number 82
QUESTION ID: 6037 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Reduction of loads on Station Battery during Station Blackout
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/22/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: DC **CATEGORY:** PROCEDURE
PPE SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-902-005	11	00	4/12/2001		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
4.1-E55-EA1.04	3.5	3.9	WLP-OPS-PPE05		03

QUESTION

Given the following Conditions:

- At 0800 a Station Blackout occurred
- Restoration of AC power is not anticipated until 1130.

Which of the following describes when you as the CRS must instruct the NPO to have the steps for reducing unnecessary station Battery loads completed?

A. 0815

B. 0830

C. 0845

D. 0900

ANSWER

B

COMMENTS

A is incorrect. Load reduction is not required within 15 minutes
B is correct. OP-902-005 step 14 requires reducing station loads within 30 minutes, if power is not expected to be restored
C is incorrect must reduce loads within 30 minutes
D is incorrect must reduce loads within 30 minutes

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 1 **Question Source:** New
10CFR Part 55 Content: 43. 5

Waterford 3 Examination Question

Examination Question Number 83
QUESTION ID: 6033 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Required Time and reason for downpower after a dropped CEA
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/20/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CED **CATEGORY:** PROCEDURE
TS SRO LEVEL
PPO

REFERENCE:	**REVISION:**	**CHANGE:**	**DATE:**
TS 3.1.3			
TS BASES	03	02	8/7/2001
OP-901-102			

NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**
4.2-A3-AK3.04	3.8*	4.1*	WLP-OPS-PPO10	03
			WLP-OPS-PPO10	05

QUESTION

While at 80% power, a shutdown bank CEA drops into the core. In accordance with the Tech Spec COLR, a downpower must be completed within _____ minutes to a maximum power level of _____, to ensure _____.

A. 60, 50%, the potential effect of CEA misalignment limited to acceptable levels.

B. 45, 60%, the potential effect of CEA misalignment limited to acceptable levels.

C. 60, 50%, values used in CPCs for azimuthal power tilt remain valid.

D. 45, 60%, values used in CPCs for azimuthal power tilt remain valid.

ANSWER

B

COMMENTS

Provide examinee with copy of COLR 3/4 1-18A " Required power reduction after single CEA deviation
A. Incorrect time and power level
B. Correct time, correct power level, correct basis
C. Incorrect time, power level and reason
D. Incorrect reason

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 2 **Question Source:** New
10CFR Part 55 Content: 43. 2

Waterford 3 Examination Question

Examination Question Number 84

QUESTION ID: 6062 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to monitor RPI for a stuck/inoperable CEA

AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003

APPROVAL: **APPROVAL DATE:**

REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/3/2003

TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1

QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**

SPECIAL REFERENCES: **SIMULATOR SETUP**

PLANT SYSTEM: CED **CATEGORY:** PROCEDURE
TS SRO LEVEL
PPO

REFERENCE:	REVISION:	CHANGE:	DATE:
TS 3.1.3			

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A5-AA1.05	3.4	3.4	WLP-OPS-PPO10	05

QUESTION

The reactor is at 90% power. While performing OP-903-005, Control Element Assembly Operability Check, the following indications are noted while inserting CEA 41:

- CEAC 1 PID 041 = 144.25”
- CEAC 2 PID 041 = 143.5”
- CEA 41 Pulse Counter indication = 148.5”

All other CEA PIDs indicate 150.0” on CEAC 1 and CEAC 2 and Pulse Counter indication. Attempts to withdraw CEA 41 with I&C personnel monitoring CEA 41 at the CEDMCS panel results in the following indication:

- CEAC 1 PID 041 = 144.25”
- CEAC 2 PID 041 = 143.5”
- CEA 41 Pulse Counter indication = 150.75”
- I&C reports CEA 41 ACTM card is malfunctioning

Based on these indications, what actions are required?

A. Enter 3.1.3.1 action a only

B. Enter 3.1.3.1 action a and 3.1.3.1 action d

C. Enter 3.1.3.5 only

D. Enter 3.1.3.5 and 3.1.3.1 action d

ANSWER

C

COMMENTS

Supply a copy of OP-903-005 and TS 3.1.3.1 and TS 3.1.3.5 to examinee.
A is incorrect because there is no indication of being untrippable or having mechanical interference or excessive friction.
B is incorrect because there is no indication of being untrippable or having mechanical interference or excessive friction and CEA misalignment is < 7 inches.
C is correct because CEA 41 is a Shutdown Bank B CEA and is < 145” withdrawn.
D is incorrect because CEA misalignment is < 7 inches.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 2 **Question Source:** New
10CFR Part 55 Content: 43. 6

Examination Question Number 85
QUESTION ID: 6038 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Verify Liquid release permit to preclude accidental liquid release
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/22/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: BM **CATEGORY:** PROCEDURE
SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:
CE-003-512	00	02	1/17/2000

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
4.2-A59-AA2.02	2.9	3.9	W-3-LP-OPS-BM00	08

QUESTION

A liquid radioactive release of the Boric Acid Condensate Tank is to be performed.

Given the attached Liquid Radioactive Waste Release permit for your review, determine which of the following would give you grounds for not approving the release?

A. CWPs available are less than CWPs required.

B. Dilution Flow is less than minimum required.

C. Max waste flow exceeds maximum limit allowed by procedure.

D. Sample collected prior to minimum required recirculation time.

ANSWER

D

COMMENTS

Provide examinee with copy of Release permit with prerelease data filled in (part 1). Miscalculation for recirc time and sample collected prior to required recirc time (not representative sample results)

A is incorrect, available CWPs available within requirements
B is incorrect, dilution flow correct for 2 CWPs in operation
C is incorrect, max waste flow within limits of procedure
D is correct sample, should be taken 390 minutes after recirc started sample collected 300 minutes after recirc started.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 2 **Question Source:** New
10CFR Part 55 Content: 43. 5

Examination Question Number 86
QUESTION ID: 6040 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Vital equipment to be maintained during a control room evacuation with fire
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/22/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPO **CATEGORY:** PROCEDURE
SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-901-502	08	00	4/30/2003		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
4.2-A67-AA2.16	3.3	4.0	W-3-LP-OPS-PPO51		05

QUESTION

Given the following;

- EDG B is out service for preventive maintenance
- HPSI pump B is out service for preventive maintenance
- LPSI pump B is out service for preventive maintenance
- Charging pump AB is out service for seal water replacement
- A cable spreading room fire is in progress.
- You have ordered a control room evacuation.

Which of the following components would you make the highest priority for returning to service?

A. HPSI pump B

B. EDG B

C. LPSI pump B

D. Charging pump AB

ANSWER

B

COMMENTS

OP-901-502 page 30 caution prior to step 1

A is incorrect because HPSI pump B is racked out in section E2 of OP-901-502
B is correct because you are procedurally required to have EDG B available to implement section E2 of OP-901-502.
C is incorrect because must hav e EDG B in operation to support LPSI pump B operation.
D is incorrect because Charging AB will not have power in section E2

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 2 **Question Source:** New
10CFR Part 55 Content: 43. 5

Examination Question Number 87
QUESTION ID: 6034 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Knowledge of SRO fuel handling responsibilities during control room evacuation
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/20/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: RF **CATEGORY:** PROCEDURE
SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:
RF-005-001	08	00	12/6/2001
TS 3.9.5			

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-2-29	1.6	3.8	W-3-LP-OPS-REQ04	01

QUESTION

Given the following:

- You are the SRO in charge of fuel handling.
- A core reload is in progress
- The phone talker informs you that the control room is being evacuated due to a fire in CP 8 and communications will be secured.
- Currently a new fuel bundle is being moved from the Spent Fuel Pool to the core and is inserted two feet into its core location.

Which of the following is the appropriate action?

A. Secure all movement of the fuel bundle and suspend core alterations.

B. Seat the fuel bundle in the core location, ungrapple the fuel bundle and reestablish communications prior to continuing.

C. Return the fuel bundle to the Rx Bldg Upender and suspend core alterations.

D. Raise the fuel bundle into the fuel mast and de-energize the Refueling Machine, reestablish communications prior to continuing.

ANSWER

C

COMMENTS

A is incorrect because the fuel bundle must be placed in a safe location when suspending core alterations.
B is incorrect because it is not safe to continue insertion of a fuel assembly without monitoring core counts or having continuous communication established and it is required to suspend core alterations.
C is correct definitions in Tech Spec state that suspension of core alterations shall not preclude placing fuel in a safe conservative position prior to suspending core alterations.
D is incorrect because suspended from the refueling mast is not considered a safe location even if at up limit and it is required is to suspend core alterations

Cognitive Level: Comprehension/Analysis **Tier/Group:** 1/ 2 **Question Source:** New
10CFR Part 55 Content: 43. 6

Examination Question Number 88
QUESTION ID: 6041 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of ECCS design interlocks between RCS and RHR
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/22/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: SDC **CATEGORY:** PROCEDURE
SI SRO LEVEL

REFERENCE:	**REVISION:**	**CHANGE:**	**DATE:**
TS 3.5.2			
OP-903-025	04	00	4/14/2003

NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**
3.2-006-K4.16	3.2	3.5	WLP-OPS-SDC00	04

QUESTION

During calibrations of the Narrow Range (0-750 psia) Pressurizer Pressure loops, the following as-found values were obtained for the pressure interlocks that affect the following valves:

- SI-401 A, SDCS Loop 2 Inside Containment Upstream Isolation - 410 psia
- SI-401 B, SDCS Loop 1 Inside Containment Upstream Isolation - 425 psia
- SI-331 A, Safety Injection Tank 1A Isolation - 515 psia
- SI-332 A, Safety Injection Tank 2A Isolation - 518 psia

Which of the valves is inoperable?

A. SI-401 A

B. SI-401 B

C. SI-331 A

D. SI-332 A

ANSWER

B

COMMENTS

Provide examinee with copy of TS 3.5.1 and 3.5.2
A is incorrect acceptable pressure band is 392-422 psia
B is correct acceptable pressure band is 392-422 psia
C is incorrect acceptable pressure band is 505-525 psia
D is incorrect acceptable pressure band is 505-525 psia

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 43. 2

Examination Question Number 89
QUESTION ID: 6042 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Predict impacts and use procedures to mitigate loss of air for CCW
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/22/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CVC **CATEGORY:** PROCEDURE
PPO SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-500-007	15	00	4/11/2003		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
3.8-008-A2.05	3.3*	3.5	WLP-OPS-PPO10		03

QUESTION

Given the following conditions:

- LETDOWN HX OUTLET TEMP HI (G-B1), annunciator in alarm.
- Letdown heat exchanger Temperature control CC-636 has failed closed due to a broken instrument air line.
- LD HX Tube Outlet Temperature CVC-ITI-0224, currently reads 200 ºF and steady.

All of the following actions are applicable for the conditions given **EXCEPT**:

A. Remove purification filter from service within 1 hour.

B. Verify ion exchangers bypassed.

C. Dispatch NAO to slowly open CC-636 Letdown HX TCV.

D. Isolate charging and letdown.

ANSWER

D

COMMENTS

OP-005-007 B1 to be given to examinee
A is incorrect purification filter must be removed from service within 1 hour if temp >180
B is incorrect Ion exchangers must be verified bypassed when temp > 140
C is incorrect NAO must locally open CC-636
D is correct Charging and letdown are not isolated until temp 230

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 43. 5

Examination Question Number 90
QUESTION ID: 5811 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Time remaining to initiate SDC
AUTHOR: avest **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/2/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: EFW **CATEGORY:** PROCEDURE
PPE SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-902-009	1.1	00	12/13/2002

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.4-061-A1.04	3.9	3.9	W-3-LP-OPS-PPE04	7

QUESTION

A Main Steam Line Break has occurred. A cooldown is desired. The following conditions exist:

- The reactor tripped one hour ago
- Two RCPs are operating
- T_h is 450°F
- Condensate Storage Pool level is 72.7%
- DWST level is 45%
- EFW is supplying the intact Steam Generator

Evaluate Condensate inventory and determine the maximum time remaining to place Shutdown Cooling in service.

A. 8 hrs

B. 11 hrs

C. 15 hrs

D. 22 hrs

ANSWER

C

COMMENTS

Supply Attachments 2-D through 2-G of OP-902-009
A is incorrect 8 hours would correspond to 190,000 gals required calculated from 100 % T-hot using four pump curve.
B is incorrect 11 hours based on correct inventory required using 4 pumps operating curve.
C is correct 15 hours based on correct inventory required using correct 2 pumps operating curve.
D is incorrect 22 corresponds to correct inventory required using no pumps operating curve

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** Bank
10CFR Part 55 Content: 43. 5

Examination Question Number 91
QUESTION ID: 6050 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Knowlege of pre and post maintenance operability for AC electrical system EDG
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/28/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: 4KV EDG ED **CATEGORY:** PROCEDURE SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:
TS 3.8.1			

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-2-21	2.3	3.5	W-3-LP-OPS-EDG00	07

QUESTION

Given the following;

- EDG A is being taken out of service for preplanned PMs to replace fuel oil and lube oil filters and replace lube oil.
- A temporary EDG is aligned for backup of EDG A.

Which of the following is **NOT** required to be performed at any time during the EDG A outage?

A. OP-903-066, Electrical Breaker Alignment Check within one (1) hour of declaring EDG A inoperable.

B. A manual start of EDG B within eight (8) hours of declaring EDG A inoperable.

C. OP-903-068, Emergency Diesel Generator and Subgroup Relay Operability Verification.

D. Restore EDG A to operable status within 10 days of taking the diesel out of service.

ANSWER

B

COMMENTS

Provide copy of T.S. 3.8.1.1 to examinee.

A is incorrect OP-903-066 is required to be performed within 1 hour of taking EDG out of service and every 8 hours afterward.
B is correct Manual start of EDG B is not required if outage is for preplanned maintenance.
C is incorrect OP-903-068 must be performed prior to restoring EDG A operability.
D is incorrect EDG A must be returned to service within 10 days.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 1 **Question Source:** New
10CFR Part 55 Content: 43. 2

Examination Question Number 92
QUESTION ID: 6051 **A** **STATUS:** Revision **LAST USED**
DESCRIPTION: Ability to use computer to evaluate parametric information on system status CET QSPDS
AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/28/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: RCS **CATEGORY:** PROCEDURE
SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-001-003	19	05	3/20/2002		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
2-1-19	3.0	3.0	WLP-OPS-REQ13		07

QUESTION

Given the following initial conditions:

- The plant is in MODE 5 preparing for entry into MODE 6.
- An RCS drain down is in progress to install nozzle dams in each steam generator.
- PZR level is currently at 30% Cold Cal.
- Jumpers have been installed on 1 CET for QSPDS 1 and 1 CET for QSPDS 2 to facilitate the drain down, all other CETs are currently disconnected.
- The CRS notes that the dedicated CET from QSPDS 1 is no longer providing valid readings.

Which of the following would be required?

A. Stop the RCS drain down immediately and refill to = 75% Cold Cal PZR level and restore at least two CETs from either QSPDS before continuing.

B. Stop the RCS drain down before lowering RCS level < 5% Cold Cal PZR level and restore at least two CETs from either QSPDS before continuing.

C. Stop the RCS drain down prior to lowering RCS level < 18 ft MSL and restore 1 CET from QSPDS channel 1 before continuing.

D. Stop drain RCS down immediately and restore 1 CET from QSPDS channel 1 before continuing.

ANSWER

C

COMMENTS

Modified from question 5703A

A is incorrect this is an initial condition prior to commencing drain down
B is incorrect drain down must be secured prior to 18 ft MSL
C is correct drain down must be secured prior to 18 ft MSL
D is incorrect loss of CET does not require securing draindown prior to 18 ft MSL.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 2/ 2 **Question Source:** Modified
10CFR Part 55 Content: 43. 5

Waterford 3 Examination Question

Examination Question Number 93

QUESTION ID: 6052 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to predict impacts and use procedures to mitigate consequences of fire protection malfunctions

AUTHOR: evines **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: evines **VERIFICATION DATE:** 5/28/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: ANP FPD **CATEGORY:** PROCEDURE SRO LEVEL
REFERENCE: **REVISION:** **CHANGE:** **DATE:**
TRM 3.3.3

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
3.8-086-A2.03	2.7	2.9	W-3-LP-OPS-FP00	06

QUESTION

ANP 102 goes closed due to Safety Injection actuation relay circuit failure, causing Annulus Negative Pressure (ANP) fans to secure.

Which of the following describe the compensatory measures required to be implemented.

A. Establish a fire watch within 1 hour.

B. Return a ANP fan to service within 8 hours

C. After 14 days establish a fire watch within 1 hour.

D. Verify annulus temperature less than 120°F once per hour.

ANSWER

A

COMMENTS

TRM 3.3.3.8.1

A is correct fire watch must be established within 1 hour if Annulus negative pressure system not in operation.
B is incorrect fire watch must be established within 1 hour if Annulus negative pressure system not in operation.
C is incorrect fire watch must be established within 1 hour if Annulus negative pressure system not in operation.
D is incorrect fire watch must be established within 1 hour if Annulus negative pressure system not in operation.

Cognitive Level: Memory **Tier/Group:** 2/ 2 **Question Source:** New
10CFR Part 55 Content: 43. 5

Waterford 3 Examination Question

Examination Question Number 94
QUESTION ID: 4581 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Minimum Shift Composition
AUTHOR: avest **REVISION** 3 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:** 1/14/1998
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/19/2003
TYPE: Multiple Choice **TIME:** 3 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPA **CATEGORY:** ORAL BOARD
SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-100-001	19	00	6/12/2003		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
2-1-4	2.3	3.4	w-3-lp-ops-ppa00		2

QUESTION

The plant is operating at 100% power. The Shift Manager on shift plans to observe the TB Watchstander perform a task in the plant.

What minimum requirement has to be met prior to the Shift Manager leaving the Control Room for the observation?

A. Assign the STA (on shift) the Control Room Command function.

B. Assign an SRO (other than the STA) the Control Room Command function.

C. Log his beeper number and expected location in the Station Log.

D. Perform a shift turnover to another qualified Shift Manager.

ANSWER

B

COMMENTS

Attachment 6.2 of OP 100-001 lists requirement.
A is incorrect during Shift Manager absence from the control room another SRO (other than the STA) must be designated for control room command and control function.
B is correct during Shift Manager absence from the control room another SRO (other than the STA) must be designated for control room command and control function.
C is incorrect during Shift Manager absence from the control room another SRO (other than the STA) must be designated for control room command and control function.
D is incorrect during Shift Manager absence from the control room another SRO (other than the STA) must be designated for control room command and control function.

Cognitive Level: Memory **Tier/Group: 3** **Question Source:** Bank
10CFR Part 55 Content: 43.2

Examination Question Number 95
QUESTION ID: 4202 **D** **STATUS:** Revision **LAST USED**
DESCRIPTION: Ultimate Heat Sink Tech Spec
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/13/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: CC **CATEGORY:** PROCEDURE
TS SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:
TS 3.7.4			

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-1-33	3.4	4.0	W-3-LP-OPS-CC00	10

QUESTION

The plant is operating at 100% power with Dry Cooling Tower Fans 2B, 6B, 7B, and 15A out of service. The control room is monitoring dry bulb temperatures every two hours. The last set of readings were taken 5 minutes ago and indicate as follows:

Dry Bulb Temperature = 84.3°F

You are informed via the Civil Defense Radio that National Weather has issued a Severe Thunderstorm Warning and a Tornado Watch for Tangipahoa, St. Tammany, Jefferson, Orleans, St. Charles and St. John parishes. Assuming no other equipment is out of service, which of the following describes the required actions to be taken?

A. Enter TS LCO 3.7.4 Action a and perform actions within the required time frames.

B. Enter TS LCO 3.7.4 Action b and perform actions within the required time frames.

C. Enter TS LCO 3.7.4 Action c and perform actions within the required time frames.

D. Remain in TS LCO 3.7.4 Action d and continue actions within the required time frames.

ANSWER

C

COMMENTS

Provide TS 3.7.4 to and SD-CC Figure 4 to examinee
This question was modified from 4202B
A and B are incorrect because Action 3.7.4.c covers the prescribed condition.
C is correct. The number of fans OOS were within requirements until the Tornado watch was issued. At that point 3.7.4.c should be entered because Fans 7B and 15A are under the missile shield and are required to be operable with a Tornado Watch in effect.
D is incorrect because a Tornado Watch is in effect.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 3 **Question Source:** Modified
10CFR Part 55 Content: 43. 2

Examination Question Number 96
QUESTION ID: 6065 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of process for managing maintenance activities during shutdown
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/3/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: RF **CATEGORY:** PROCEDURE
TS SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:		
RF-004-001	10	00	12/17/2002		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**	**OBJECTIVE**	
2-2-18	2.3	3.6	W-3-LP-OPS-REQ04	06	
			WLP-OPS-TS04	02	

QUESTION

The plant is in Mode 6 preparing to commence core alterations. Core alterations are scheduled to start on 8/22/03 at 1400. Refueling activities are currently on schedule. TS Boration flowpath is BAM Tank A and gravity feed valves via Charging Pump A. The following surveillances were last performed at the following times:

- OP-903-002, Boration Flowpath Valve Lineup Verification – 1800, 7/23/03
- OP-903-003, Charging Pump Operability Check, Charging Pump A – 1400, 5/10/03
- OP-903-101, Startup Channel Functional Test, Startup Channel 1 – 0500, 8/22/03
- OP-903-101, Startup Channel Functional Test, Startup Channel 2 – 0700, 8/22/03

Which surveillance must be performed prior to commencing core alterations, if refueling activities remain on schedule?

A. OP-903-002

B. OP-903-003

C. OP-903-101, Channel 1

D. OP-903-101, Channel 2

ANSWER

C

COMMENTS

Provide pages 1 and 2 of RF-004-001, Attachment 9.5 to examinee
A is incorrect because it is within the 31 day periodicity.
B is incorrect because it is within 1.25 (115 days) of the 92 day (Quarterly) periodicity.
C is correct because it is not within the 8 hour time frame for starting core alterations and the 1.25 does not apply.
D is incorrect because it meets the 8 hour

Cognitive Level: Comprehension/Analysis **Tier/Group:** 3 **Question Source:** New
10CFR Part 55 Content: 43. 2

Waterford 3 Examination Question

Examination Question Number 97
QUESTION ID: 6055 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Knowledge of new and spent fuel movement procedures
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/19/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: RF **CATEGORY:** ADMIN PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
OP-100-001	19	00	6/12/2003
RF-001-001	10	00	3/27/1903

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-2-28	2.6	3.5	W-3-LP-OPS-REQ04	03
			W-3-LP-OPS-RFUEL	09

QUESTION

Which of the following personnel are authorized to suspend core alterations?

A. Shift Manager and Refueling Director

B. Refueling Director and Refueling Controller

C. Refueling Controller and Fuel Handling Supervisor

D. Fuel Handling Supervisor and Shift Manager

ANSWER

D

COMMENTS

This question is the same as question 5552A in the Operations bank.
A is incorrect because the Refueling Director is not authorized unless he happens to be an SRO filling the Fuel Handling Supervisor position.
B is incorrect because the Refueling Director and Refueling Controller are not authorized, unless they happen to be an SRO filling the Fuel Handling Supervisor position.
C is incorrect because the Refueling Controller is not authorized unless he happens to be an SRO filling the Fuel Handling Supervisor position.
D is correct per RF-005-001 and OP-100-001.

Cognitive Level: Memory **Tier/Group:** 3 **Question Source:** Bank
10CFR Part 55 Content: 43. 7

Examination Question Number 98

QUESTION ID: 448 **B** **STATUS:** Revision **LAST USED**

DESCRIPTION: Emergency exposure limits per EP-002-030
AUTHOR: avest **REVISION** 2 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/13/2003
TYPE: Multiple Choice **TIME:** 2 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: EP RAD **CATEGORY:** PROCEDURE

REFERENCE:	REVISION:	CHANGE:	DATE:
EP-002-030	09	00	4/8/2003

NRC KA NUMBER:	RO	SRO	TRAINING MATERIAL:	OBJECTIVE
2-3-4	2.5	3.1	W-3-LP-EP-SS	55

QUESTION

Given the following:

- A Large Break LOCA has occurred
- HPSI Pump A has developed a 40 gpm leak on the pump suction
- Attempts to isolate HPSI Pump A from the Safeguards Valve Gallery failed due to a broken reach rod on the suction isolation valve
- All ESF Pumps are taking a suction from the SI Sump
- An Emergency Team member has volunteered to enter Safeguards Pump Room A to close HPSI Pump A suction valve locally

The maximum allowed TEDE exposure that the Emergency Coordinator can authorize the Emergency Team member to receive while performing this evolution is:

A. 10 REM

B. 25 REM

C. 75 REM

D. 100 REM

ANSWER

A

COMMENTS

A is correct per EP-002-030, 10 REM is limit (TEDE) for corrective actions for accident mitigation
B is incorrect because 25 REM is limit (TEDE) for lifesaving measures per EP-002-030
C is incorrect because the limit is 10 REM per EP-002-030; however 75 REM was the previous limit for corrective action limit for accident mitigation.
D is incorrect because the limit is 10 REM per EP-002-030; however 100 REM was the previous limit for lifesaving measures.

Cognitive Level: Comprehension/Analysis **Tier/Group:** 3 **Question Source:** Bank
10CFR Part 55 Content: 43. 4

Examination Question Number 99
QUESTION ID: 5739 **A** **STATUS:** Revision **LAST USED**

DESCRIPTION: Ability to take actions in the facility Emergency Plan (Toxic Chemical Emergency)
AUTHOR: avest **REVISION** 1 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 5/29/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** X **OPEN REFERENCE**
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: EP **CATEGORY:** PROCEDURE
SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:		
EP-004-010	09	00	4/10/2003		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
2-4-38	2.2	4.0	W-3-LP-OPS-PPO50		03
			WLP-OPS-EP02		26

QUESTION

Given the following conditions:

- A pipe that carried Vinyl Chloride failed at Dow Chemical
- The leak has not been isolated
- Failure time was 09:50
- Current time is 09:56
- The plume travel time is 25 minutes, based on current wind speed
- Wind direction is from 135°

What emergency classification should you declare and which Tab of EP-004-010 should be implemented?

A. Declare an Unusual Event and implement Tab A, Standby

B. Declare an Alert and implement Tab B, Site Evacuation

C. Declare an Alert and implement Tab C, Shelter

D. Declare a Site Area Emergency and implement Tab C, Shelter

ANSWER

C

COMMENTS

This question is modified from question 5739N.
A is incorrect because chemicals are not within the EAB and Vinyl Chloride is a large hazard.
B is incorrect because response time is less than 45 minutes.
C is correct because chemicals are within the EAB, W3 is less than 5 miles from Dow Chemical, Vinyl Chloride is a large hazard, the release is not secured, W3 is downwind of the release, and response time is less than 45 minutes.
D is incorrect because personnel have not been sheltered for greater than 30 minutes.

Cognitive Level: Comprehension/Analysis **Tier/Group: 3** **Question Source:** Modified
10CFR Part 55 Content: 43. 5

Examination Question Number 100
QUESTION ID: 5684 **N** **STATUS:** Revision **LAST USED**

DESCRIPTION: Prioritization of Safety Functions in OP-902-008
AUTHOR: avest **REVISION** 2 **REVISION DATE** 6/26/2003
APPROVAL: **APPROVAL DATE:**
REFERENCE VERIFIED: avest **VERIFICATION DATE:** 6/2/2003
TYPE: Multiple Choice **TIME:** 5 **POINTS:** 1
QUIZ ONLY: **CLOSED REFERENCE:** **OPEN REFERENCE** X
SPECIAL REFERENCES: **SIMULATOR SETUP**
PLANT SYSTEM: PPE **CATEGORY:** PROCEDURE
SRO LEVEL

REFERENCE:	REVISION:	CHANGE:	DATE:		
OP-902-008	12	00	4/12/2001		
NRC KA NUMBER:	**RO**	**SRO**	**TRAINING MATERIAL:**		**OBJECTIVE**
2-4-21	3.7	4.3	W-3-LP-OPS-PPE08		6

QUESTION

OP-902-008, Safety Function Recovery Procedure has been implemented. Refer to the attached Safety Function Tracking Sheet and determine the priority for addressing the safety functions.

A. 1, 2, 3, 4, 5, 6, 7, 8, 9

B. 1, 7, 5, 2, 8, 3, 4, 6, 9

C. 1, 7, 2, 3, 8, 4, 5, 6, 9

D. 1, 5, 6, 2, 7, 3, 4, 8, 9

ANSWER

B

COMMENTS

Check (✔) the following on the Safety Function Tracking Sheet:
Success Path in Use – RC-3, MVA-DC-1, MVA-AC-2, IC-2, PC-1, HR-2, CI-1, CPTC-2, CCGC-1
SFSC Met – MVA-DC-1, MVA-AC-2, PC-1, CPTC-2, CCGC-1
A is incorrect because this group of numbers just follows the order in which the safety functions are laid out in the procedure with no regard to their status.
B is correct because it follows the methodology laid out in section E0 of OP-902-008.
C is incorrect MVA-AC-2 is prioritized higher than some safety functions not meeting any Safety Function Status Checklist criteria.
D is incorrect because this order would result from overlooking the fact that MVA-AC and CTPC do not meet success path 1 criteria.

Cognitive Level: Comprehension/Analysis **Tier/Group: 3** **Question Source:** Bank
10CFR Part 55 Content: 43. 5