LOI-20 NRC Licensing Exam

ID: 852830

Points: 1.00

(Reference Provided)

1

After a trip from 100% power, EOP-1.0, Standard Post Trip Actions, is complete. The crew has entered EOP-8.0, Loss of Offsite Power / Forced Circulation Recovery.

The Safety Function Status Checks (SFSCs) are being performed and the following are the current conditions:

- NO PCPs are running
- PZR Level is 50% with Charging and Letdown in service
- PZR Pressure is 1620 psia
- ALL RVLMS lights are green
- AFW is maintaining BOTH S/Gs at 65% level
- Tcolds are 540°F
- Thots are 560°F
- Tave indicates 550°F
- Average of Qualified CETs (KCETA) is 584°F
- ASDVs are throttled and lowering PCS temperatures

Given these conditions, complete the following statements:

The Safety Function Status Check for:

- PCS Heat Removal ___(1)___ satisfied.
- Core Heat Removal ____(2)___ satisfied.

	<u>(1)</u>	<u>(2)</u>
A.	is	is
В.	is	is NO
C.	is NOT	is
D.	is NOT	is NO

LOI-20 NRC Licensing Exam

ID: 847350

Points: 1.00

(Reference Provided)

PCS Heatup is in progress in accordance with SOP-1C, "Primary Coolant System - Heatup". A bubble has been formed in the Pressurizer.

At time 1000:00,

2

- PCS is at 400°F
- Pressurizer Pressure is at 450 psia
- 3 PCPs are operating within the required parameters of the procedures
- The LTOP Switches are in 'ENABLE'
- BOTH PZR PORV Block valves are OPEN

At time 1005:00,

• PT-0104B, Pressurizer Pressure input to LTOP Controller PY-0105B fails to 1500 psia

Complete the following:

- At 1005:00, the number of OPEN Pressurizer PORVs is ____(1)____.
- At 1006:00, if TS-0115, PCS Temperature input to LTOP Controller PY-0105A fails to 450°F, then

 (2) PZR PORV can provide automatic programmed LTOP protection throughout the heatup.

<u>(1)</u>		<u>(2)</u>	
Α.	ONLY ONE	ONLY ONE	
В.	ONLY ONE	NEITHER	
C.	NONE	NEITHER	
D.	NONE	ONLY ONE	

LOI-20 NRC Licensing Exam

ID: 847669

Points: 1.00

Given the following:

At time 1000:00

3

- The Plant has been tripped from 100% power due to a small break
- LOCA 2400V Bus 1C is de-energized (faulted)
- Levels in BOTH Steam Generators are 55% and lowering at 10% per minute

At time 1004:00

• Auxiliary Feedwater flow will ____(1)___ automatically initiated.

At time 1005:00

- Highest S/G pressure is 900 psia
- The actions of EOP-1.0, "Standard Post Trip Actions," have been completed
- The CRS has given the direction to commence a PCS cooldown and depressurization

When AFW flow is established, AFW flow will be from ___(2)___.

	<u>(1)</u>	<u>(2)</u>
A.	have	P-8A
В.	have	P-8C
C.	have NOT	P-8A
D.	have NOT	P-8C

LOI-20 NRC Licensing Exam

ID: 848570

Points: 1.00

The Plant is at 100% power, with ALL systems normally aligned. A seismic event occurs, and the operators note that PCS pressure rapidly lowers to containment pressure.

While performing EOP-1.0, Standard Post Trip Actions,

• The operators will stop ___(1)___ PCPs.

4

• The reason for the above action is to ____(2)____.

<u>(1)</u> <u>(2)</u>

- A. ONLY two provide protection against cavitation
- B. ONLY two prevent unwanted additional loss of mass from PCS
- C. ALL four provide protection against cavitation
- D. ALL four prevent unwanted additional loss of mass from PCS

LOI-20 NRC Licensing Exam

ID: 847690

Note to Examinee: There is a color image provided as a handout for this question

The plant is in MODE 3 at normal operating temperature and pressure

PCS Flow on Panel C-12 is shown below: •



Then, EK-0902, "PRI COOLANT PUMP P-50B TRIP" annunciates.

Given these conditions, complete the following statements:

- PCS Flow indication on ___(1)___ Flow Indicator(s) lower(s). •
- The automatic start of a Lift Oil Pump is indicated by the illumination of a(n) ____(2)___ light on • Panel C-02.

<u>(1)</u>		<u>(2)</u>	
A.	ONLY one	Amber	
В.	ONLY one	Red	
C.	ALL four	Amber	
D.	ALL four	Red	

5

LOI-20 NRC Licensing Exam

ID: 853530

Points: 1.00

The plant is at 100% power, with all systems in automatic control

• Single Charging is aligned in accordance with SOP-2A, Chemical and Volume Control System

P-55A, Charging Pump, trips.

6

NO other charging pump starts.

All other equipment functions as designed.

Given these conditions and with NO operator action, complete the following statements:

- Letdown isolates ____(1)___ EK-0763, Pressurizer Level CH A LO-LO, or EK-0764, Pressurizer Level CH B LO-LO annunciates.
- In 15 minutes, Pressurizer Level ___(2)___.
 - <u>(1)</u> <u>(2)</u>
 - A. before stabilizes
 - B. before continues to lower
 - C. after stabilizes
 - D. after continues to lower

LOI-20 NRC Licensing Exam

ID: 853534

Points: 1.00

The plant has just been shutdown from a 100 day run at full power.

Component Cooling Water Temperature is 95°F

7

• E-60A, Shutdown Cooling (SDC) Heat Exchanger is unavailable

Given these conditions, complete the following statements:

- The SDC system ___(1)___ meet its design basis.
- With SDC in service and a loss of air to CV-3212, CV-3213, CV-3223, and CV-3224, SDC HX Isolation valves occurs, PCS flow through the SDC HXs (2).

	(1)	(2)
A.	can	stops
B.	can	continues
C.	can NOT	stops
D.	can NOT	continues

LOI-20 NRC Licensing Exam

ID: 847954

Points: 1.00

The plant is in MODE 1,

8

• Component Cooling Water flow has degraded

The following PCP Temperatures are ALL noted to be rising at a rate of 1°F per minute:

P-50A Upper Guide Bearing	170°F
P-50B Upper Thrust Bearing	171°F
P-50C Lower Seal	172°F
P-50D Vapor Seal	173°F

In accordance with AOP-29, PCP Abnormal Conditions, which PCP temperature will FIRST require an immediate reactor trip?

- A. Upper Guide Bearing
- B. Upper Thrust Bearing
- C. Lower Seal
- D. Vapor Seal

LOI-20 NRC Licensing Exam

ID: 848571

Points: 1.00

The Plant is at 100% power.

9

Which of the following would cause the Primary Coolant System to get closer to saturated conditions?

- A. Steam Generator ADV inadvertently opens
- B. Pressurizer Spray valve CV-1057 loses Instrument Air
- C. In service Pressurizer Pressure Controller output fails low
- D. In service Pressurizer Pressure Controller output fails high

LOI-20 NRC Licensing Exam

ID: 852014

Points: 1.00

The plant is at power, when a transient occurs causing PCS Pressure to reach 2385 psia.

• Reactor Power has NOT changed

For these conditions...

- A. NO Trip is required.
- B. ONLY RPS Trip circuits have failed.
- C. ONLY ATWS Trip circuits have failed.
- D. BOTH RPS and ATWS Trip circuits have failed.

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LOI-20 NRC Licensing Exam

ID: 847990

Points: 1.00

A SGTR occurred while the plant was in MODE 1

11

• EOP-5.0, Steam Generator Tube Rupture Recovery, is in progress.

Given these conditions, complete the following statements:

- The requirement to maintain PCP NPSH for any running PCP ___(1)___ take precedence over the equalization of primary and secondary pressure.
- The reason for lowering PCS pressure to the affected S/G pressure is to ____(2)____.

	<u>(1)</u>	<u>(2)</u>
A.	does	raise injection flow from the SIS pumps
В.	does	minimize the potential for overfilling the affected S/G
C.	does NOT	raise injection flow from the SIS pumps
D.	does NOT	minimize the potential for overfilling the affect S/G

LOI-20 NRC Licensing Exam

12

ID: 852250

Points: 1.00

(Reference Provided)

Given the following Plant conditions during an Excess Steam Demand Event (ESDE):

- Containment temperature is 250°F
- 'B' steam generator pressure is 300 psia
- 'B' steam generator level indicated by LI-0752A is 67%
- PCS Pressure is 900 psia

Which of the following describes the actual level in 'B' steam generator?

- A. 56%
- B. 59%
- C. 62%
- D. 66%

LOI-20 NRC Licensing Exam

13

ID: 847995

Points: 1.00

A Station Blackout occurred 30 minutes ago.

The crew is evaluating indications to verify Natural Circulation is occurring:

- Pressurizer Pressure is 1700 psia
- Average Qualified CETs is 548°F
- Pressurizer level is 36%
- Auxiliary Feedwater is keeping each SG level at 40%

Given these conditions, complete the following statements:

If PCS temperatures are slowly lowering, then Natural Circulation is occurring if

• the PCS Loop Tcolds are between ___(1)___,

AND

• the PCS Loop Thots are between ___(2)___.

	<u>(1) Tcolds</u>	<u>(2) Thots</u>
A.	485°F and 495°F	520°F and 530°F
В.	485°F and 495°F	535°F and 545°F
C.	500°F and 510°F	520°F and 530°F
D.	500°F and 510°F	535°F and 545°F

LOI-20 NRC Licensing Exam

ID: 847996

Points: 1.00

(Reference Provided) A Loss of Offsite Power has occurred.

14

EOP-8.0 Loss of Offsite Power/ Forced Circulation Recovery is in progress at step 13b, which states:

• Corrected PZR level is greater than 20% (40% for degraded Containment) and controlled.

The following indications are noted:

- Containment Ambient Temperature is 250°F
- Pressurizer Pressure is 1000 psia
- LIC-0101A and 0101B indicate 60% PZR Level

Actual pressurizer level is closest to....

- A. 37%
- B. 46%
- C. 51%
- D. 59%

LOI-20 NRC Licensing Exam

ID: 847830

Points: 1.00

Given the following conditions with the plant at 65% power during Power Escalation:

• Preferred AC Bus Y-20 de-energizes

With NO operator action, then over the next 30 seconds the response of level in the Steam Generators is...

- A. A rises, and B lowers
- B. B rises, and A lowers
- C. BOTH rise

15

D. BOTH lower

LOI-20 NRC Licensing Exam

ID: 848010

Points: 1.00

The Plant was at 100% power with the following alignments:

- ED-17, Station Battery Charger No 3, is in service supplying the No 1 DC Bus
- ED-18, Station Battery Charger No 4, is in service supplying the No 2 DC Bus

FIVE minutes ago, the Plant experienced a Loss of Offsite Power

ALL systems and equipment responded as designed EXCEPT:

- 2400V bus 1C faulted and remains de-energized
- AC Supply Breaker (52-285) for ED-17, Station Battery Charger No 3, tripped and can NOT be reclosed

Given these conditions, complete the following statements:

Assuming NO operator actions,

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- DC Bus No 1 is currently powered from ___(1)___.
- DC Bus No 2 is currently powered from (2).
 - A. (1) ONLY Station Battery No 1 (2) ONLY Station Battery No 2
 - B. (1) ED-15, Station Battery Charger No 1, and Battery No 1
 (2) ONLY Station Battery No 2
 - C. (1) ONLY Station Battery No 1 (2) ED-18, Station Battery Charger No 4, and Station Battery No 2
 - D. (1) ED-15, Station Battery Charger No 1, and Station Battery No 1
 (2) ED-18, Station Battery Charger No 4, and Station Battery No 2

LOI-20 NRC Licensing Exam

ID: 848599

Points: 1.00

While at 100% power, entry conditions for AOP-35, Loss of Service Water, were met:

• Service Water Header Pressure is 43 psig

Below is an excerpt from AOP-35, Loss of Service Water, Section 5.0 IMMEDIATE ACTIONS:

© 1. VERIFY EK-1165, "NON CRITICAL SERV WATER LO PRESS" is clear.

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- 1.1 <u>IF</u> any of the following annunciators are in alarm, <u>THEN</u> **TRIP** the Reactor, if reset. Refer to EOP-1.0, "Standard Post-Trip Actions."
 - EK-0259, "EXCITER COOLER HI TEMP" (50°C)
 - PPC Úrgent Alarm, "EXC Field Cold Air RTD-31" (48°C)
 - PPC Urgent Alarm, " EXC Diode Cold Air RTD-32" (48°C)
- 1.2. <u>IF</u> the following occur, <u>THEN</u> **PERFORM** Attachment 1, "Break Condenser Vacuum":
 - Non-Critical Service Water has been isolated or lost
 - Exciter Cold Air Temperature is greater than 80°C or rising as indicated on REC-C11A-01, Generator Temperature Recorder

The reason for tripping the reactor per step 1.1 is because ___(1)___.

The reason for breaking condenser vacuum per step 1.2 is to ____(2)___.

- A. (1) exciter damage occurs within 10 seconds (2) protect the condenser from overpressure
- B. (1) exciter damage occurs within 10 seconds
 - (2) minimize the amount of time the exciter is subjected to overheating conditions
- C. (1) the heat load in containment needs to be reduced to raise available cooling to other service water loads
 - (2) minimize the amount of time the exciter is subjected to overheating conditions
- D. (1) the heat load in containment needs to be reduced to raise available cooling to other service water loads
 - (2) protect the condenser from overpressure

LOI-20 NRC Licensing Exam

ID: 848572

Points: 1.00

The Plant is at 825 MWe:

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• Generator Hydrogen pressure is 75 psig

A grid disturbance occurred due to severe weather in the area resulting in:

- Generator reactive load is 225 MVAR OUT
- The following annunciators are LIT
 - EK-0303, "VOLTAGE REGULATOR LIMITER OPERATION"
 - o EK-0310, "GENERATOR VOLTAGE REG TRIP"

Initial attempts to clear the alarms per the ARPs are unsuccessful.

Given these conditions, complete the following statements:

When using the DC Adjuster under these conditions:

- the Automatic Regulator Limits ____(1)___ function.
- 390CS, Voltage Regulator Control Switch should be in the ____(2)___ position.

	<u>(1)</u>	<u>(2)</u>
A.	will	AUTO or ON
В.	will	OFF or TEST
C.	will NOT	AUTO or ON
D.	will NOT	OFF or TEST

LOI-20 NRC Licensing Exam

ID: 853531

Points: 1.00

The plant is at 70% power, with the controlling group of Regulating Rods at 120 inches withdrawn.

- One of the rods in this controlling group drops to the bottom of the core.
- The reactor remains critical.

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Given these conditions, complete the following statements:

- If NO operator action is taken, the average indicated Reactor Power (NI-5, 6, 7, 8) will stabilize at a level ____(1)___ the power level prior to the dropped rod.
- In accordance with AOP-5, Control Rod Drop, the operators must ____(2)____ to maintain Tave-Tref mismatch within the prescribed band.

	<u>(1)</u>	<u>(2)</u>
Α.	equal to	dilute the PCS
В.	equal to	lower turbine load
C.	lower than	lower turbine load
D.	lower than	dilute the PCS

LOI-20 NRC Licensing Exam

20	ID: 852018	Points: 1.00	
 A reactor start up is in progress. Initial readings were taken at 1000:00 Then rods were withdrawn, and rod motion stopped At 1015:00, 1/M plot was performed 			
The following Nuclear Instrument	readings are obtained:		
Nuclear Instrument	Initial Reading	1/M Plot Reading	
NI-1A, Source Range	3.0 cps	290 cps	
NI-2A, Source Range	3.3 cps	360 cps	
NI-3A, Wide Range	1.2 x 10E-7% power	9.5 x 10E-5% power	
NI-4A, Wide Range	1.3 X 10E-7% power	9.5 x 10E-6% power	

The overlap response of the Nuclear Instrument that is outside of procedural requirements is:

- A. NI-1A, Source Range
- B. NI-2A, Source Range
- C. NI-3A, Wide Range
- D. NI-4A, Wide Range

LOI-20 NRC Licensing Exam

ID: 848052

Points: 1.00

The Plant was at 100% power,

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- AOP-6, Loss of Condenser Vacuum, has been entered, due to P-39A, Cooling Tower Pump trip
- Attachment 1, Cooling Tower Pump Trip actions, are in progress

Given these conditions and in accordance with AOP-6, Attachment 1...

- ENSURE ___(1) MV-AE111, 'A' Secondary Air Ejector Steam Supply
- ENSURE ____(2) MV-AE117, 'A' Secondary Air Ejector Suction

(1)	(2)
-----	-----

- A. OPEN CLOSED
- B. CLOSED OPEN
- C. OPEN OPEN
- D. CLOSED CLOSED

LOI-20 NRC Licensing Exam

ID: 848584

Points: 1.00

T-101A, Waste Gas Decay Tank, develops a leak on its manway.

The Radiation Monitor that will indicate this release FIRST is...

A. RIA-1113, Waste Gas

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- B. RIA-2326, Stack Gas Effluent
- C. RIA-1809, Radwaste Ventilation
- D. RIA-1810, East Safeguards Equipment Room

LOI-20 NRC Licensing Exam

ID: 848600

Points: 1.00

The plant was just tripped from 100% power,

23

- Conditions in the Main Control Room degrade to the point where Evacuation is required.
- After leaving the Main Control Room, Breaker 152-105, the normal feed breaker to Bus 1C trips on OVERCURRENT / LOCKOUT.
- NO Emergency Diesel Generators automatically start due to UV relay failures.

Given these conditions, complete the following statements:

- EDG 1-1 ___(1)___ be started from the local control panel in the Emergency Diesel Generator Room.
- Starting EDG 1-1 (2) cause Breaker 152-107, EDG output breaker, to AUTOMATICALLY close.

<u>(1)</u>	<u>(2)</u>
------------	------------

- A. can will
- B. can will NOT
- C. can NOT will
- D. can NOT will NOT

PLP - 2018 NRC EXAM

ACTIONS\EXPECTED RESPONSE

- **VERIFY** the interlock mechanism is 8. **OPERABLE** in each Containment Air Lock.
- affected air lock within...
- 8.2 CAUTION TAG the outer door handwheel of the affected air lock

When the interlock mechanism of a Containment Air Lock is NOT OPERABLE, the reason for hanging a CAUTION Tag on the outer door handwheel of the affected air lock in Step 8.2 is to ensure ___(2)___.

Page: 24 of 100

- Α. (1) is NOT (2) ONLY one door on the affected air lock is opened at a time
- Β. (1) is NOT (2) an OPERABLE door is verified locked closed
- C. (1) is (2) ONLY one door on the affected air lock is opened at a time
- D. (1) is (2) an OPERABLE door is verified locked closed

Conditions have arisen that may require entry and performance of AOP-32, Loss of Containment Integrity.

The following are excerpts from steps 3 and 8 of the procedure:

24

ACTIONS\EXPECTED RESPONSE

- 3. DETERMINE AND PERFORM required procedure steps
 - Inoperable containment isolation valve(s) in a • path with two containment isolation valves (Steps 4 through 5)
 - Inoperable containment isolation valve in a path with one containment isolation valve and a closed system (Step 6)
 - Failed containment air lock (Steps 7 through 9)

An INOPERABLE Main Steam Isolation Valve (MSIV) (1) addressed by the actions of this procedure.

EXAMINATION

LOI-20 NRC Licensing Exam

ID: 848590

8.1 **ENSURE** an OPERABLE door is closed on the

RESPONSE NOT OBTAINED

RESPONSE NOT OBTAINED

Points: 1.00

LOI-20 NRC Licensing Exam

ID: 848614

The plant has been tripped from 100% power due to a LOCA.

An Inadequate Core Cooling condition exists and the operators have implemented Once Through Cooling in accordance with EOP-9.0 Functional Recovery.

- BOTH HPSI pumps (P-66A and P-66B) are available and operating
- ALL Charging Pumps (P-55A, P-55B, and P-55C) are operating
- ALL PCPs are stopped

25

Given these conditions, complete the following statements:

- The position of the PZR PORV BLOCK valves for these conditions is ___(1)___ OPEN.
- If P-66B were to trip, the operator will ____(2)____.

	<u>(1)</u>	<u>(2)</u>
Α.	вотн	maintain any open PORV OPEN
В.	BOTH	CLOSE at least one PORV
C.	ONLY ONE	maintain any open PORV OPEN
D.	ONLY ONE	CLOSE at least one PORV

Points: 1.00

LOI-20 NRC Licensing Exam

ID: 848645

Points: 1.00

Given the following conditions:

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- The Plant is at 100% power
- Tave is stable at 560°F
- PCS pressure is stable at 2060 psia
- NO dilution or boration activities are in progress

The following data has been collected:

Parameter	<u>1000:00</u>	<u>1012:00</u>
PZR Level	57.9%	58.5%
VCT Level	71.0%	68.5%
RIA-0631, Off Gas monitor	20 cpm	25 cpm
RIA-0707, S/G BD monitor	360 cpm	350 cpm
Containment Sump Level	Stable	Rising

Given these conditions, complete the following statements:

- The estimated PCS leak rate is ___(1)___ gpm.
- The NCO-T should recommend entering ____(2)____.

	<u>(1)</u>	<u>(2)</u>
A.	<u>></u> 4	AOP-24, Steam Generator Tube Leak
В.	<u>></u> 4	AOP-23, Primary Coolant Leak
C.	< 4	AOP-23, Primary Coolant Leak
D.	< 4	AOP-24, Steam Generator Tube Leak

LOI-20 NRC Licensing Exam

ID: 851771

Points: 1.00

A transient has occurred resulting in the implementation of EOP-9.0, Functional Recovery Procedure. The following procedure step is in progress:

Safety Function: Maintenance of Vital DC Power Success Path: Battery Chargers/Station Batteries Resource Tree: B

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- 4. VERIFY the following on ED-10L/ED-10R DC Bus:
 4.1 PUSH 72-01, Isolation Breaker To DC Battery NO. 1 ED-01 (Shunt Trip Breaker.) LOCATION: ED-11A behind 1C Bus
 Any faults are isolated
 4.2 REFER TO AOP-41, "Alternate Safe Shutdown Procedure."
 - Voltage greater than 105 volts

If ED-10L/ED-10R DC Bus is 100 volts, complete the following statements:

After a local operator completes step 4.1

- DG 1-1, Emergency Diesel Generator, ___(1)___ able to be manually started.
- DG 1-1, ___(2)___ able to field flash.

	<u>(1)</u>	<u>(2)</u>
Α.	is	is
В.	is	is NOT
C.	is NOT	is
D.	is NOT	is NOT

LOI-20 NRC Licensing Exam

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ID: 848820

Points: 1.00

Control rod drop testing is being performed.

- ZERO Power Mode Bypass is in operation
- 4 PCPs are operating

Consider each of the following situations separately:

- Situation 1: P-50A, Loop 1A PCP trips. A reactor trip ____(1)___ occur.
- Situation 2: P-50A, Loop 1A PCP trips AND ONE of the Wide Range Nuclear Instruments drifts over ten minutes to an output of 0.01% power. The reactor ____(2)___ trip.
 - (1)
 (2)

 A.
 does
 does
 - B. does does NOT
 - C. does NOT does
 - D. does NOT does NOT

LOI-20 NRC Licensing Exam

ID: 848710

Points: 1.00

The plant is at 100% power with normal single charging and letdown in service.

Consider each of the following situations independently.

Situation 1:

29

 Opening MO-3064, HPSI Train 2 Loop Injection valve, results in TICA-0201, Regen Heat Exchanger Temperature Indicator ____(1)____.

Situation 2:

• Opening CV-2117, PZR Aux Spray valve, results in ___(2)___ flow being returned to the PCS Cold leg.

	<u>(1)</u>	<u>(2)</u>
A.	remaining stable	less
В.	remaining stable	more
C.	rising	less
D.	rising	more

LOI-20 NRC Licensing Exam

ID: 848810

Points: 1.00

The plant is at 100% power with double charging aligned using P-55A, and P-55C Charging pumps.

- CV-2003, Letdown Orifice Stop valve is OPEN with its handswitch in AUTO
- CV-2004, Letdown Orifice Stop valve is OPEN with its handswitch in OPEN
- PIC-0202, Intermediate Letdown Pressure Controller is failed 'AS IS'

Which of the following operations will result in exceeding the maximum design letdown flow through the demineralizers as indicated on FIC-0202, Letdown Flow, while operating at 100% power?

- A. Opening CV-2005, Letdown Orifice Stop valve
- B. Opening CV-2002, and CV-2202, Letdown Orifice Bypass valves
- C. RV-2006, Letdown Relief valve fails open
- D. RV-2013, Low Pressure Letdown line Safety Relief valve, fails open

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LOI-20 NRC Licensing Exam

31

ID: 847827

Points: 1.00

The Plant is in a solid condition on Shutdown Cooling:

• CV-3006, SDC HX Bypass Valve, is throttled as needed.

The air line to CV-3006 becomes damaged such that NO operating air is supplied.

Given these conditions, complete the following statements:

With NO operator action,

- CV-3006 ___(1)___.
- ONE minute after the air line was damaged, PCS pressure has ___(2)___.

<u>(1)</u> <u>(2)</u>

- A. OPENS risen
- B. OPENS lowered
- C. CLOSES risen
- D. CLOSES lowered

LOI-20 NRC Licensing Exam

ID: 849650

Points: 1.00

The plant has been tripped from 100% power due to a LOCA. EOP-4.0, LOCA, is in progress and the crew is trying to determine if SI Throttling Criteria are met.

The Pressurizer Level, S/G Heat Removal, and RVLMS requirements are ALL met. •

They note the following:

32

- **TWO PCPs** •
 - running Pressurizer Pressure 1200 psia 539°F
- Average Qualified CETs •
- TI-0112HC, Loop 1 Th 536°F •
- TI-0112HD, Loop 1 Th 535°F •
- TI-0112CC, Loop 1 Tc 531°F
- TI-0112CD, Loop 1 Tc 531°F •

SMM-0114, Subcooled Margin Monitor is indicating the following margins:

- 20°F •
- 242 psi

Given these conditions, complete the following statements:

- HPSI flow ____(1)___ be throttled. •
- The indication on SMM-0114 is ____(2)____. •

	<u>(1)</u>	<u>(2)</u>	
A.	can	accurate	

- Β. too low can
- C. can NOT too low
- D. can NOT accurate

LOI-20 NRC Licensing Exam

ID: 847829

Points: 1.00

The plant was tripped from 100% power due to a LOCA.

33

- The Safety Injection Tanks (SIT) are expected to start injecting at a PCS Pressure of ___(1)___ psia.
- If while implementing EOP-4.0, Loss of Coolant Accident Recovery, Pressurizer Pressure is controlled and a controlled PCS cooldown is in progress, the SITs should be isolated or vented when PZR Pressure FIRST reaches ___(2)___ psia.

	<u>(1)</u>	<u>(2)</u>
A.	320	250-200
B.	320	350-300
C.	250	250-200
D.	250	350-300

LOI-20 NRC Licensing Exam

ID: 846870

Points: 1.00

At time 1000:00, with the Plant operating at 100% power,

• LIA-0116, T-73 Quench Tank level is 72%

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- PIA-0116, T-73 Quench Tank Pressure is 3 psig and rising at 3 psi / minute
- SS-0116, Pressurizer Quench Tank PI Range Selector is in NARROW position

Given these conditions complete the following statements:

- At 1002:00, EK-0732, QUENCH TANK HI PRESS, ___(1)___ in alarm.
- It will take ____(2)____ 25 minutes until the quench tank rupture disc blows.

	<u>(1)</u>	<u>(2)</u>
A.	is	less than
В.	is NOT	less than
C.	is NOT	more than

D. is more than

LOI-20 NRC Licensing Exam

ID: 846871

Points: 1.00

The plant is at 100% power

• Breaker 152-107, Diesel Generator (DG) 1-1 to Bus 1C is racked to disconnect for cleaning and repair

At time 1000:00

35

- A differential current actuation condition at the Safeguards Transformer causes breaker 152-401, Safeguards Transformer 1-1 Incoming Breaker, to open
- Breaker 152-202, Startup Transformer 1-2 to Bus 1D, fails to close

Given these conditions, with NO other operator actions, which of the following, if any, is energizing P-52A, Component Cooling Pump?

- A. Diesel Generator 1-2
- B. Startup Transformer 1-2
- C. Station Power Transformer 1-2
- D. P-52A is de-energized

LOI-20 NRC Licensing Exam

ID: 846918

During a power escalation a transient occurs which causes Pressurizer pressure to change to 2075 psia.

If all equipment is functioning properly, the expected indications for the in service Pressurizer Pressure Controller are:

- Process Indication is ___(1)___ Setpoint Indication
- Output Signal is ___(2)___ 66%

36

(1)(2)A.less thanless thanB.less thangreater thanC.greater thanless thanD.greater thangreater than
LOI-20 NRC Licensing Exam

ID: 847153

Points: 1.00

The Plant is at 60% power,

37

- EY-10, Preferred AC Bus #1, develops a problem and de-energizes
- AOP-12, Loss of Preferred Bus EY-10, is entered

Given these conditions, complete the following statements:

- BEFORE any operator action, the MINIMUM number of additional RPS channels that must reach a trip setpoint on RPS to cause a Reactor Trip is ____(1)___.
- AFTER the affected RPS Channel is addressed per the AOP, the MINIMUM number of RPS channels that must reach a RPS trip setpoint to cause a Reactor Trip is ___(2)___.

	<u>(1)</u>	<u>(2)</u>
Α.	one	one
В.	one	two
C.	two	one
D.	two	two

LOI-20 NRC Licensing Exam

ID: 847154

Points: 1.00

(Reference provided)

The plant is at 30% power,

• The white high power rate pre-trip bistable unit light on the RPS panel for channel 'A' has illuminated.

Given these conditions complete the following statements:

- A cause for the bistable trip unit light to illuminate at this power level is a(n) ___(1)___.
- After the condition clears, the bistable light is reset by ___(2)___.

	<u>(1)</u>	(2)
A.	Start-up rate = 1.5 DPM	bypassing the channel with the keyswitch
В.	Start-up rate = 1.5 DPM	depressing the two lamp pushbutton
C.	ASI = -0.56	depressing the two lamp pushbutton
D.	ASI = -0.56	bypassing the channel with the keyswitch

LOI-20 NRC Licensing Exam

ID: 847828

Points: 1.00

While the plant was at 100% power, PT-0102A, Pressure Transmitter that provides input to RPS and ESF for Pressurizer Pressure Channel A failed.

• RPS Channel 'A' has been bypassed

39

Now, the Plant is being cooled down and depressurized in preparation for a refueling outage:

- The Actuation Logic Channels for Safety Injection Signal (SIS) have been manually BLOCKED per GOP-9, MODE 3 > 525°F to MODE 4 or MODE 5 CHECKLIST.
- A failure of the Pressurizer pressure controller causes PCS pressure to rise from 1550 psia to the following:
 - A Channel Failed Low
 - B Channel 1685 psia
 - C Channel 1685 psia
 - D Channel 1700 psia

Assuming NO accidents, as the PCS cool down and depressurization continues and pressure is intentionally lowered to 100 psia, Safety Injection...

- A. can NOT be actuated manually.
- B. will automatically actuate on BOTH trains.
- C. will automatically actuate on ONLY one train.
- D. will NOT automatically actuate on EITHER train.

LOI-20 NRC Licensing Exam

ID: 849651

Points: 1.00

Which of the following Engineered Safeguards Features (ESF) Instrument Channels has a built-in bypass capability that uses a key operated switch (similar to the RPS Trip Channel Bypasses)?

A. Containment High Pressure (CHP)

- B. Containment High Radiation (CHR)
- C. Main Steam Isolation Signal (MSIS)
- D. Auxiliary Feedwater Actuation Signal (AFAS)

LOI-20 NRC Licensing Exam

ID: 847311

Points: 1.00

Plant is at 100% power in mid-summer.

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- Outside air temperature is 98°F
- Service Water Pumps P-7A and P-7B are in service
- Service Water Pump P-7C is in Standby
- EK-1132, "SERVICE WATER PUMP P-7A BASKET STR HI dP", has annunciated
- 'B' Critical Service Water header pressure is 49 psig
- 'A' Critical Service Water Header is 50 psig
- Containment Cooling system components are in normal operating alignment with ALL components OPERABLE and available

What action(s) should be taken?

- A. Start the third Service Water Pump, P-7C
- B. Close CAC VHX-4 outlet Bypass, CV-0843
- C. Open CAC VHX-4 outlet control valve, CV-0867
- D. Start Containment Cooling Fans V-4A and V-4B

LOI-20 NRC Licensing Exam

ID: 847174

Points: 1.00

The plant is at 100% power, when a transient occurred resulting in an SIAS and a Loss of Offsite Power.

At time 1000:00,

42

- ONLY the DBA Sequencer from the SIS RIGHT channel starts operating
- Containment Pressure is 10 psig

With NO operator action, which Containment Spray (CS) Pump(s) is / are operating at 1006:00?

- A. CS pump P-54A ONLY
- B. CS pumps P-54B and P-54C ONLY
- C. CS pumps P-54A and P-54C ONLY
- D. CS pumps P-54A, P-54B and P-54C

LOI-20 NRC Licensing Exam

ID: 847312

Points: 1.00

The Plant is at 100% power.

43

- A failure of the input to PIC-0511, Turbine Bypass Valve controller, CV-0511, Turbine Bypass Valve (TBV), has occurred
- CV-0511 has been closed by placing PIC-0511 in MANUAL with a zero output signal
- HIC-0780A, Steam Dump controller is in AUTO
- The TBV is NOT isolated

If a Reactor Trip were to occur now, the quick open feature would cause ____(1)___ to open.

- A. ONLY the TBV
- B. ONLY the ADVs
- C. BOTH the ADVs and the TBV
- D. NEITHER the ADVs NOR the TBV

LOI-20 NRC Licensing Exam

ID: 847313

Points: 1.00

Given the following:

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- The Plant is at 100% power
- A steam line break occurs OUTSIDE the Containment Building UPSTREAM of CV-0510, 'A' S/G MSIV
- 'A' S/G Pressure indicates 475 psia
- 'B' S/G Pressure indicates 850 psia

Which of the following describes the expected response of the MSIVs and Feed Regulating Valves (FRVs) to this event?

- A. BOTH 'A' and 'B' S/G MSIVs close. BOTH 'A' and 'B' S/G FRVs close.
- B. BOTH 'A' and 'B' S/G MSIVs close. ONLY 'A' S/G FRV closes.
- C. ONLY 'A' S/G MSIV closes. BOTH 'A' and 'B' S/G FRVs close.
- D. ONLY 'A' S/G MSIV closes. ONLY 'A' S/G FRV closes.

LOI-20 NRC Licensing Exam

ID: 847310

Points: 1.00

A plant power escalation is in progress, with the following alignments:

- LIC-0701/LIC-0703, S/G Level Indicating Controllers are in AUTO
- BOTH MFW pumps are at 3900 RPM each

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- HIC-0525, Feedwater Control Mode Selector, is in MANUAL
- HIC-0526/HIC-0529, MFW Pump Speed Controllers are in MANUAL (Controller Span 0-6000 RPM)
- The red pointers and the blue pointers on the HIC-0526 and HIC-0529 are matched
- SG levels are stable at program value
- Feedwater pump discharge pressure is 160 psi greater than Steam Generator (S/G) pressure

On an Individual Speed Controller, should the Programmed Function (PF) light be flashing? If NOT, what action is necessary to cause it to start flashing?

- A. YES; The PF light should be flashing.
- B. NO; LOWER Main Feed Pump Speed
- C. NO; RAISE Main Feed Pump Speed
- D. NO; RAISE FW/SG Delta Pressure

LOI-20 NRC Licensing Exam

ID: 847236

Points: 1.00

Given the following conditions:

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- EOP-7.0, 'Loss of All Feedwater', actions are in progress
- E-50A, 'A' S/G level is -130% and lowering at 2% / minute
- E-50B, 'B' S/G level is -78% and lowering at 2% / minute

Feedwater flow has just become available, but due to valve control issues, is available ONLY at flow rates of 350 gpm or more.

Complete the following statements:

- Feeding at flow rates of 350 gpm should be commenced to S/G ___(1)___.
- The risk of feeding the OTHER S/G at 350 gpm is ___(2)___.

	<u>(1)</u>	<u>(2)</u>
A.	А	causing significant tube bundle damage
В.	В	causing significant tube bundle damage

- C. A challenging the PCS cooldown limits
- D. B challenging the PCS cooldown limits

LOI-20 NRC Licensing Exam

ID: 847257

Points: 1.00

The Plant is in MODE 1.

- The Technical Specification volume requirement of LCO 3.7.6 Condensate Storage and Supply is met if there is a minimum of at least ____(1)___ gallons of useable volume in the designated tank(s).
- A volume measured at 85% in EACH tank (T-2, CST and T-81, PMST) ___(2)___ meet the MINIMUM volume required by SHO-1.

	<u>(1)</u>	<u>(2)</u>
A.	100,000	does
В.	100,000	does NOT
C.	250,000	does
D.	250,000	does NOT

LOI-20 NRC Licensing Exam

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ID: 848150

Points: 1.00

The plant is at 90% power.

Preferred AC Bus EY-30 is to be placed on the Bypass Regulator in accordance with SOP-30, Station Power.

For this evolution, complete the following statements:

- In accordance with this procedure Emergency Diesel Generator ____(1)___is to be considered INOPERABLE.
- Although NO power interruption to EY-30 is expected to occur, if EY-30 did momentarily lose power then RPS Breaker 42-2 ____(2)____ trip.

	<u>(1)</u>	<u>(2)</u>
Α.	1-1	would NOT
В.	1-1	would
C.	1-2	would NOT
D.	1-2	would

LOI-20 NRC Licensing Exam

ID: 851907

Points: 1.00

The Plant has just been synchronized to the grid with power at 10% when the following occurs:

- EK-0547, 125V DC Bus Ground annunciates
- The 250 amp fuses supplying ED-21-2, 125 VDC Distribution Panel, blow and de-energize ED-21-2.

Given these conditions, complete the following statements:

• ___(1)___ CLOSES.

- The required action(s) is/are to ____(2)____.
 - A. (1) CV-1359, Non-critical Service Water Isolation
 - (2) Trip the Reactor
 - B. (1) CV-1359, Non-critical Service Water Isolation
 (2) Trip the Turbine ONLY
 - C. (1) CV-2099, PCP Controlled Bleedoff Containment Isolation
 - (2) Trip the Reactor and all Primary Coolant Pumps
 - D. (1) CV-2099, PCP Controlled Bleedoff Containment Isolation
 - (2) Verify Controlled Bleedoff pressure is < 140 psig

LOI-20 NRC Licensing Exam

ID: 848151

Points: 1.00

The Plant is at full power:

50

- Fuel Oil Transfer Pump P-18B is tagged out for maintenance
- Due to Chemistry sampling, D/G 1-2 Fuel Oil Day Tank T-25B level has lowered
- Fuel Oil Transfer Pump P-18A has automatically started and is pumping fuel oil to T-25B

While this fuel oil transfer is in progress the following occurs:

- A Loss of All Offsite Power occurs
- D/G 1-1 FAILS to automatically start and will NOT start
- manually D/G 1-2 starts and loads per design

Given these conditions, complete the following statement:

Fuel oil transfer to T-25B...

- A. occurs ONLY after manually re-energizing MCC-2.
- B. occurs ONLY after manually re-energizing MCC-8.
- C. automatically occurs as part of the D/G 1-2 loading sequence.
- D. is occurring by gravity feed from T-10A, Fuel Oil Storage Tank, ONLY.

LOI-20 NRC Licensing Exam

ID: 850890

Points: 1.00

Emergency Diesel Generator (EDG) 1-1, is operating in PARALLEL with its bus for the monthly surveillance.

- ALL switches are appropriately aligned in accordance with the governing procedure(s) MO-7A-1, Emergency Diesel Generator 1-1.
- One of the loads on the bus trips

Given these conditions, complete the following statements:

Immediately after the load trips,

- the Speed of EDG 1-1 __(1)___.
- the Voltage of EDG 1-1 ___(2)___.

(1) Speed	(2) Voltage
-----------	-------------

- A. rises rises
- B. rises lowers
- C. lowers rises
- D. lowers lowers

LOI-20 NRC Licensing Exam

ID: 848152

Points: 1.00

Digital Rate meters in the Process Liquid Monitor and Gaseous Process Monitoring Systems ___(1)___ have a CHECK SOURCE Function.

When the HIGH Pushbutton on the operating Analog Linear Rate Meter, RIA-1809, Waste Gas Plenum Radiation Monitor, is illuminated it means ____(2)___.

	<u>(1)</u>	(2)
A.	do	depressing this button RESETS the High alarm
B.	do NOT	depressing this button RESETS the High Alarm
C.	do	the monitor reading is (or was) above the HIGH Setpoint
D.	do NOT	the monitor reading is (or was) above the HIGH Setpoint

LOI-20 NRC Licensing Exam

ID: 848153

Points: 1.00

The plant is at 100% power.

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• P-7A, Service Water System (SWS) pump trips on an overcurrent condition

Given these conditions, complete the following statements:

- The Service Water System Train associated with the Right Safeguards Electrical Distribution Train includes the SWS pump ___(1)___.
- With P-7A tripped as described, entering LCO 3.7.8 Service Water System, ___(2)___ required.

	<u>(1)</u>	<u>(2)</u>
A.	7C	is
В.	7B	is
C.	7C	is NOT
D.	7B	is NO

LOI-20 NRC Licensing Exam

ID: 848156

Points: 1.00

The plant is at 100% power

54

- A loss of instrument air has occurred, and the following annunciators are in alarm:
 - EK-1101, CONTAIMENT INSTR AIR LO PRESS
 - EK-1102, INSTRUMENT AIR LO PRESS
 - EK-1103, SERVICE AIR LO PRESS

AOP-37, Loss of Instrument Air has been entered

- All Instrument Air Compressors are running,
- Air header pressure is 30 psig and lowering

Given these conditions,

- Pressurizer Pressure will be maintained by __(1)___.
- Pressurizer level will be maintained by intermittent automatic operation of ____(2)____.

	(1)	(2)
A.	Manual control of heaters ONLY	P-55A, Charging Pump
В.	Manual control of heaters ONLY	P-55B or P-55C, Charging Pump
C.	Aux Spray and manual control of heaters	P-55A, Charging Pump
D.	Aux Spray and manual control of heaters	P-55B or P-55C, Charging Pump

LOI-20 NRC Licensing Exam

ID: 848163

Points: 1.00

The plant was shutdown for refueling 10 days ago.

• The plant is in MODE 6

55

- CORE ALTERATIONS are in progress
- Irradiated Fuel is being moved in the Spent Fuel Pool
- Equipment Hatch is closed and held in place by four bolts
- ONLY ONE door of the personnel air lock is closed
- ALL other Containment Penetrations meet the requirements of LCO 3.9.3, Containment Penetrations

The ONLY running Fuel Handling Area Fan has just tripped.

Given these conditions, complete the following statements:

- Tech Spec LCO 3.9.3, Containment Penetrations ___(1)___ met.
- Irradiated fuel movements in the Spent Fuel Pool ____(2)____.

	<u>(1)</u>	<u>(2)</u>
Α.	is	can continue
В.	is	must be suspended
C.	is NOT	must be suspended
D.	is NOT	can continue

LOI-20 NRC Licensing Exam

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ID: 851790

Points: 1.00

The plant is at 100% power.

The following alarm annunciates:

• EK-0954, Rod Drive Seal Leak Off HI Temp

The indication on TRA-150 for CRD-23 shows 201°F.

Given these conditions, complete the following statement:

• When a CRDM has excessive leak off, ___(1)___ is leaking into the ___(2)___.

	<u>(1)</u>	<u>(2)</u>
A.	CCW	Quench Tank
В.	CCW	Containment Sump
C.	PCS	Containment Sump
D.	PCS	Quench Tank

LOI-20 NRC Licensing Exam

ID: 848171

Points: 1.00

The reactor has been tripped from 60% power.

• A loss of Bus 1D occurs at the time of the trip

During performance of EOP 1.0, Standard Post Trip Actions, the Reactor Operator notes the following: At time 1000:00,

- PCS pressure is 1850 psia and is rising at 10 psia per minute.
- Pressurizer Level is 30% and rising at 1% per minute

Given these conditions, and assume NO manipulation of any PZR Controllers, complete the following statements:

At time 1003:00,

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• There are ___(1)___ PZR Heater Groups ON / Energized.

At time 1015:00,

• There are a MAXIMUM of ____(2)___ PZR Heater Groups ON / Energized.

	<u>(1) 1003:00</u>	<u>(2) 1015:00</u>
A.	NO	3
В.	NO	6
C.	SOME	3
D.	SOME	6

LOI-20 NRC Licensing Exam

ID: 852019

Points: 1.00

On ALL Power Range NIs (NI-5, 6, 7, and 8), Reactor power is STABLE at 6%.

- The Main Turbine is TRIPPED
- WR NI-1/3 starts drifting high at 1% per minute from 6%

In 10 minutes, with NO operator action,

- the Loss of Load Reactor Trip ___(1)___ BYPASSED.
- the Reactor ____(2)___ automatically TRIPPED.

	<u>(1)</u>	<u>(2)</u>
Α.	is	has
В.	is	has NOT
C.	is NOT	has
D.	is NOT	has NOT

LOI-20 NRC Licensing Exam

ID: 848173

Points: 1.00

The plant is at 100% power:

59

- ALL control switches for the CRHVAC system on panel C-11A are in the AUTO position with the exception of V-95, Air Handling Unit Fan, which is in the ON position
- Containment Pressure is 1.0 psig
- Containment Radiation level is 1 R/hr

At time 1000:00, an event occurs inside containment

- Containment Pressure is rising at 0.15 psig per minute
- Containment Radiation is rising by 0.7 R/hr every minute

Given these conditions, and assuming equipment operates as designed, complete the following statements:

At time 1015:00,

- Charcoal Filter Unit 26A ___(1) ___ in service.
- CRHVAC Compressor VC-11 (2) running.

<u>(1)</u>	<u>(2)</u>

Α.	IS	IS

- B. IS IS NOT
- C. IS NOT IS
- D. IS NOT IS NOT

LOI-20 NRC Licensing Exam

ID: 851872

Points: 1.00

Given the following conditions:

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- A loss of coolant accident occurs inside containment
- EOP-4.0, "Loss of Coolant Accident Recovery" is being implemented
- ALL PCPs have been tripped
- CETs temperatures are 550°F and rising on TRI-0101A1, A2, and TRI-0101B1, B2
- PCS Thots are 560°F
- PCS Tcolds are 518°F
- PCS Tave is 539°F
- PZR level is at 45% and rising
- PCS pressure is at 1100 psia and lowering
- BOTH channels of Reactor Vessel Level Monitoring System (RVLMS) have five red lights LIT

These conditions indicate that the fluid in the vessel is ...

- A. superheated.
- B. more than 1°F, but less than 10°F subcooled.
- C. more than 10°F, but less than 25°F subcooled.
- D. more than 25°F subcooled.

LOI-20 NRC Licensing Exam

ID: 848193

Points: 1.00

In accordance with SOP-27, Fuel Pool System:

- When filling the Spent Fuel Pool from the SIRWT, the MAXIMUM level should be NO higher than
 <u>(1)</u> the Southeast Skimmer.
- The reason the MAXIMUM level should NOT be exceeded is to ____(2)____.
 - A. 1) at the level of2) prevent unwanted SFP liner leakage
 - B. 1) 5 inches below2) prevent unwanted SFP liner leakage
 - C. 1) 5 inches below 2) allow fuel movement
 - D. 1) at the level of2) allow fuel movement

LOI-20 NRC Licensing Exam

ID: 848195

Points: 1.00

The plant was at 100% power, when a total loss of Instrument Air occurs

- The reactor was manually tripped
- 386AST, Turbine Trip Relay, does NOT actuate when the turbine trips
- Instrument Air header pressure to the ASDVs and TBV is near zero psig
- Tave is 542°F and STABLE

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- HIC-0780A, Steam Dump Controller demand is Steady at 2-3%
- ALL other equipment functions as designed

Given these conditions, complete the following statements:

- CV-0511, Turbine Bypass Valve, (TBV) ____(1)___ open and controlling Tave.
- To bring Tave to the requirements of EOP-1.0, Standard Post Trip Actions, (525°F-540°F) the (2) must be opened in MANUAL.
 - (1)(2)A.isTBVB.isASDVsC.is NOTTBVD.is NOTASDVs

LOI-20 NRC Licensing Exam

ID: N/A

Points: 0.00

Question 63 deleted from examination per revised answer key.

LOI-20 NRC Licensing Exam

ID: 851770

Points: 1.00

Note to examinee: There is a color image provided as a handout

With the Plant at 100% power, the following alarm is received in the Control Room during a Waste Gas Decay Tank batch release:

• EK-1364, GASEOUS WASTE MONITORING HI RADIATION

The Control Room Operator checks RIA-1113, Waste Gas Discharge Monitor, and sees the following:



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Based on the above indication or image provided, RIA-1113 indication is ______ (1) _____ and CV-1123, Waste Gas Decay Tank Discharge Valve, will _____(2) ____.

A.	(1)	high out of range
	(2)	remain open

- B. (1) high out of range (2) automatically close
- C. (1) low out of range (2) remain open
- D. (1) low out of range
 - (2) automatically close

LOI-20 NRC Licensing Exam

ID: 848219

Points: 1.00

Placing the cutout switches for the RIA-2316 and RIA-2317, Fuel Handling Area Radiation Monitors, to the "IN" position will:

- A. Enable automatic closure of specific Containment Isolation valves.
- B. Trip the Fuel Handling Area Supply Fan, V-7, on one out of two logic.
- C. Enable automatic closure of Fuel Handling Area exhaust dampers.
- D. Trip the Penetration and Fan Room Fans, V-78 and V-79, on high radiation.

LOI-20 NRC Licensing Exam

ID: 847460

Points: 1.00

Admin Procedure 4.00, Conduct of Operations requires:

- After completing a formal turnover of the 'At-The-Controls' responsibilities, the NCO ___(1)___ notify the Control Room Supervisor (CRS) when this transfer takes place.
- The operator designated as the At-The-Controls Operator (ATC) needs to discuss a procedure step with the Control Room Supervisor (CRS). If this discussion takes place at the PPC on the CRS' island, a turnover of the ATC position ___(2)___ occur first.

	<u>(1)</u>	<u>(2)</u>
A.	must	must
В.	must	does NOT have to
C.	do NOT have to	must
D.	do NOT have to	does NOT have to

LOI-20 NRC Licensing Exam

ID: 847657

Points: 1.00

A work group who has been granted access to the surveillance area and the At-The-Controls (ATC) area needs to go behind the control room panels and then return to the surveillance area.

Upon return,

- the work group ____(1)___ required to ask permission to enter the surveillance area.
- If the work group needs to enter the At-The-Controls (ATC) area, permission must be granted _____(2)____.

	<u>(1)</u>	<u>(2)</u>
A.	is	ONLY once
B.	is	each time of entry
C.	is NOT	ONLY once
D.	is NOT	each time of entry

LOI-20 NRC Licensing Exam

ID: 847462

Points: 1.00

EOP-1.0, Standard Post Trip Actions, is in progress.

- E-50A, 'A' Steam Generator level is 6% and rising slowly
- E-50B, 'B' Steam Generator level is -5% and lowering slowly
- P-8A, 'A' AFW pump is providing 165 gpm to each Steam Generator

During the Verbal Verifications, the CRS has asked:

• Do we have at least one Steam Generator with level between 5 and 70% with feedwater available?

In accordance with the Operations Standards Clarifications, the MINIMUM acceptable response to this direction is...

A. YES.

- B. YES, we have feedwater available at 165 gpm to each Steam Generator.
- C. YES, 'B' Steam Generator level is -5% and lowering slowly, being fed by P-8A Aux Feedwater Pump at 165 gpm to each Steam Generator.
- D. YES; 'A' Steam Generator level is 6% and rising slowly, 'B' Steam Generator is -5% and lowering slowly, being fed by P-8A Aux Feedwater Pump at 165 gpm to each Steam Generator.

LOI-20 NRC Licensing Exam

ID: 847501

Points: 1.00

What part of the procedure change process in Administrative Procedure 10.41, "Site Procedure Processes," ensures the usability of the revised procedure by the least experienced qualified worker?

A. Technical Review

- B. Validation Review
- C. Cross-Discipline Review
- D. On-Site Safety Review Committee

LOI-20 NRC Licensing Exam

ID: 847470

The following is an excerpt from Admin Procedure 4.02, Control of Equipment', Attachment 4:

SHIFTLY CONTROL ROOM COMPONENT CHECKLIST FOR OPERATIONS IN MODES 1, 2, AND 3

COMPONENT NUMBER	REQUIRED POSITION	SERVICE	INITIAL	COMMENTS/EXCEPTION S
MO-1043A Indication	CLOSED	Power Relief Valve Isolation Valve		
110 40400	01.005	PRV-1043B Power Operated		

When performing this checklist for the component listed as MO-1043A Indication, you observe the indication as 'OPEN'.

Given these conditions, complete the following statements:

- Without any further instruction, the 'INITIAL' block for MO-1043A Indication, should be ____(1)____. •
- This Checklist is to be completed ____(2)___.

	<u>(1)</u>	<u>(2)</u>
A.	left blank	at any time during each shift
В.	left blank	within 2 hours of the beginning of shift
C.	initialed with comments added	within 2 hours of the beginning of shift
D.	initialed with comments added	at any time during each shift

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ID: 850975

Points: 1.00

Note to examinee: RWP 2020-12345 is provided as a handout

Complete the following statements based on the information provided in RWP No. 2020-12345.

- You are the operator tasked with performing the manipulations of Valves 'A' and 'B'.
- You are signed onto RWP No. 2020-12345 and are now at the location of the valves.

After unlocking and closing valve 'A', some liquid is observed to be dripping from the stem of valve 'A', which is absorbed by the absorbent material in the bag.

- After this manipulation, you notice a tear in the outer glove of your right hand.
- You reopen and backseat valve 'A' and the liquid flow stops.
- You unlock and close valve 'B'.

71

The manipulations you performed ____(1)___ covered by this RWP.

A re-survey of the valve ____(2)___ required.

- <u>(1)</u> <u>(2)</u>
- A. ARE IS
- B. ARE NOT IS
- C. ARE IS NOT
- D. ARE NOT IS NOT

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ID: 850972

Points: 1.00

The Plant is at 50% power. A Containment Entry needs to be made. Placing one additional Letdown orifice on line, raises power by 9 MWth.

- The limit on the change in Heat Balance Power during a Containment Entry is ___(1)___% power.
- Raising letdown flow by placing an additional letdown orifice in service ____(2)___ violate the constant power requirements of the Containment Entry procedure.

<u>(1)</u>		<u>(2)</u>	
A.	0.5	does	
В.	2.0	does	
C.	0.5	does NOT	
D.	2.0	does NOT	
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ID: 847851

Points: 1.00

EOP-1.0, Standard Post Trip Actions, are in progress due to a LOCA

• Immediate Actions are complete

73

 During the performance of the first Operator Action, the NCO-R recognizes the need to trip all Primary Coolant Pumps (PCPs)

To meet the EOP Performance Standards in Attachment 15 of Admin Procedure 4.06, Emergency Operating Procedure Development and Implementation, the NCO-R will...

- A. immediately trip all four PCPs, and then report the action taken.
- B. announce Pressurizer pressure value, then wait for CRS to direct the action.
- C. announce the action to be taken, provide opportunity for intervention from the crew, and then trip all four PCPs.
- D. advocate the need to trip all four PCPs, obtain permission from the CRS, and then perform the action once permission is given.

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ID: 852017

Points: 1.00

Question 74 withheld from public disclosure due to security-related content.

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ID: 850991

Points: 1.00

At time 1000:00,

75

An event has occurred while you are assigned to the Main Control Room.

At time 1005:00

• The event has been initially classified as an Unusual Event, with no release in progress and you are to perform the duties of the communicator for the initial notifications of the Offsite Response Organizations (OROs).

If ALL the InForm machines are NOT in service, the FIRST Agency to contact is...

- A. Allegan County
- B. Berrien County
- C. Van Buren County
- D. State of Michigan

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ID: 848220

Points: 1.00

SRO ONLY

76

With the Plant at full power, a reactor trip occurs due to a loss of off-site power.

• During the actions of EOP-1.0, "Standard Post Trip Actions," a fire develops in the cable spreading room causing ALL Preferred AC Buses to DEENERGIZE.

- The location for controlling the plant is at ___(1)___.
- The appropriate procedure to mitigate this event is ___(2)___.

	<u>(1)</u>	(2)
Α.	Panel C-150/C-150A	EOP-3.0, "Station Blackout Recovery"
В.	Panel C-33	EOP-3.0, "Station Blackout Recovery"
C.	Panel C-33	EOP-9.0, "Functional Recovery Procedure"
D.	Panel C-150/C-150A	EOP-9.0, "Functional Recovery Procedure"

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77

ID: 848251

Points: 1.00

SRO ONLY

The plant is at 100% power.

At time 1000:00,

- Component Cooling Water (CCW) Surge tank level starts lowering
- CCW discharge pressure starts lowering
- AOP-36, Loss of Component Cooling Water is entered

At time 1005:00

 AOP-29, Primary Coolant Pump (PCP) Abnormal Conditions is entered due to low CCW flow and rising PCP temperatures causing alarms on P-50A, PCP

At time 1010:00,

- CCW to P-50A seal cooling has degraded to the point where imminent PCP Failure indications are present for P-50A
- P-50A Lower Guide bearing temperature is 184°F and rising
- P-50A vibrations are 35 mils and oscillating

- P-50A should be manually tripped ONLY after the reactor has been tripped and the ___(1)___ Safety Function is satisfied.
- After tripping ONLY P-50A, CV-2083, CV-2099, and CV-2191, Controlled Bleedoff valves should be ____(2)___.

<u>(1)</u>	<u>(2)</u>
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- A. Reactivity CLOSED
- B. Reactivity left OPEN
- C. Core Heat Removal CLOSED
- D. Core Heat Removal left OPEN

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ID: 848270

Points: 1.00

SRO ONLY

The plant has just established Shutdown Cooling (SDC) when the LPSI pumps were found to be steam bound.

- AOP-30, Loss of Shutdown Cooling, has been entered
- Highest PCS temperature has risen to 315°F
- BOTH Containment Spray (CS) pumps are available
- SIRWT is at 80%
- Containment is accessible

- When performing the step to ENSURE PCS Level is restored as high as possible, it ___(1)___ permissible to exceed Technical Specification Cooldown Limits.
- Using a Containment Spray (CS) pump to remove steam from a steam bound LPSI pump (2) make the CS pump inoperable.

	<u>(1)</u>	<u>(2)</u>
A.	is NOT	would
В.	is NOT	would NOT
C.	is	would
D.	is	would NOT

LOI-20 NRC Licensing Exam

79

ID: 848285

Points: 1.00

SRO ONLY:

A Steam Generator Tube Rupture has occurred on the 'A' Steam Generator. The appropriate EOP(s) are being performed:

- 'A' S/G has been isolated
- 'A' S/G pressure is 840 psia
- 'B' S/G pressure is 560 psia
- Pressurizer pressure is 960 psia
- Pressurizer level is 42%
- PCS temperature is 508°F
- 'A' S/G Level is 80% and rising

For these conditions, which of the following actions, regarding Pressurizer pressure, will the CRS direct?

- A. Raise Pressurizer pressure to 980 psia to re-establish adequate subcooling margin
- B. Raise Pressurizer pressure to 970 psia to prevent backflow dilution of the PCS
- C. Lower Pressurizer pressure to 755 psia to initiate backflow into the PCS
- D. Lower Pressurizer pressure to 935 psia to ensure Main Steam Safety Valves remain closed

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80

ID: 848302

Points: 1.00

(Reference Provided)

SRO ONLY

The plant is addressing a Loss Of All Feedwater per EOP-7.0.

At time 1000:00,

- ALL PCPs have been stopped
- 'A' S/G level is -75% and lowering at 5% per minute
- 'B' S/G level is -80% and lowering at 5% per minute
- BOTH S/G pressures are 300 psia and stable

At time 1002:00, discharge pressure of the in service condensate pump is 550 psia.

Given these conditions, which Feedwater Regulating Valve Bypass Valve position will be selected for use?

- A. 10%
- B. 20%
- C. 30%
- D. 40%

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81

ID: 848311

Points: 1.00

SRO ONLY:

The plant was at 100% power, when Instrument Air (IA) Header Pressure began to lower

At time 1000:00,

- Instrument Air (IA) header pressure was 79 psig
- The plant was tripped due to erratic response of equipment required for safe operations from lowering IA pressure
- Troubleshooting and repairs have begun

At time 1030:00,

• A high energy line break inside containment causes containment pressure to reach 4.2 psig

At time 1300:00,

• IA header pressure is 50 psig and still lowering

- Closing manual valves MV-CC712, CCW Supply to Containment and MV-CC713, CCW Return from Containment by ____(1)___ at the LATEST, is required by Technical Specifications.
- The closure of these manual valves is directed in ____(2)___.

	<u>(1)</u>	<u>(2)</u>
A.	1400:00	AOP-37, Loss of Instrument Air
В.	1400:00	AOP-36, Loss of Component Cooling Water
C.	1700:00	AOP-37, Loss of Instrument Air
D.	1700:00	AOP-36, Loss of Component Cooling Water

LOI-20 NRC Licensing Exam

ID: 851536

Points: 1.00

SRO ONLY:

82

The plant is holding at 24% power during a power escalation after a brief shutdown for maintenance.

• Rods are being balanced

The following two alarms come in simultaneously:

- EK-0905, Shutdown Rod Position Abnormal
- EK-0906, Incore Alarm

Given these conditions, complete the following statement.

• Annunciator ____(1) requires the EARLIEST action to ____(2) ____.

	<u>(1)</u>	<u>(2)</u>
A.	EK-0905	withdraw the rod to above 124 inches
В.	EK-0905	determine the LHR is within the COLR limits
C.	EK-0906	withdraw the rod to above 124 inches
D.	EK-0906	determine the LHR is within the COLR limits

LOI-20 NRC Licensing Exam

ID: 847672

Points: 1.00

SRO ONLY

83

The Plant is at 50% power with the following conditions:

- LIC-0101B, 'B' Channel PZR Level Controller, is in service in CASCADE
- P-55A, Charging Pump, is operating with P-55B and P-55C secured in Automatic
- CV-2003, Letdown Orifice Stop Valve, is in Automatic and open
- CV-2004 and CV-2005, Letdown Orifice Stop Valves, are in AUTO and closed
- SS-TAVE, Avg Temp Display Select Switch, on Panel C-02 is in the LOOP 2 position

Then, the following occurs:

- EK-0761, PRESSURIZER LEVEL HI-LO, annunciates
- EK-0967, LOOP 1/LOOP 2 TAVE DEVIATION, annunciates
- EK-0969, LOOP 2 TAVE / TREF GROSS DEVIATION, annunciates
- The setpoint meter (blue pointer) on LIC-0101B indicates 42%
- The process meter (red pointer) on LIC-0101B indicates 49%
- TI-0110, T_{AVE} Digital Temperature Indicator, on Panel C-02 indicates 515°F
- A valid POWER_PIP_DELTA_T reading on the PPC is 45%

Given these conditions, complete the following statements:

- For PDIL monitoring, the POWER_PIP_DELTA_T is ___(1)___.
- The procedure and action(s) to address these conditions are ___(2)___.
 - A. (1) OPERABLE

(2) alternate PZR Level Controller to LIC-0101A per AOP-22, Pressurizer Level Control Malfunctions

- B. (1) OPERABLE
 (2) select valid Tave channel with SS-Tave Selector Switch per AOP-27, Tave/Tref Controller Failure
- C. (1) INOPERABLE (2) alternate PZR Level Controller to LIC-0101A per AOP-22, Pressurizer Level Control Malfunctions
- D. (1) INOPERABLE
 (2) select valid Tave channel with SS-Tave Selector Switch per AOP-27, Tave/Tref Controller Failure

LOI-20 NRC Licensing Exam

ID: 851530

Points: 1.00

SRO ONLY:

84

The Plant is in Mode 5 for a maintenance outage.

• An UNPLANNED ENTRY into a Higher Risk Plant Operating States (HRPOS) is required.

- Any Hot Work in progress ____(1)____.
- LCO 3.0.9, which addresses situations where required barriers are unable to perform their related support functions and provides instructions and conditions for meeting the supported system LCOs ____(2)___ applicable to Fire Barriers.

	<u>(1)</u>	<u>(2)</u>
A.	must be stopped	is
В.	must be stopped	is NOT
C.	can continue	is
D.	can continue	is NOT

LOI-20 NRC Licensing Exam

85

ID: 850970

Points: 1.00

SRO ONLY

An event has occurred requiring a plant trip from 100% power Conditions are such that EOP-9.0, Functional Recovery Procedure, has been entered

- ALL PCPS are OFF
- Corrected PZR Level is 10%
- MSIVs are closed
- E-50A, 'A' S/G is completely depressurized
- ALL feedwater to 'A' S/G has been stopped

Following the current check of Safety Functions 15 minutes ago, it has been determined that the PCS cooldown rate has been exceeded, and the PCS is over subcooled.

- PZR Pressure is 1800 psia
- PCS Temperature is 400°F

What actions will the Control Room Supervisor direct the operators to perform to restore PCS to within the limits?

- A. Operate PZR PORVs to reduce PCS Pressure, and stop PCS cooldown for at least 45 minutes
- B. Operate PZR PORVs to reduce PCS Pressure, and continue PCS cooldown at less than 100°F per hour
- C. Control Charging and Letdown to reduce PCS Pressure, and stop PCS cooldown for at least 45 minutes
- D. Control Charging and Letdown to reduce PCS Pressure, and continue cooldown at less than 100°F per hour

LOI-20 NRC Licensing Exam

86

ID: 851561

Points: 1.00

SRO ONLY:

The plant is at 100% power with P-52C, Component Cooling Pump, in service.

At time 1000:00, the following annunciator alarms:

- EK-1167, Component Clg Pumps P-52A, P-52B, P-52C Trip
- Operators immediately determine P-52C tripped

At 1001:00

• P-52A auto-started

At time 1005:00, the following annunciator alarms:

• EK-1172, Component Clg Surge Tank T-3 Hi-Lo Level

At time 1008:00

• The CCW Surge Tank level issue results in isolating the CCW side of E-54B, CCW Heat Exchanger.

- Just prior to 1001:00, there ____(1)___ 2 trains of CCW OPERABLE.
- Isolating the CCW side of E-54B, CCW Heat Exchanger, ____(2)___ directed by AOP-36, Loss of Component Cooling.

(1)	(2)
	<u>1-1</u>

- A. are is
- B. are is NOT
- C. are NOT is
- D. are NOT is NOT

LOI-20 NRC Licensing Exam

ID: 851111

Points: 1.00

SRO ONLY:

87

The plant is in MODE 3 after a trip from 100% power. The PCS is at normal operating temperature and pressure.

• 2400 Volt AC Bus 1D develops a fault and is de-energized

- LCO 3.6.6, Containment Cooling Systems ACTION C for Less than 100% of the required post accident Containment Cooling Capability ___(1)___ required to be entered.
- The required support function of Containment Spray for the HPSI pumps ____(2)___ met.

	<u>(1)</u>	<u>(2)</u>
Α.	is NOT	is NOT
В.	is NOT	is
C.	is	is NOT
D.	is	is

LOI-20 NRC Licensing Exam

88

ID: 850971

Points: 1.00

SRO ONLY:

A LOCA has occurred that has resulted in the actuation of the Containment Spray System. The appropriate EOPs are being performed.

- If the pH of the containment sump was NOT buffered by Sodium Tetraborate then the radiological contribution of iodine to a containment atmosphere leak will be ____(1)____.
- If the SIRWT reaches 2% with an Active SIAS, and the CV-3030 and CV-3029, Containment Sump Isolation Valves fail to auto actuate, the procedure that addresses this alignment is EOP Supplement ____(2)___.

	<u>(1)</u>	<u>(2)</u>
A.	higher	42, Pre and Post RAS Actions
В.	higher	5, Checklist for Safeguards Equipment Following SIAS
C.	unaffected	42, Pre and Post RAS Alignment
D.	unaffected	5, Checklist for Safeguards Equipment Following SIAS

LOI-20 NRC Licensing Exam

ID: 851480

Points: 1.00

SRO ONLY:

89

The plant is in MODE 1, with the instrumentation issues listed below:

Instrument LI-0702, 'A' SG Narrow Range Level LI-0757B, 'A' SG Wide Range Level FI-0727A Aux Feedwater Flow to 'B' SG LI-0752D, 'B' SG Safety Channel Issue failed low failed high failed high failed low

Given these conditions:

- The number of INOPERABLE Post Accident Monitoring (PAM) Instrument(s) is ____(1)___.
 - A. one
 - B. two
 - C. three
 - D. four

LOI-20 NRC Licensing Exam

ID: 851810

Points: 1.00

SRO ONLY:

90

The plant is in MODE 3 after a trip from 100% power. The PCS is at normal operating temperature and pressure.

- 2400 Volt AC Bus 1C develops a fault and is de-energized
- EK-0532, Bus 1C or 1D Overcurrent Lockout, is in alarm
- Critical Service Water Header Pressure lowers to 42 psig

- The Tech Spec ACTION for the Condition where Less than 100% of the required post accident SWS Cooling Capability ____(1)___ required to be entered.
- Emergency Diesel Generator (DG) 1-1 should be ____(2)___.

<u>(1)</u>	<u>(2)</u>
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- A. is tripped
- B. is left running
- C. is NOT tripped
- D. is NOT left running

LOI-20 NRC Licensing Exam

91

ID: 851072

Points: 1.00

(Reference Provided)

SRO ONLY:

The plant is at 98% power, and GOP-5, Power Escalation is in progress

- Control Rods are fully withdrawn
- EK-0917, Rod Withdrawal Prohibit, annunciates
- There are NO Variable High Power Pre Trips active

• Investigation reveals a failure in the Rod Control System (DW10-K22, Rod Withdrawal Block Relay failed)

- The Rod Mode Select Switch is placed in 'EM OFF'
- Repairs are estimated to be completed in 10 hours

- The LCO to enter for this is ___(1)___.
- If the repairs are completed 8 hours from now, the General Operating Procedure (GOP) in progress is ____(2)____.
 - A. (1) LCO 3.1.1, Shutdown Margin (2) GOP-5 Power Escalation
 - B. (1) LCO 3.1.1, Shutdown Margin
 (2) GOP-8 Power Reduction to Mode 2 or Mode 3 > 525°F
 - C. (1) LCO 3.1.4, Control Rod Alignment (2) GOP-5 Power Escalation
 - D. (1) LCO 3.1.4, Control Rod Alignment
 (2) GOP-8 Power Reduction to Mode 2 or Mode 3 > 525°F

LOI-20 NRC Licensing Exam

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ID: 851070

Points: 1.00

SRO ONLY:

Irradiated Sources are being transferred in accordance with SOP-28, Fuel Handling System.

- After lowering the source lifting tool directly over the source to be removed, as the SRO you will direct ____(1)____ SFP Overhead Crane prior to closing the jaws of the lifting tool.
- The reason for this action is to prevent ____(2)____.
 - A. (1) de-energizing
 - (2) re-opening of the source lifting tool jaws
 - B. (1) energizing
 - (2) unintended lifting of neutron sources
 - C. (1) energizing
 - (2) re-opening of the source lifting tool jaws
 - D. (1) de-energizing
 - (2) unintended lifting of neutron sources

LOI-20 NRC Licensing Exam

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ID: 851052

Points: 1.00

SRO ONLY:

At time 1000:00,

With the plant at 100% power, it is noted that LCO 3.7.6, Condensate Storage and Supply, is NOT met because of volume.

Below is an excerpt from the ACTIONS portion of this Technical Specification:

ACTIONS

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. Condensate volume not within limit.	A.1 Verify OPERABILITY of backup water supplies.	4 hours <u>AND</u> Once per 12 hours thereafter

- The LATEST the OPERABILITY of the backup water supplies must be verified is ____(1)___;
- For subsequent performances of the Operability Verification of Backup Water Supplies, a 25% time extension ____(2)___ allowed.

	<u>(1)</u>	<u>(2)</u>
A.	1400	is NOT
B.	1400	is
C.	1500	is NOT
D.	1500	is

LOI-20 NRC Licensing Exam

94

ID: 847872

Points: 1.00

(Reference Provided)

SRO ONLY

The MAXIMUM allowable Linear Heat Rate (LHR) at the top of the peak powered fuel rod is ______ kW/ft.

- A. 6.11
- B. 9.16
- C. 14.21
- D. 15.28

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95

ID: 847882

Points: 1.00

SRO ONLY

It is day 15 of a refueling outage

- CORE ALTERATIONS are about to begin
- Equipment Hatch is open

The Fuel Handling Ventilation system is aligned as follows:

- V-7, Fuel Handling Area Supply Fan is OFF
- V-8A, Fuel Handling Exhaust Fan is ON
- V-8B, Fuel Handling Exhaust Fan is ON
- V-69, Fuel Handling Area Supply Fan is OFF
- V-70A, Fuel Handling Area Exhaust Fan is OFF
- V-70B, Fuel Handling Area Exhaust Fan is ON

In order to meet Technical Specification requirements before CORE ALTERATIONS can begin,

- ___(1)___ fans have to be started or stopped.
- The basis for the required fan alignment is to ____(2)___.

	<u>(1)</u>	(2)
Α.	2	allow Fuel Handling Building atmosphere flow to bypass the HEPA filter
В.	2	ensure all fuel handling areas exhaust to the HEPA filter
C.	3	ensure all fuel handling areas exhaust to the HEPA filter
D.	3	allow Fuel Handling Building atmosphere flow to bypass the HEPA filter

LOI-20 NRC Licensing Exam

96

ID: 847891

Points: 1.00

SRO ONLY

The Plant is in MODE 3

- The PCS Safety Limit has been violated
- PCS Pressure peaked at 3000 psia

The ACTIONS for this Safety Limit violation...

- A. require a MODE reduction to MODE 4 in order to perform the necessary engineering evaluation of PCS Integrity.
- B. require a MODE reduction to MODE 6, and when the first Reactor Vessel head bolt is less than fully tensioned, this safety limit no longer applies.
- C. do NOT require a MODE reduction because the PCS was hydro tested to 125% of design pressure (3125 psia) and that pressure was NOT reached.
- D. do NOT require a MODE reduction because reducing MODES would add further thermal gradient stress due to the cooldown to the existing pressure stress.

LOI-20 NRC Licensing Exam

ID: 847926

Points: 1.00

SRO ONLY

97

For 100% power conditions, which of the following conditions affecting the ability to makeup to the Primary Coolant System requires notification to the Nuclear Regulatory Commission?

- A. P-67A, LPSI pump, is INOPERABLE and will be restored in 60 hours.
- B. P-55B, Charging Pump, is INOPERABLE and will be restored in 4 days.
- C. T-82A, Safety Injection Tank, pressure is 180 psig and lowering. It will be restored to normal in 4 days.
- D. P-56A, Boric Acid Pump, spuriously started and was manually stopped. Repairs will require 68 hours.

LOI-20 NRC Licensing Exam

ID: 851010

Points: 1.00

SRO ONLY

98

A waste gas release is being planned for Waste Gas Decay Tanks, T-101A, T-101B and T-68C.

- Samples have been completed and analyzed per CH 6.22, "Sampling Waste Gas Decay Tank," and CH 6.23, "Evaluation and Release of Waste Gas Decay Tank."
- There are NO Operational or Maintenance needs driving the release of any Waste Gas Decay Tank

The following information is contained on the batch release forms for T-101A, T-101B and T-68C:

	<u>T-101A</u>	<u>T-101B</u>	<u>T-68C</u>
Isolation date	52 days ago	50 days ago	18 days ago
Isolation pressure	90 psig	91 psig	93 psig
Current pressure	93 psig	97 psig	95 psig

Which tank(s), if any, should be approved for release?

- A. ONLY T-101A
- B. ONLY T-68C
- C. ONLY T-101A and T-101B
- D. T-101A, T-101B, and T-68C

LOI-20 NRC Licensing Exam

ID: 850994

Points: 1.00

SRO ONLY:

99

The plant is tripped, after an accident in which the General Emergency Thresholds are exceeded.

- A General Emergency has just been declared.
- The State Emergency Operations Center is NOT yet activated.

The INITIAL Protective Action Recommendation (PAR) to be made to the State and Local authorities must be approved by the ____(1)___, and personally communicated to Van Buren county by ___(2)___.

	(1)	(2)
A.	Shift Manager	the Shift Manager
В.	Shift Manager	a qualified ENS Communicator
C.	Operations Manager	the Shift Manager
D.	Operations Manager	a qualified ENS Communicator

LOI-20 NRC Licensing Exam

100

ID: 850993

Points: 1.00

(Reference Provided)

SRO ONLY

The Plant was operating at full power when an event occurs. The Shift Manager determines that the Primary Coolant System barrier is lost and the Containment barrier is potentially lost.

Which of the following describes the Emergency Classification that would apply for these conditions?

- A. Unusual Event
- B. Alert
- C. Site Area Emergency
- D. General Emergency