

Examination KEY for: ILT 20-1 MNS RO NRC Exam

<i>Question Number</i>	<i>Answer</i>
1	C
2	D
3	C
4	D
5	B
6	A
7	D
8	C
9	C
10	A
11	C
12	C
13	A
14	A
15	D
16	D
17	A
18	C
19	B
20	D
21	B
22	B
23	C
24	C
25	D

Examination KEY for: ILT 20-1 MNS RO NRC Exam

<i>Question Number</i>	<i>Answer</i>
26	A
27	B
28	B
29	B
30	C
31	A
32	A
33	B
34	D
35	D
36	B
37	D
38	A
39	A
40	A
41	C
42	A
43	B
44	A
45	A
46	C
47	B
48	D
49	B
50	D

Examination KEY for: ILT 20-1 MNS RO NRC Exam

<i>Question Number</i>	<i>Answer</i>
51	A
52	D
53	A
54	A
55	C
56	A
57	C
58	D
59	A
60	B
61	B
62	A
63	D
64	B
65	C
66	C
67	A
68	C
69	C
70	B
71	B
72	B
73	C
74	A
75	D

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ILT 20-1 MNS RO NRC Examination

Question: 1
(1 point)

Given the following on Unit 1:

- Unit is at 40% RTP
- Power ascension in progress
- Turbine Controls in MW-IN

Subsequently:

- 1C NC pump trips

Based on the conditions above and assuming no operator action,

- 1) **Tcold** in the unaffected NC loops _____ stabilize at a lower value.
- 2) NC Loop 1C **delta T** will stabilize at a value _____ than the other NC loops delta Ts.

Which ONE (1) of the following completes the statements above?

- A. 1. will NOT
 2. lower
 - B. 1. will NOT
 2. higher
 - C. 1. will
 2. lower
 - D. 1. will
 2. higher
-

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ILT 20-1 MNS RO NRC Examination

Question: 2
(1 point)

Given the following on Unit 1:

- NCS Tavg is 215°F
- NCS pressure is 250 PSIG
- VCT pressure is 28 PSIG
- The 1A NC pump is to be started for a unit heatup

Subsequently:

- The 1A2 Oil Lift pump is started
- Oil Lift pressure is 580 PSIG

- 1) In accordance with OP/1/A/6150/002A (REACTOR COOLANT PUMP OPERATION) Attachment 1 (Startup and Operation), the MINIMUM required #1 Seal differential pressure for starting the NC pump _____ met.
- 2) Based on the conditions above, if the 1A NC PUMP SAFETY BKR "**START**" pushbutton is depressed, the pump _____ start.

Which ONE (1) of the following completes the statements above?

- A.
 1. is NOT
 2. will
 - B.
 1. is NOT
 2. will NOT
 - C.
 1. is
 2. will
 - D.
 1. is
 2. will NOT
-

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ILT 20-1 MNS RO NRC Examination

Question: 3
(1 point)

Given the following on Unit 1:

- Unit is at 75% RTP
- The U1 Boric Acid Tank (BAT) has been placed in Normal Recirculation per OP/1/A/6150/009 (BORON CONCENTRATION CONTROL)

Based on the conditions above,

- 1) the U1 BAT _____ available as a boration flowpath to the NC system.
- 2) SLC 16.9.9 (BORATION SYSTEMS FLOW PATH - OPERATING) requires that _____ of 3 boron injection flow paths be OPERABLE.

Which ONE (1) of the following completes the statements above?

- A.
 1. is
 2. one
- B.
 1. is NOT
 2. two
- C.
 1. is
 2. two
- D.
 1. is NOT
 2. one

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Question: 4
(1 point)

Given the following on Unit 2:

- Operations is shifting from the 2A NV pump to the 2B NV pump per OP/2/A/6200/001B, (CHEMICAL AND VOLUME CONTROL CHARGING)

In accordance with OP/2/A/6200/001B,

- 1) the DP between Seal Balance Line Pressure AND suction pressure must be less than or equal to a MAXIMUM of _____ PSID.
- 2) if DP is too high, the procedure requires _____ to be notified to evaluate pump performance.

Which ONE (1) of the following completes the statements above?

- A.
 1. 40
 2. Maintenance
 - B.
 1. 50
 2. Maintenance
 - C.
 1. 40
 2. Engineering
 - D.
 1. 50
 2. Engineering
-

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Question: 5
(1 point)

Given the following on Unit 1:

- Plant shutdown and cooldown to 100°F is in progress.
- NC System temperature 180°F.
- Both trains of ND are in service in accordance with station procedures.

The power supply to 1ND-1B (C NC Loop to ND Pumps) is ____ (1) ____ and the current status of its motor breaker is ____ (2) ____.

Which ONE (1) of the following completes the statement above?

- A. 1. 1EMXA4
 2. OPEN
 - B. 1. 1EMXD
 2. OPEN
 - C. 1. 1EMXA4
 2. CLOSED
 - D. 1. 1EMXD
 2. CLOSED
-

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Question: 6
(1 point)

Given the following on Unit 1:

- A Reactor Trip and Safety Injection have occurred due to a LOCA
- LOCA SEQ ACTUATED TRAIN B status light on 1SI-14 is DARK
- The Phase A "RESET" lights for Trains "A" and "B" are LIT

- 1) Based on the conditions above, the "S LATCHED" light for 1NI-185A (RB SUMP TO TRAIN A ND & NS) _____ LIT.
- 2) When the "S LATCHED" lights are LIT for 1NI-185A and 1NI-184B, depressing the "SS RESET" pushbuttons _____ disable the Auto OPEN signal.

Which ONE (1) of the following completes the statements above?

- A.
 1. is
 2. will
 - B.
 1. is
 2. will NOT
 - C.
 1. is NOT
 2. will
 - D.
 1. is NOT
 2. will NOT
-

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ILT 20-1 MNS RO NRC Examination

Question: 7
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- Leak-by on ONE PZR PORV has caused PRT temperature to rise
- NO PRT level adjustments are in progress

- 1) In accordance with OP/1/A/6150/004 (PZR RELIEF TANK) Limits and Precautions, PRT temperature should be maintained less than a MAXIMUM of _____ degrees F.
- 2) In accordance with OP/1/A/6150/004, Enclosure 4.3 (PRT Cooling), the PRT will be cooled by _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. 120
 2. initiating PRT spray flow from the RMWST
 - B.
 1. 114
 2. initiating PRT spray flow from the RMWST
 - C.
 1. 120
 2. recircing PRT contents with the NCDT pump and heat exchanger
 - D.
 1. 114
 2. recircing PRT contents with the NCDT pump and heat exchanger
-

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ILT 20-1 MNS RO NRC Examination

Question: 8
(1 point)

Given the following on Unit 1:

- The unit is in HOT SHUTDOWN on ND Cooling (Both Train A and B)
- B Train KC is aligned to supply Reactor and Aux Bldg Non-Essential Headers with both 1B1 and 1B2 pumps in operation
- A Train KC is aligned to supply the A ND HX Header with both 1A1 and 1A2 pumps in operation
- The 1A1 KC pump has just tripped

In accordance with the Limits and Precautions of OP/1/A/6400/005 (Component Cooling Water System), KC flow through the 1A ND Heat Exchanger shall be throttled to less than a MAXIMUM of _____.

Which ONE (1) of the following completes the statement above?

- A. 6000 GPM
 - B. 5000 GPM
 - C. 4000 GPM
 - D. 3500 GPM
-

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Question: 9
(1 point)

Given the following on Unit 1:

- The Unit is at 100% RTP
- Pressurizer pressure is 2235 psig and stable
- Due to a failure on the 1EVID output breaker, power was lost to 1EKVD and 1AD-6 F/5 NC1, 2, OR 3 FLO DETECTED annunciator is lit

Based on the conditions above:

- 1) 1EKVD will be manually swapped to _____.
- 2) While 1EKVD is de-energized, alternate indication for lifting of a pressurizer safety valve _____ still available.

Which ONE (1) of the following completes the statements above?

- A. 1. KRB
 2. is
- B. 1. KRB
 2. is NOT
- C. 1. 1KRP
 2. is
- D. 1. 1KRP
 2. is NOT

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Question: 10
(1 point)

Given the following on Unit 2:

- A Reactor Trip and Safety Injection from 100% RTP has occurred

Based on the conditions above:

- 1) The **S/G CF Control Bypass Valves** _____ receive a CLOSE signal.
- 2) Closing the Reactor Trip breakers _____ required to regain control of the **S/G CF Control Valves**.

Which ONE (1) of the following completes the statements above?

- A. 1. will
 2. is
 - B. 1. will
 2. is NOT
 - C. 1. will NOT
 2. is
 - D. 1. will NOT
 2. is NOT
-

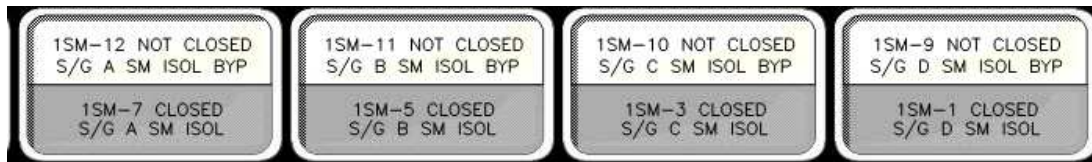
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ILT 20-1 MNS RO NRC Examination

Question: 11
(1 point)

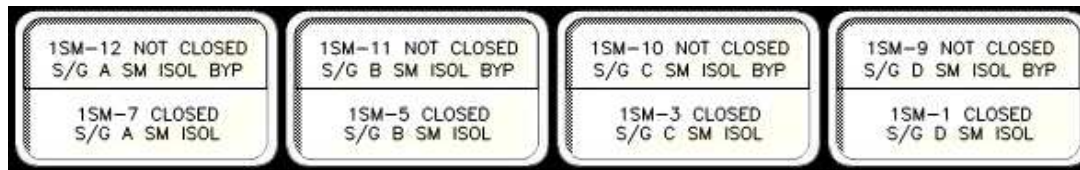
Given the following on Unit 1:

- Unit is at 10% RTP
- Main Turbine is rolling at 1800 RPM in preparation for a unit startup
- Status lights on **1SI-3** indicate the following:



Subsequently,

- A steam leak occurs upstream of the 1D S/G MSIV
- 1D S/G pressure is 790 PSIG
- The status lights on **1SI-3** currently indicate the following:



- 1) Based on the indications above, the MSIVs _____ operated as designed.
(Assume No Operator Actions Taken)
- 2) When a Main Steam Isolation signal has been generated, depressing the Main Steam Isolation Reset Pushbuttons ONLY _____ regain control of the Main Steam Isolation Bypass valves.

Which ONE (1) of the following completes the statements above?

1. have
2. will NOT
1. have
2. will
1. have NOT
2. will NOT
1. have NOT
2. will

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Question: 12
(1 point)

Given the following on Unit 2:

- Containment Pressure Channel III has failed high

Following this malfunction, a High Containment Pressure Safety Injection signal will be generated if a MINIMUM of ____ (1) ____ of the remaining channels exceed the setpoint of ____ (2) ____.

Which ONE (1) of the following completes the statement above?

- A. 1. two
 2. 1.0 PSIG
 - B. 1. two
 2. 3.0 PSIG
 - C. 1. one
 2. 1.0 PSIG
 - D. 1. one
 2. 3.0 PSIG
-

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Question: 13
(1 point)

Given the following on Unit 2:

- Unit is currently in Mode 2
- Four VL AHUs are running in low speed

Subsequently,

- A small NC system leak occurs
- Containment Pressure is slowly rising

Based on the condition above,

- 1) The VL AHUs will FIRST shift to HIGH speed at a MINIMUM containment pressure of _____ PSIG.
- 2) If VL AHUs are successful in lowering containment pressure, the fans will _____ to LOW speed.

Which ONE (1) of the following completes the statements above?

- A. 1. 0.5
 2. automatically shift
- B. 1. 0.5
 2. be manually shifted
- C. 1. 1.0
 2. automatically shift
- D. 1. 1.0
 2. be manually shifted

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Question: 14
(1 point)

Given the following on Unit 2:

- Unit is in Mode 3 performing a plant cooldown to Cold Shutdown
- NC Tave is 400 °F
- NC system Pressure is 800 PSIG

Subsequently,

- The OATC reports containment pressure is 0.5 PSIG and rising slowly
- Annunciator 2AD-9 A/5 (ICE COND LOWER INLET DOORS OPEN) alarms

- 1) Entry into AP-34 (SHUTDOWN LOCA) is allowed in MODE 3 only if _____.
- 2) Based on the conditions above, symptoms for entry into AP-34 _____ been met.

Which ONE (1) of the following completes the statements above?

- A.
 1. Cold Leg Accumulators are isolated
 2. have
 - B.
 1. Pzr pressure is less than P-11
 2. have
 - C.
 1. Cold Leg Accumulators are isolated
 2. have NOT
 - D.
 1. Pzr pressure is less than P-11
 2. have NOT
-

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ILT 20-1 MNS RO NRC Examination

Question: 15
(1 point)

Given the following on Unit 1:

- NCS temperature is 185°F and stable.
- The BOP reports that Ice Condenser Chart Recorder (1NPRC-5000) indicates temperatures on multiple ice bed RTDs are 21 °F and rising at a rate of 0.5 °F/minute (**Assume ice bed heatup rate remains constant**).

Based on the conditions above,

- 1) the Technical Specification 3.6.12 (Ice Bed) maximum allowed ice bed temperature will be reached in a MINIMUM of _____ minutes.
- 2) Technical Specification 3.6.12 (Ice Bed) _____ applicable.

Which ONE (1) of the following completes the statements above?

- A. 1. 8
 2. is
 - B. 1. 8
 2. is NOT
 - C. 1. 12
 2. is
 - D. 1. 12
 2. is NOT
-

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ILT 20-1 MNS RO NRC Examination

Question: 16
(1 point)

Given the following on Unit 2:

- A Large Break LOCA has occurred
- "A" train of NS has been aligned per ES-1.3 (TRANSFER TO COLD LEG RECIRC)

- 1) The 2A NS Pump will automatically stop when containment pressure lowers to less than a MAXIMUM of _____.
- 2) Subsequently, if Containment pressure increases to greater than 1 PSIG, the 2A NS Pump _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. 1 PSIG
 2. will start automatically
 - B.
 1. 1 PSIG
 2. can be started manually
 - C.
 1. 0.35 PSIG
 2. will start automatically
 - D.
 1. 0.35 PSIG
 2. can be started manually
-

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ILT 20-1 MNS RO NRC Examination

Question: 17
(1 point)

Given the following on Unit 1:

- A LOCA has occurred
- A Loss of Off-site power has occurred
- Containment pressure is 3.1 PSIG and STABLE
- NC Temperature is 395 °F
- ES-1.2 (POST LOCA COOLDOWN AND DEPRESSURIZATION) has been implemented

Based on the conditions above and in accordance with ES-1.2,

- 1) the NC system cooldown will be performed using the _____.
- 2) the crew will cooldown at a rate NOT to exceed _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. SM PORVs
 2. 100 °F/hour
 - B.
 1. SM PORVs
 2. 85 °F/hour
 - C.
 1. Condenser Dumps
 2. 100 °F/hour
 - D.
 1. Condenser Dumps
 2. 85 °F/hour
-

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Question: 18
(1 point)

Given the following on Unit 1:

- A reactor trip has occurred due to a secondary system malfunction
- E-0 (REACTOR TRIP OR SAFETY INJECTION) has been performed and the crew has transitioned to ES-0.1 (REACTOR TRIP RESPONSE)

Subsequently,

- The crew enters FR-H.2 (RESPONSE TO STEAM GENERATOR OVERPRESSURE)
- The crew is preparing to dump steam from the affected S/G

FR-H.2 will NOT allow steam to be released from the affected S/G if NR level exceeds a MINIMUM of ____ (1) ____ due to ____ (2) ____ concerns, without an overfill evaluation being completed.

Which ONE (1) of the following completes the statements above?

- A. 1. 83%
 2. steamline water hammer
 - B. 1. 83%
 2. condenser tube damage
 - C. 1. 92%
 2. steamline water hammer
 - D. 1. 92%
 2. condenser tube damage
-

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ILT 20-1 MNS RO NRC Examination

Question: 19
(1 point)

Given the following on Unit 2:

- E-0 (Reactor Trip or Safety Injection) was entered following a Small Break LOCA
- Both trains of Safety Injection automatically actuated
- 2B Reactor Trip Breaker (RTB) failed to open from the Control Room
- All CA pumps failed to start

Subsequently:

- The crew has entered FR-H.1 (Response to Loss of Secondary Heat Sink) and is attempting to align feed flow from 2A CFPT

- 1) In order to reset 2B Train Safety Injection, 2B RTB _____ required to be locally opened.
- 2) In accordance with FR-H.1, 2A CFPT will be reset _____.

Which ONE of the following completes the statements above?

- A. 1. is
2. locally
 - B. 1. is
2. at 2MC-10
 - C. 1. is NOT
2. locally
 - D. 1. is NOT
2. at 2MC-10
-

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ILT 20-1 MNS RO NRC Examination

Question: 20
(1 point)

Given the following on Unit 1:

- The unit is at 98% RTP
- In preparation for a Unit 1 TDCA pump performance test the following flow control valves are positioned with the manual loaders as follows:

1CA-64AB (TD CA PUMP TO 1A S/G) -- CLOSED
1CA-52AB (TD CA PUMP TO 1B S/G) -- CLOSED
1CA-48AB (TD CA PUMP TO 1C S/G) -- OPEN
1CA-36AB (TD CA PUMP TO 1D S/G) -- OPEN

Subsequently,

- An inadvertent U1 TDCA pump auto-start signal was generated

After the inadvertent auto-start signal is initiated, ____ (1) ____ U1 TDCA Flow Control valves will be OPEN and the CA MODULATING VALVES RESET [TURB] indicating light will be ____ (2) _____. (**No operator actions have been taken**)

Which ONE (1) of the following completes the statement above?

- A. 1. ONLY two
 2. illuminated
 - B. 1. ONLY two
 2. dark
 - C. 1. all
 2. illuminated
 - D. 1. all
 2. dark
-

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ILT 20-1 MNS RO NRC Examination

Question: 21
(1 point)

Given the following on Unit 2:

- A loss of voltage has occurred on 2ETA
- Blackout loading is in progress

Subsequently:

- A Safety Injection signal is received before Blackout loading is completed on 2ETA

Based on the conditions above, the Blackout load sequence ____ (1) ____ be completed and 2ETA will be cleared of ____ (2) ____.

Which ONE (1) of the following completes the statement above?

- A. 1. will NOT
 2. all loads
 - B. 1. will NOT
 2. non-SI loads ONLY
 - C. 1. will
 2. all loads
 - D. 1. will
 2. non-SI loads ONLY
-

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ILT 20-1 MNS RO NRC Examination

Question: 22
(1 point)

Given the following on Unit 1:

- Unit is shutdown in MODE 5
- Auxiliary Transformer 1ATA is tagged out for repairs
- All unit loads are being supplied by Auxiliary Transformer 1ATB

- 1) A Blackout will occur if _____ open.
- 2) The DG Committed Sequence _____ require emergency bus minimum voltage and frequency setpoints to be met.

Which ONE (1) of the following completes the statements above?

- A.
 1. PCBs 8 & 9
 2. does NOT
 - B.
 1. PCBs 11 & 12
 2. does NOT
 - C.
 1. PCBs 8 & 9
 2. does
 - D.
 1. PCBs 11 & 12
 2. does
-

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ILT 20-1 MNS RO NRC Examination

Question: 23
(1 point)

Given the following initial conditions:

- Both Units are operating at 100% RTP
- An equalizing charge is being performed on vital battery EVCB

1) When performing a normal equalizing charge, battery EVCB will be charged by battery charger _____.

AND

2) Subsequently, if a loss of offsite power occurs on Unit 1 and 1B DG fails to start, 125 VDC Distribution Center (EVDB) _____ be energized.

Which ONE (1) of the following completes the statements above?

- A. 1. EVCS
 2. will
 - B. 1. EVCS
 2. will not
 - C. 1. EVCB
 2. will
 - D. 1. EVCB
 2. will not
-

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ILT 20-1 MNS RO NRC Examination

Question: 24
(1 point)

Given the following on Unit 1:

- 1AD-11 A6, D/G A PANEL TROUBLE is in alarm
- An AO has been dispatched to the 1A D/G local panel

Subsequently, the AO reports the following;

- AD-19 (Diesel Generator Panel 1A) C5, STARTING AIR PRESSURE LOW, is in alarm
- 1VGPS-5040, Starting Air Tank 1A1, is 208 PSIG and lowering
- 1VGPS-5050, Starting Air Tank 1A2, is 220 PSIG and lowering
- VG compressors have just automatically started

- 1) Based on the conditions above, VG compressors will automatically stop if header pressure rises to a MINIMUM of _____ PSIG.
- 2) In accordance with the VG System Design Basis, one air receiver with pressure greater than a MINIMUM of _____ PSIG will provide at least one fast start and five total starts.

Which ONE (1) of the following completes the statements above?

- A.
 1. 225
 2. 210
- B.
 1. 225
 2. 220
- C.
 1. 235
 2. 210
- D.
 1. 235
 2. 220

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ILT 20-1 MNS RO NRC Examination

Question: 25
(1 point)

Given the following on Unit 2:

- Unit is in Mode 6
- VP is in service and refueling is in progress

Subsequently:

- A power supply failure occurs on 2EMF-38(L) (CONTAINMENT PARTICULATE MONITOR)

- 1) Based on the conditions above, the VP Supply and Exhaust _____.
- 2) In accordance with OP/2/A/6100/010 Q (Annunciator Response for 2EMF 38 CONT PART HI RAD), to regain control of VP components, _____ must be reset.

Which ONE (1) of the following completes the statements above?

- A.
 1. fans will be "OFF" ONLY
 2. Containment Ventilation (S_H) ONLY
 - B.
 1. fans will be "OFF" ONLY
 2. Containment Ventilation (S_H) AND 2EMF-38
 - C.
 1. fans will be "OFF" AND dampers will be CLOSED
 2. Containment Ventilation (S_H) ONLY
 - D.
 1. fans will be "OFF" AND dampers will be CLOSED
 2. Containment Ventilation (S_H) AND 2EMF-38
-

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ILT 20-1 MNS RO NRC Examination

Question: 26
(1 point)

Given the following on Unit 1:

Initial Conditions:

- The Unit is at 100% power
- Both trains of KC and RN are in service

Subsequently:

- 1A RN pump TRIPS
- A B/O occurs on **2ETA**

Based on the conditions above: (Assuming no operator actions)

- 1) 1A KC HX will lose RN flow due to the closure of _____.
- 2) 1B RN suction _____ automatically swap to the SNSWP.

Which ONE (1) of the following completes the statements above?

- A. 1. 1RN-43A (Train B to Non-Ess Hdr Isol)
 2. will NOT
 - B. 1. 1RN-43A (Train B to Non-Ess Hdr Isol)
 2. will
 - C. 1. 1RN-40A (Train A to Non-Ess Hdr Isol)
 2. will NOT
 - D. 1. 1RN-40A (Train A to Non-Ess Hdr Isol)
 2. will
-

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Question: 27
(1 point)

Given the following on Unit 1

- A Loss of Offsite Power has occurred
- A loss of VI to the Auxiliary Building has occurred
- Safety Injection has NOT actuated
- D/G speed is at 96%

- 1) Based on the conditions above, the VG to VI Auxiliary Building Air tank isolation valves _____ auto OPEN after the time delay is met.
- 2) When conditions are met, auto OPENING of the VG to VI Auxiliary Building Air tank isolation valves ONLY _____ complete the VG to VI alignment.

Which ONE (1) of the following completes the statements above?

- A.
 1. will
 2. does
 - B.
 1. will
 2. does NOT
 - C.
 1. will NOT
 2. does
 - D.
 1. will NOT
 2. does NOT
-

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ILT 20-1 MNS RO NRC Examination

Question: 28
(1 point)

Given the following on Unit 2:

- Unit is at 100% RTP
- The Upper Airlock, Reactor Side Door will not CLOSE and has been declared INOPERABLE

In accordance with T.S. 3.6.2 (CONTAINMENT AIR LOCKS), the OPERABLE door in the affected air lock must be ____ (1) ____ CLOSED ____ (2) ____.

Which ONE (1) of the following completes the statement above?

- A. 1. verified
 2. IMMEDIATELY
 - B. 1. verified
 2. within ONE hour
 - C. 1. locked
 2. IMMEDIATELY
 - D. 1. locked
 2. within ONE hour
-

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Question: 29
(1 point)

Given the following on Unit 1:

- Unit is at 50% RTP
- Control Rod Bank Select Switch is in "Auto"
- Control Bank "D" is at 195 steps withdrawn

Subsequently:

- Selected TIN1 (Turbine Inlet Pressure) output fails to the 100% value

Assuming no operator action, Control Bank "D" will _____ .

Which ONE (1) of the following completes the statement above?

- A. remain at 195 steps
 - B. withdraw 5 steps
 - C. withdraw 31 steps
 - D. withdraw until Reactor Power reaches 103%
-

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ILT 20-1 MNS RO NRC Examination

Question: 30
(1 point)

Given the following on Unit 2:

- The Unit is operating at 40% RTP
- Power ascension in progress
- Turbine controls in MW-IN

Subsequently,

- NCP 2A trips on overcurrent

Assuming no operator action,

- 1) DNBR will _____.
- 2) Reactor power will _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. LOWER
 2. lower and stabilize at a new lower power
 - B.
 1. RISE
 2. lower and stabilize at a new lower power
 - C.
 1. LOWER
 2. initially lower and then return to 40% RTP
 - D.
 1. RISE
 2. initially lower and then return to 40% RTP
-

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Question: 31
(1 point)

Given the following conditions on Unit 1:

- A Loss of Offsite Power has occurred
- 1ETA and 1ETB are energized from their respective DGs

Based on the conditions above, power can be restored to Pressurizer Heater Group(s)
_____.

Which ONE (1) of the following completes the statement above?

- A. A and B ONLY
 - B. C and D ONLY
 - C. C ONLY
 - D. D ONLY
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 32
(1 point)

In accordance with E-0 (Reactor Trip or Safety Injection):

- 1) Below P-10, a reactor trip signal will be generated if 1/2 Intermediate Range NIs increase to a MINIMUM power of _____.
- 2) One indication that is used in the immediate actions to verify that the reactor is tripped is _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. 25%
 2. IR Power - GOING DOWN
 - B.
 1. 25%
 2. IR SUR - NEGATIVE
 - C.
 1. 20%
 2. IR Power - GOING DOWN
 - D.
 1. 20%
 2. IR SUR - NEGATIVE
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 33
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- Pzr pressure channels indicate as follows:

Channel I	2239 PSIG
Channel II	2226 PSIG
Channel III	2235 PSIG
Channel IV	2230 PSIG

Subsequently,

- Channel I experiences a loss of power

1) Prior to the Channel I failure, SELECTED Pzr pressure value was _____ PSIG.

2) After the Channel I failure, SELECTED Pzr pressure value is _____ PSIG.

Which ONE (1) of the following completes the statements above?

REFERENCE PROVIDED

- A. 1. 2235
 2. 2230.5
 - B. 1. 2235
 2. 2232.5
 - C. 1. 2230
 2. 2230.5
 - D. 1. 2230
 2. 2232.5
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 34
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- "A" Train KC is in service
- 1A KF Pump is in service

Subsequently:

- 1KC-50A (Aux Bldg Non-Ess Hdr Isol) has spuriously CLOSED
- 1) In accordance with OP/1/A/6200/005 (SPENT FUEL COOLING SYSTEM) Limits and Precautions, the spent fuel pool must be maintained less than a MAXIMUM of _____.
 - 2) 1KC-149 (A KF Hx Outlet Flow) _____ AUTOMATICALLY reposition in order to attempt to maintain Spent Fuel Pool temperature.

Which ONE of the following completes the statements above?

- A.
 1. 90°F
 2. will
- B.
 1. 90°F
 2. will NOT
- C.
 1. 140°F
 2. will
- D.
 1. 140°F
 2. will NOT

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 35
(1 point)

Given the following on Unit 2:

- The unit is at 100% RTP
- The VF (Fuel Handling Building Ventilation) system is in its normal alignment for current plant conditions

Subsequently:

- A loss of power to 2EMF-42 (Fuel Building Ventilation Radiation Monitor) occurs

Based on the conditions above,

1) The Exhaust Filter Bypass Damper (D-5) _____ close.

2) The Supply and Exhaust Fans _____ stop.

Which ONE (1) of the following completes the statements above:

- A. 1. will NOT
 2. will NOT
 - B. 1. will
 2. will
 - C. 1. will NOT
 2. will
 - D. 1. will
 2. will NOT
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 36
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- A minimally decayed Waste Gas Decay Tank is being released

Subsequently,

- A significant packing leak starts on isolation valve 1WG-160 (WG DECAY TANK OUTLET TO UNIT VENT CONTROL)
- 1EMF-37 (UNIT VENT IODINE) Trip 2 alarms

Based on the conditions above,

- 1) Unit(s) _____ Aux Bldg Ventilation unfiltered exhaust fans will be secured.
- 2) If a Trip 2 occurs on _____, Aux Bldg Ventilation filters will be placed in service.

Which ONE (1) of the following completes the statements above?

LEGEND:

1EMF-35 (UNIT VENT PART HI RAD)
0EMF-41 (AUX BLDG VENT HI RAD)

- A. 1. 1 ONLY
2. 0EMF-41
 - B. 1. 1 AND 2
2. 0EMF-41
 - C. 1. 1 ONLY
2. 1EMF-35
 - D. 1. 1 AND 2
2. 1EMF-35
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 37
(1 point)

Given the following on Unit 1:

- Unit is in Mode 4
- The "HI Flux At Shutdown" switch for N31 ONLY has been placed in "BLOCK"

- 1) Based on the conditions above, if a Trip 2 is received on 1EMF-16 (Cont Refueling Bridge), the containment evacuation alarm _____ activate.
- 2) 1EMF-16 uses a _____ detector.

Which ONE (1) of the following completes the statements above:

- A.
 1. will NOT
 2. Ionization Chamber
 - B.
 1. will NOT
 2. Geiger Mueller
 - C.
 1. will
 2. Ionization Chamber
 - D.
 1. will
 2. Geiger Mueller
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 38
(1 point)

Given the following:

- A Zone 5 alarm has occurred on the Fire Detection System Processing Control Center (EFAPCC) for the 2A NC Pump

Based on the conditions above,

- 1) An annunciator for "Fire Detection System Alert" will be received on _____ AD-13.
- 2) After the annunciator on AD-13 is acknowledged, depressing the "RESET" pushbutton on the EFAPCC panel _____ required to allow subsequent fire alarms to be annunciated on AD-13.

Which ONE (1) of the following completes the statements above?

- A. 1. Unit 1
 2. is
 - B. 1. Unit 1
 2. is NOT
 - C. 1. Unit 2
 2. is
 - D. 1. Unit 2
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 39
(1 point)

Given the following sequence of events on Unit 1:

- 0210 ▯ reactor tripped due to a LOCA
- 0300 ▯ crew enters ECA-1.1, (LOSS OF EMERGENCY COOLANT RECIRC)

Current conditions at time 0320:

- The crew is at step 17.b of ECA-1.1
- 1A NI pump is running, indicating 180 GPM
- 1B NI pump is running, indicating 160 GPM
- Both NV pumps are running, indicating 350 GPM (**Consider that the NV pumps have equal capacity**)
- Subcooling is +35°F

Based on the conditions above, at time 0320:

- 1) the MINIMUM flow from the ECCS pumps which will match the decay heat removal requirements of ECA-1.1 is _____.

AND

- 2) to meet the ECCS requirements of ECA-1.1, the crew will _____.

Which ONE (1) of the following completes the statements above?

REFERENCE PROVIDED

- A. 1. 350 GPM
 2. stop both NI pumps
 - B. 1. 350 GPM
 2. stop the 1B NI pump AND one NV pump
 - C. 1. 335 GPM
 2. stop both NV pumps
 - D. 1. 335 GPM
 2. stop the 1A NI pump AND one NV pump
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 40
(1 point)

Given the following on Unit 1

- Unit is at 95% RTP
- A pressure transient has resulted in an NC system pressure increase
- 1NC-34A (PZR PORV) opened but did NOT re-close
- 1NC-34A is manually isolated using 1NC-33A (PZR PORV Isol)
- 1NC-34A is NOT capable of being manually cycled

Based on the conditions above and in accordance with TS 3.4.11 (PZR PORVs),

- 1) Power to 1NC-33A (PZR PORV Isol) _____ required to be removed.
- 2) PZR PORVs are required to be OPERABLE in Modes _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. is
 2. 1, 2 and 3 ONLY
 - B.
 1. is
 2. 1, 2, 3 and 4 with all RCS cold leg temperatures $\leq 300^{\circ}\text{F}$
 - C.
 1. is NOT
 2. 1, 2 and 3 ONLY
 - D.
 1. is NOT
 2. 1, 2, 3 and 4 with all RCS cold leg temperatures $\leq 300^{\circ}\text{F}$
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 41
(1 point)

Given the following on Unit 2:

- A SBLOCA has occurred

As a result of equipment malfunctions, the following conditions are observed:

- Containment pressure is 1.5 PSIG and lowering
- NC system subcooling is (-) 5°F
- All NC pumps have been secured
- CETs indicate 710°F and rising
- Reactor Vessel LR Level is 45% and slowly lowering.

Based on the conditions above, the Core Cooling CSF status tree is currently ____ (1) ____, and continuous monitoring of the CSF status trees ____ (2) ____ required.

Which ONE (1) of the following completes the statement above?

- A. 1. YELLOW
 2. is
 - B. 1. YELLOW
 2. is NOT
 - C. 1. ORANGE
 2. is
 - D. 1. ORANGE
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 42
(1 point)

Regarding ES-1.4 (HOT LEG RECIRCULATION),

- 1) Transition to ES-1.4 should be made _____ hours after event initiation.
- 2) **One** of the reasons for transition _____ to terminate core boiling.

Which ONE (1) of the following completes the statements above?

- A. 1. 6
 2. is
 - B. 1. 6
 2. is NOT
 - C. 1. 4
 2. is
 - D. 1. 4
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 43
(1 point)

Given the following on Unit 1

- 1KC-338B (NC Pump Sup Hdr Cont Outside Isol) has failed CLOSED and will NOT OPEN using pushbutton on 1MC-11

In accordance with annunciator response procedures, entry into ____ (1) ____ is required due to NC pump ____ (2) ____ temperatures going up.

Which ONE (1) of the following completes the statement above?

PROCEDURE LEGEND:

AP-08, (MAFUNCTION OF NC PUMP)
AP-21, (LOSS OF KC OR KC SYSTEM LEAKAGE)

- A. 1. AP-08
 2. Motor Stator Winding
- B. 1. AP-08
 2. Motor Bearing
- C. 1. AP-21
 2. Motor Stator Winding
- D. 1. AP-21
 2. Motor Bearing

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 44
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- A VCT automatic make-up is in progress

Subsequently the following occurs:

- 1AD-7/D3, (VCT ABNORMAL LVL) is lit
- 1NV-221A and 1NV-222B (Unit 1 NV Pump Suction From FWST Isol) are OPEN
- 1NV-141A and 1NV-142B (Unit 1 VCT Outlet Isol) are CLOSING

Based on the above conditions:

- 1) VCT level is currently NO GREATER THAN _____.
- 2) The cause of the continued VCT low level condition during automatic make-up is a failure of _____.

Which ONE (1) of the following completes the statements above?

LEGEND:

- **1NV-137A (NC Filters Otlt 3-Way Cntl)**
- **1NV-171A (BA Blender to VCT Inlet)**

- A. 1. 4%
 2. 1NV-137A
 - B. 1. 16%
 2. 1NV-171A
 - C. 1. 4%
 2. 1NV-171A
 - D. 1. 16%
 2. 1NV-137A
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 45
(1 point)

Given the following on Unit 1:

- The Unit is in Mode 6
- AP/1/A/5500/019 (LOSS OF RESIDUAL HEAT REMOVAL SYSTEM) has been implemented due to lowering NC system level
- The CRS has decided to makeup to the NC system using gravity feed through 1ND-35 (U1 ND TO FWST ISOL) and 1NI-173A (1A ND TO A & B COLD LEGS ISOL)

In accordance with AP-19,

- 1) Flow to the NC system will be established by throttling 1ND-35 _____.
- 2) ND pump operation is not allowed with 1ND-35 OPEN because _____ will occur.

Which ONE (1) of the following completes the statements above?

- A. 1. locally
2. a loss of NC system inventory outside containment
 - B. 1. locally
2. ND pump runout conditions
 - C. 1. from the Control Room
2. a loss of NC system inventory outside containment
 - D. 1. from the Control Room
2. ND pump runout conditions
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 46
(1 point)

Given the following on Unit 2:

- KC Surge Tank level is lowering slowly
- The crew has implemented AP-21 (LOSS OF KC OR KC SYSTEM LEAKAGE)

- 1) A possible location of the KC system leakage is into the _____ heat exchanger.
- 2) The assured supply of makeup water to the KC Surge tank is _____.

Which ONE (1) of the following completes the statements above?

- A. 1. Letdown
 2. RN
 - B. 1. Letdown
 2. YM
 - C. 1. Seal Water Return
 2. RN
 - D. 1. Seal Water Return
 2. YM
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 47
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- Pzr Pressure is 2235 PSIG

Subsequently:

- The Pressurizer Pressure Master controller has suffered an internal failure resulting in a "Pressurizer Pressure Error" of +100 PSIG
- Actual Pressurizer Pressure is 2100 PSIG and lowering

1) Pressurizer Spray valves are currently _____.

2) _____ has received a signal to open.

Which ONE (1) of the following completes the statements above?

- A. 1. OPEN
 2. all Pressurizer PORVs
 - B. 1. OPEN
 2. 1NC-34A ONLY
 - C. 1. CLOSED
 2. all Pressurizer PORVs
 - D. 1. CLOSED
 2. 1NC-34A ONLY
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 48
(1 point)

Given the following on Unit 1:

- Reactor trip from 100% power has occurred
- Crew is implementing EP/1/A/5000/ECA-2.1 (UNCONTROLLED DEPRESSURIZATION OF ALL STEAM GENERATORS)
- Containment pressure peaked at 3.1 PSIG and is currently 2.7 PSIG
- All S/G N/R levels are 4%
- CA flow to each S/G was throttled to 110 GPM in E-0

Based on the conditions above,

- 1) A RED path on the Heat Sink Critical Safety Function _____ exist.
- 2) and in accordance with ECA-2.1, minimum feed flow must be maintained to any S/G with a N/R level less than a MAXIMUM of _____.

Which ONE (1) of the following completes the statements above?

- A. 1. does NOT
 2. 11%
 - B. 1. does NOT
 2. 32%
 - C. 1. does
 2. 11%
 - D. 1. does
 2. 32%
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 49
(1 point)

Given the following on Unit 1:

- The crew has entered FR-H.1 (Response to Loss of Secondary Heat Sink)
- All Pzr PORVs are available
- Trend of parameters are as follows:

Time	1400	1410	1420	1430
S/G 1A WR [%]	43	37	30	26
S/G 1B WR [%]	41	32	25	20
S/G 1C WR [%]	42	34	29	25
S/G 1D WR [%]	40	33	26	21
Total feed flow [GPM]	0	0	0	0
Cont press [PSIG]	0.75	2.1	3.2	2.8

- 1) Based on the conditions above, the **EARLIEST** time that the crew would be required to initiate NC system Feed and Bleed is _____.
- 2) To establish adequate heat removal during feed and bleed, FR-H.1 requires a MINIMUM of _____ Pzr PORV(s) to be OPENED.

Which ONE (1) of the following completes the statements above?

- A. 1. 1420
 2. one
 - B. 1. 1420
 2. two
 - C. 1. 1430
 2. one
 - D. 1. 1430
 2. two
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 50
(1 point)

Given the following on Unit 1:

- The unit is in Mode 5 with both trains of ND in operation

Subsequently,

- A loss of off-site power occurs
- 1) Based on the conditions above the ND pumps _____ start automatically after 20 seconds.
 - 2) The reason for this configuration is that the sequencer will enter _____ mode due to the LOOP.

Which ONE (1) of the following completes the statements above?

- A.
 1. will
 2. Priority
 - B.
 1. will
 2. Secondary
 - C.
 1. will NOT
 2. Priority
 - D.
 1. will NOT
 2. Secondary
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 51
(1 point)

Given the following:

- A loss of 2EKVD has occurred
- The crew has implemented AP-15 (LOSS OF VITAL OR AUX CONTROL POWER)

In accordance with AP-15,

- 1) when checking Vital AC panelboards ENERGIZED, the crew will check _____.
- 2) Annunciator 2AD-2/F-1 (SSPS TRN B GENERAL WARNING) _____ be LIT.

Which ONE (1) of the following completes the statements above?

- A.
 1. bottom row of status lights - NORMAL
 2. will
 - B.
 1. switch indication on any pump powered from 2ETB - DARK
 2. will
 - C.
 1. bottom row of status lights - NORMAL
 2. will NOT
 - D.
 1. switch indication on any pump powered from 2ETB - DARK
 2. will NOT
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 52
(1 point)

Given the following on Unit 1:

- Unit is at 75% RTP
- 1A Train in service

Subsequently,

- A loss of 1A RN pump occurs
- The crew implements AP/20 (LOSS OF RN, CASE I, LOSS OF OPERATING RN TRAIN)
- 1B RN Pump has been started

In accordance with AP-20, ____ (1) ____ will be used to establish the desired flow rate while maintaining 1B RN pump flow less than a MAXIMUM of ____ (2) ____ GPM.

Which ONE (1) of the following completes the statement above?

LEGEND:

- **1RN-187B (B KC HX INLET ISOLATION)**
- **1RN-190B (RN to B KC HX CONTROL)**

- A. 1. 1RN-187B
 2. 16,000
 - B. 1. 1RN-187B
 2. 14,000
 - C. 1. 1RN-190B
 2. 16,000
 - D. 1. 1RN-190B
 2. 14,000
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 53
(1 point)

Given the following:

- A complete loss of Instrument Air has occurred.
- AP-22, Enclosure 13 for Unit 2, RN Strainer Surveillance During Loss of VI, was implemented at 1200.
- An Operator was not available for dispatch to perform Enclosure 12, Placing RN Strainers in Manual Backwash, until 1315.

The following readings were obtained from the OAC:

Time	2RN-21A Accumulator Pressure (OAC Point M2A0000)	2RN-25B Accumulator Pressure (OAC Point M2A0006)
1200	305.5 PSIG	285.5 PSIG
1300	294.4 PSIG	204.4 PSIG

Based on the above readings, ____ (1) ____ required to be placed in backwash no later than time ____ (2) ____.

Which ONE (1) of the following completes the statements above?

REFERENCE PROVIDED

- A. 1. both 2A AND 2B RN Strainers are
 2. 1500
 - B. 1. both 2A AND 2B RN Strainers are
 2. 1600
 - C. 1. 2B RN Strainer ONLY is
 2. 1500
 - D. 1. 2B RN Strainer ONLY is
 2. 1600
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 54
(1 point)

Given the following on Unit 2:

- The crew has implemented ECA-1.2 (LOCA OUTSIDE CONTAINMENT)
- U2 FWST level is slowly lowering
- NC system pressure is 1600 PSIG and slowly lowering

In accordance with ECA-1.2,

- 1) the crew will FIRST stop and isolate the _____ pumps from the FWST.
- 2) the overall mitigation strategy includes cooldown and depressurization of the NCS to allow the _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. ND
 2. ND isolation valves (2NI-173A and 2NI-178B) to be closed
 - B.
 1. ND
 2. Cold Leg Accumulators to inject
 - C.
 1. NI
 2. ND isolation valves (2NI-173A and 2NI-178B) to be closed
 - D.
 1. NI
 2. Cold Leg Accumulators to inject
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 55
(1 point)

Given the following on Unit 1:

- A Large Break LOCA has occurred inside Containment
- A and B ND pumps are NOT available
- The Control room crew has implemented ECA-1.1 (LOSS OF EMERGENCY COOLANT RECIRC) but, NO actions have been taken
- Containment pressure is 8 PSIG and slowly rising
- FWST level is 105 inches and lowering

- 1) When the FWST Level LO setpoint is reached, 1NI-184B (1B ND PUMP SUCTION FROM CONT SUMP ISOL) **AND** 1NI-185A (1A ND PUMP SUCTION FROM CONT SUMP ISOL) _____ automatically OPEN.
- 2) Per ECA-1.1 Foldout Page, when FWST level decreases to less than a MAXIMUM of _____ inches ALL ECCS pumps must be secured.

Which ONE (1) of the following completes the statements above?

- A. 1. will
 2. 95
 - B. 1. will NOT
 2. 95
 - C. 1. will
 2. 20
 - D. 1. will NOT
 2. 20
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 56
(1 point)

Given the following on Unit 1:

- A Reactor trip and Safety Injection have occurred
- Containment pressure peaked at 2.7 PSIG and is slowly lowering
- The crew has implemented EP/1/A/5000/FR-H.1 (RESPONSE TO LOSS OF SECONDARY HEAT SINK)
- All attempts to restore CA flow have been unsuccessful

Based on the conditions above and in accordance with FR-H.1:

- 1) All NC pumps _____ required to be stopped.
- 2) The NEXT source of feed water ATTEMPTED for restoration of flow to the S/Gs is through the CM/CF system using _____ pump(s).

Which ONE (1) of the following completes the statements above?

- A.
 1. are
 2. either Main Feed Water
 - B.
 1. are NOT
 2. either Main Feed Water
 - C.
 1. are
 2. Hotwell and Booster
 - D.
 1. are NOT
 2. Hotwell and Booster
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 57
(1 point)

Given the following on Unit 1:

- Unit is currently refueling
- The refueling crew is lowering an irradiated fuel assembly into the core

Subsequently,

- The assembly drops completely into the core
- Gas bubbles are observed originating from the dropped assembly
- 1EMF-39 (CONTAINMENT GAS HI RAD) is in Trip 1 alarm
- NO other annunciators have been received
- The crew has implemented AP/1/A/5500/025 (SPENT FUEL DAMAGE)

- 1) Based on the conditions above, the Containment Evacuation Alarm _____ require manual actuation.
- 2) AP-25 _____ direct VP to be manually secured.

Which ONE (1) of the following completes the statements above?

- A.
 1. will NOT
 2. does
 - B.
 1. will NOT
 2. does NOT
 - C.
 1. will
 2. does
 - D.
 1. will
 2. does NOT
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 58
(1 point)

Given the following on Unit 2:

- The unit is at 75% RTP
- 2EMF-33 (CONDENSER AIR EJECTOR EXHAUST) is in Trip 2 alarm
- 2EMF-73 (S/G C LEAKAGE) is in Trip 2 alarm
- The crew has implemented AP-10 (NC SYSTEM LEAKAGE), Case 1 (S/G TUBE LEAKAGE)
- Pressurizer level has been stabilized
- Letdown flow is 75 GPM
- Charging flow is 125 GPM

- 1) Based on the above conditions, the estimated leak rate is _____ GPM.
- 2) In accordance with AP-10, the MAXIMUM allowed charging flow to stabilize Pressurizer level is _____ GPM.

Which ONE (1) of the following completes the statements above?

- A. 1. 50
 2. 155
 - B. 1. 50
 2. 200
 - C. 1. 38
 2. 155
 - D. 1. 38
 2. 200
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 59
(1 point)

Given the following Unit 1 initial conditions:

- Unit is at 40% RTP and stable
- Rod Control is in automatic
- The MW feedback loop is OUT of service
- NC T-Avg is 567°F

Subsequently,

- Control Bank [D] Rod M-12 drops fully into the core
- The crew has implemented AP-14 (ROD CONTROL MALFUNCTION)
- NC T-Avg is 563°F

- 1) Turbine power _____ stabilize at a lower value.
- 2) In accordance with AP-14, the crew _____ FIRST restore T-Avg to T-Ref by adjusting turbine load.

Which ONE (1) of the following completes the statements above?

- A. 1. will
 2. will
 - B. 1. will
 2. will NOT
 - C. 1. will NOT
 2. will
 - D. 1. will NOT
 2. will NOT
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 60
(1 point)

In Modes 1 - 4, which ONE (1) of the following statements represents a loss of Containment Integrity?

- A. Submarine (Emergency Access) hatch is found open
 - B. Both lower personnel airlock doors closed with all seals deflated
 - C. Annulus doors blocked open for maintenance
 - D. Discovery of major divider barrier seal degradation
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 61
(1 point)

Given the following on Unit 1:

- A LOCA has occurred
- The crew entered FR-C.1, RESPONSE TO INADEQUATE CORE COOLING
- S/G depressurization was not effective in restoring adequate core cooling
- Core Exit Thermocouples (CET) are 1200°F and rising

In accordance with FR-C.1,

- 1) the crew will _____ until CETs lower below 1200°F.
- 2) normal conditions for starting a NC pump _____ required.

Which ONE (1) of the following completes the statements above?

- A.
 1. start NC pumps one at a time
 2. are
 - B.
 1. start NC pumps one at a time
 2. are NOT
 - C.
 1. start all available NC pumps and monitor
 2. are
 - D.
 1. start all available NC pumps and monitor
 2. are NOT
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 62
(1 point)

Given the following on Unit 1:

- A Reactor Trip and Safety Injection have occurred
- The crew has implemented ES-1.1, (SAFETY INJECTION TERMINATION)
- While checking if S/I flow is required, the BOP reports Pzr level is 15% and lowering

If Pzr level can NOT be maintained greater than a MINIMUM of ____ (1) ____, ES-1.1 Foldout page directs the crew to raise S/I flow, restore Pzr level **AND** transition to procedure ____ (2) ____.

Which ONE (1) of the following completes the statement above?

PROCEDURE LEGEND:

E-0 (REACTOR TRIP OR SAFETY INJECTION)

E-1 (LOSS OF REACTOR OR SECONDARY COOLANT)

- A. 1. 11%
 2. E-1
 - B. 1. 11%
 2. E-0
 - C. 1. 4%
 2. E-1
 - D. 1. 4%
 2. E-0
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 63
(1 point)

Given the following on Unit 2:

- A Large Break LOCA has occurred
- The CRS has elected to implement FR-Z.3 (RESPONSE TO HIGH CONTAINMENT RADIATION LEVEL)
- Current Containment conditions:
 - Containment Pressure - 2.5 PSIG and stable
 - Containment Radiation Level - 36 R/HR and slowly rising
 - Containment Sump Level - 5.5 FEET and slowly rising

Based on the conditions above,

- 1) FR-Z.3 _____ direct the crew to start the Containment Aux Carbon Filter fan.
- 2) FR-Z.3 _____ require the crew to start the VE fans.

Which ONE (1) of the following completes the statements above?

- A.
 1. will
 2. does NOT
 - B.
 1. will
 2. does
 - C.
 1. will NOT
 2. does NOT
 - D.
 1. will NOT
 2. does
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 64
(1 point)

Given the following on Unit 1:

- The Crew entered ES-1.2, (POST LOCA COOLDOWN AND DEPRESSURIZATION), after a small break LOCA occurred
- Containment Pressure peaked at 3.2 PSIG and is now stable at 2.5 PSIG

Based on the condition above:

- 1) The operator will first use _____ to depressurize the NC system.
- 2) After NC system depressurization has commenced, a rapid rise in pressurizer level would be caused by _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. NV aux spray
 2. voiding in the upper head region
- B.
 1. one Pzr PORV
 2. voiding in the upper head region
- C.
 1. NV aux spray
 2. increased S/I flow
- D.
 1. one Pzr PORV
 2. increased S/I flow

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 65
(1 point)

Given the following on Unit 2:

- Unit tripped from 100% RTP
- A Loss of Off-Site Power (LOOP) has occurred
- One CRDM fan is running
- ES-0.2 (NATURAL CIRCULATION COOLDOWN) has been implemented

Based on the conditions above and in accordance with ES-0.2, an NC system cooldown to cold shutdown will be performed using the ____ (1) ____ at a rate NOT to exceed ____ (2) ____ in an hour.

Which ONE (1) of the following completes the statement above?

- A. 1. steam dumps
 2. 100°F
 - B. 1. steam dumps
 2. 70°F
 - C. 1. S/G PORVs
 2. 100°F
 - D. 1. S/G PORVs
 2. 70°F
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 66
(1 point)

In accordance with OMP 5-12 (COMMUNICATION OF DAY-TO-DAY PLANT ISSUES),

- 1) Communications of detailed instructions or major guidance to the Control Room will be communicated using _____.
- 2) The Operations Target Contact for this type of communication is the _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. the Ops Work List
 2. CRS
 - B.
 1. the Ops Work List
 2. SM
 - C.
 1. Engineering Group Guidance Sheets
 2. CRS
 - D.
 1. Engineering Group Guidance Sheets
 2. SM
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 67
(1 point)

In accordance with AD-HS-ALL-0103 (FALL PROTECTION),

- 1) Continuous Fall Protection (100% tie-off) is required when there is a free-fall risk of greater than or equal to a MINIMUM of _____ feet above a working or walking surface.
- 2) A body belt _____ be used to meet Personal Fall Arrest System (PFAS) requirements.

Which ONE (1) of the following completes the statements above?

- A.
 1. 4
 2. can NOT
 - B.
 1. 4
 2. can
 - C.
 1. 10
 2. can NOT
 - D.
 1. 10
 2. can
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 68
(1 point)

Given the following on Unit 2:

- Unit is in Mode 6
- Core off-load is in progress
- 2EMF-42 (FUEL BLDG VENT HI RAD) Trip 2 is in alarm
- 2EMF-4 (SPENT FUEL BLDG REFUEL BRDG) Trip 2 is in alarm

In accordance with the annunciator response procedure for 2EMF-4 HI RAD,

- 1) the operating crew is required to _____.
- 2) evacuation of the Spent Fuel Building _____ required.

Which ONE (1) of the following completes the statements above?

- A.
 1. place the Refueling Cavity in purification
 2. is
 - B.
 1. place the Refueling Cavity in purification
 2. is NOT
 - C.
 1. ensure at least one train of VC Outside Air Pressure Filtration is in service
 2. is
 - D.
 1. ensure at least one train of VC Outside Air Pressure Filtration is in service
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 69
(1 point)

In accordance with AD-HU-ALL-004 (PROCEDURE AND WORK INSTRUCTION USE AND ADHERENCE),

- 1) if it is determined that an in progress surveillance PT can NOT be performed as written, out of sequence step performance _____ allowed with supervisor approval, if taking credit for surveillance.
- 2) verbal approval for out of sequence step performance _____ allowed.

Consider Each Statement Separately

Which ONE (1) of the following completes the statements above?

- A.
 1. is
 2. is
 - B.
 1. is
 2. is NOT
 - C.
 1. is NOT
 2. is
 - D.
 1. is NOT
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 70
(1 point)

In accordance with AD-OP-ALL-1000 (CONDUCT OF OPERATIONS),

- 1) A nuisance alarm _____ a situation that warrants disabling an annunciator.
- 2) A disabled annunciator _____ required to be restored prior to the end of shift.

Which ONE (1) of the following completes the statements above?

- A. 1. is
 2. is
 - B. 1. is
 2. is NOT
 - C. 1. is NOT
 2. is
 - D. 1. is NOT
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 71
(1 point)

Given the following on Unit 1:

- A liquid waste release from the Ventilation Unit Condensate Drain Tank (VUCDT), through the NORMAL discharge path, has been initiated

- 1) If 1EMF-44 (CONT VENT DRN TK OUTLET) reaches Trip 2 status, _____ will automatically CLOSE to terminate the release.
- 2) Following a Trip 2 signal, the VUCDT release _____ be re-started without additional sampling.

Which ONE (1) of the following completes the statements above?

LEGEND:

- 1WP-35 (WMT & VUCDT TO RC CNTRL)
- 1WM-46 (0EMF-49 OUTLET HI RAD SHUTOFF ISOL)

- A.
 1. 1WM-46
 2. can
 - B.
 1. 1WP-35
 2. can
 - C.
 1. 1WP-35
 2. can NOT
 - D.
 1. 1WM-46
 2. can NOT
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 72
(1 point)

Given the following:

- The NV system is being aligned for startup
- The procedure in use requires independent verification of a single valve located in a room with a general dose rate of 130 mREM/hr
- Estimated time to independently verify the valve's position is 10 minutes
- There are no known hot spots in the area
- There is no airborne activity in this room
- The room has no surface contamination areas

In accordance with AD-HU-ALL-0005 (HUMAN PERFORMANCE TOOLS), independent verification of the valve above ____ (1) ____ be waived because the ____ (2) ____ .

Which ONE (1) of the following completes the statement above?

- A.
 - 1. can
 - 2. general area dose rate is greater than 100 mREM/hr
 - B.
 - 1. can
 - 2. radiation exposure for a single verification would exceed the allowable limit
 - C.
 - 1. can NOT
 - 2. general area dose rate is less than 1 REM/hr
 - D.
 - 1. can NOT
 - 2. radiation exposure for a single verification is within the allowable limit
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 73
(1 point)

Given the following:

- Security has reported an active fire at the McGuire Office Complex (MOC)

- 1) Site Fire Brigade _____ responsible for fire suppression and fire alarm response.
- 2) If required, _____ contains the guidance for dispatching offsite fire departments.

Which ONE (1) of the following completes the statements above?

PROCURE LEGEND:

AP/0/A/5500/045 (PLANT FIRE OR TURBINE BLDG OIL LEAK)
RP/0A/5700/025 (FIRE BRIGADE RESPONSE)

- A.
 1. is
 2. RP-25
 - B.
 1. is
 2. AP-45
 - C.
 1. is NOT
 2. RP-25
 - D.
 1. is NOT
 2. AP-45
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 74
(1 point)

Given the following:

- A Fire alarm has actuated in the Unit 1 CA Pump Room
- An Operator dispatched to the area reports that there is smoke and some cables with glowing embers but, **NO** visible flames

- 1) In accordance with AP/0/A/5500/045 (PLANT FIRE), this _____ classified as an ACTIVE fire.
- 2) In accordance with RP/0/A/5700/025 (FIRE BRIGADE RESPONSE), in addition to making an announcement on the Fire Brigade Radio and activating the Fire Brigade Pagers, a Plant PA announcement _____ required when dispatching the Fire Brigade.

Which ONE (1) of the following completes the statements above?

- A. 1. is NOT
 2. is
 - B. 1. is NOT
 2. is NOT
 - C. 1. is
 2. is
 - D. 1. is
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS RO NRC Examination

Question: 75
(1 point)

Regarding AD-OP-ALL-1001 (CONDUCT OF ABNORMAL OPERATIONS),

- 1) When Reactor Operators (ROs) identify that a fold-out page condition is met, SRO concurrence _____ required PRIOR to performing any required actions.
- 2) The dispatch of Auxiliary Operators (AOs) to perform tasks outside the control room _____ performed by the Reactor Operators (ROs).

Which ONE (1) of the following completes the statements above?

- A. 1. is NOT
 2. is NOT
 - B. 1. is
 2. is NOT
 - C. 1. is NOT
 2. is
 - D. 1. is
 2. is
-

Reference List for: ILT 20-1 MNS RO NRC Examination

Copy of AP-22 Enclosure 13 (Unit 2)

ECA-1.1 (Step 17)

ECA-1.1 (Enclosure 9)

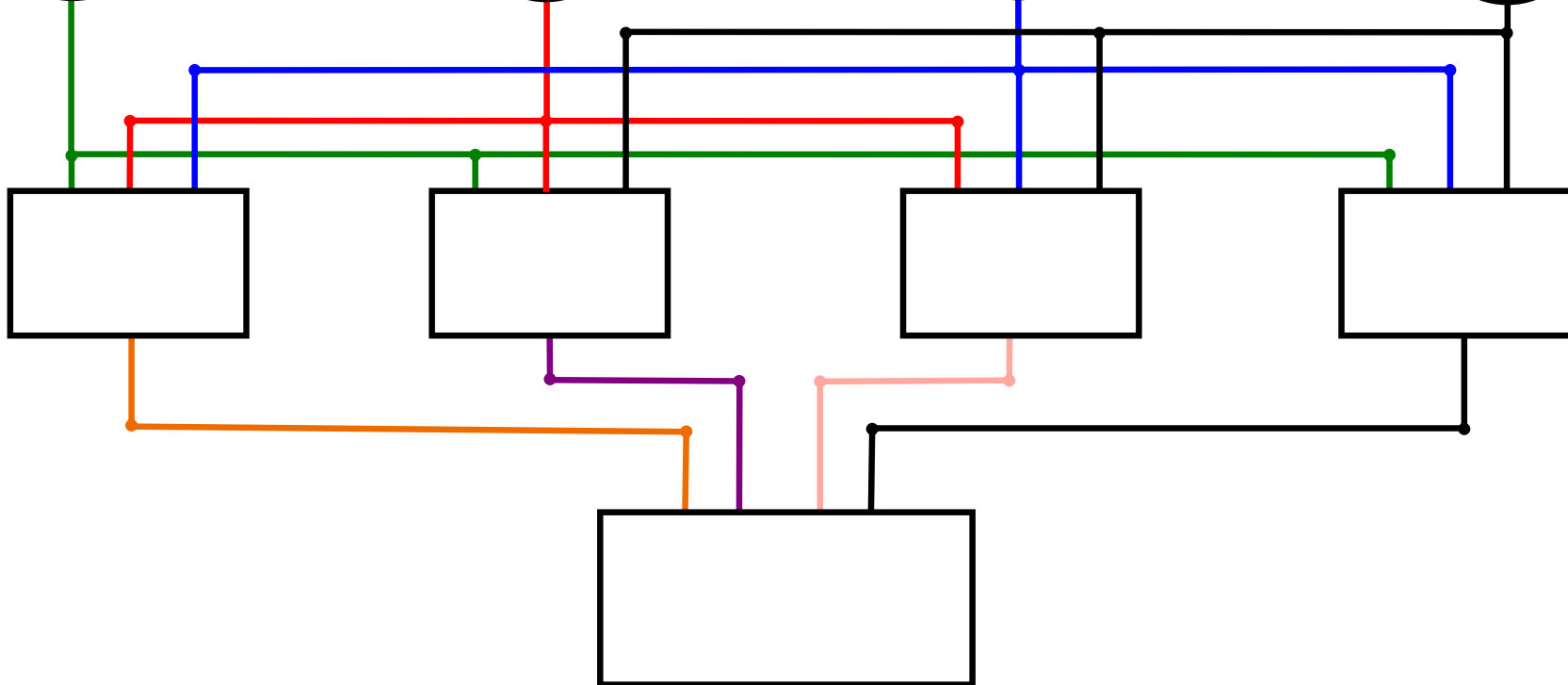
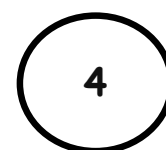
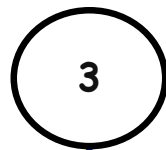
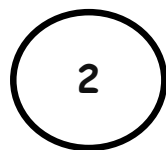
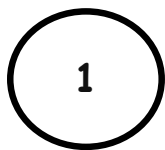
Pressurizer Pressure Block Diagram

2239 PSIG

2226 PSIG

2235 PSIG

2230 PSIG



SELECTED Pzr Pressure

MNS EP/1/A/5000/ECA-1.1 UNIT 1	LOSS OF EMERGENCY COOLANT RECIRC	PAGE NO. 20 of 113 Rev. 17
---	----------------------------------	----------------------------------

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

17. **Check if S/I can be terminated:**

a. Check RVLIS indication:

- ___ • **IF** all NC pumps off, **THEN** check "REACTOR VESSEL LR LEVEL" - GREATER THAN 60%.

OR

- ___ • **IF** at least one NC pump on, **THEN** check "REACTOR VESSEL D/P" - GREATER THAN REQUIRED DELTA P FROM Enclosure 7 (Minimum Dynamic RVLIS Indication).

- ___ b. NC subcooling based on core exit T/Cs - GREATER THAN 50°F.

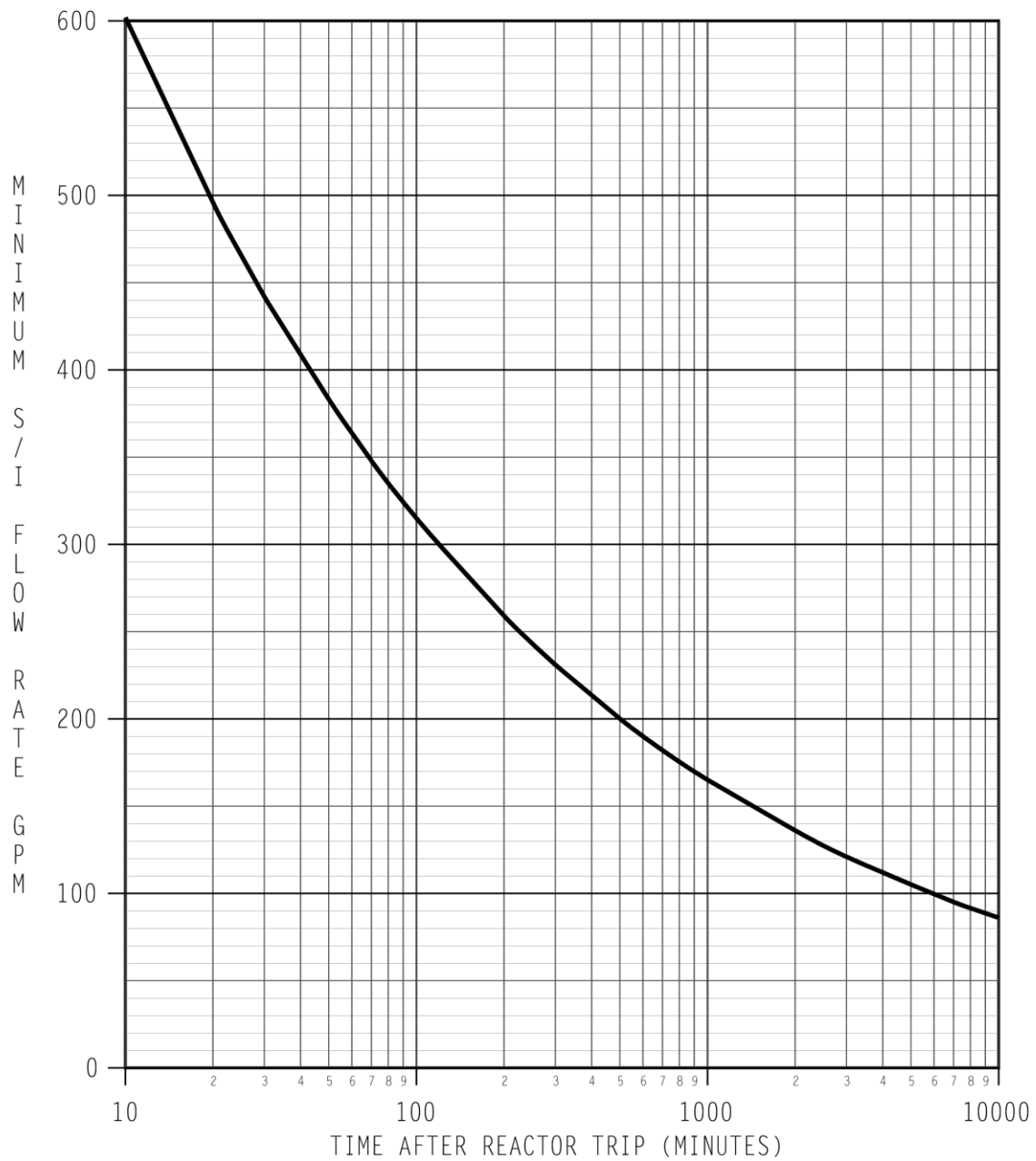
- ___ a. Observe Caution prior to Step 23 and **GO TO** Step 23.

b. Perform the following:

- ___ 1) Determine minimum S/I flow required **PER** Enclosure 9 (Flow Required to Match Decay Heat).
- ___ 2) Minimize S/I flow by stopping one or more S/I pumps while maintaining greater than or equal to flow required by Enclosure 9 (Flow Required to Match Decay Heat).
- ___ 3) Observe Caution prior to Step 23 and **GO TO** Step 23.

18. **Reset the following:**

- ___ • Phase A Isolation
- ___ • Phase B Isolation.



ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. **Perform the following steps once every 6 hours:**

___ a. Check OAC - IN SERVICE.

a. Perform the following:

- ___ 1) Dispatch operator to obtain RN strainer accumulator tank pressure readings **PER** Enclosure 11 (Local Pressure Check of RN Strainer Accumulator Tanks).
- ___ 2) **WHEN** 15 minutes have elapsed from time of dispatch, **THEN** contact dispatched operator to check on status of local action.
- ___ 3) Do not continue until pressure readings obtained.

___ b. Record RN strainer backwash assured VI accumulator tank pressures in table below:

Date/Time	2RN-21A Accumulator Tank Pressure (OAC point M2A0000)	2RN-25B Accumulator Tank Pressure (OAC point M2A0006)

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. (Continued)

- c. Check both accumulator tank pressures - GREATER THAN 294 PSIG.

- c. **IF** either accumulator tank pressure is less than 294 PSIG, **THEN** place both Unit 2 RN strainers in backwash as follows:

- 1) Determine time limit from table below for placing both Unit 2 RN strainers in backwash:

Lowest Strainer Accumulator Tank Pressure	Time Limit
206 - 294 PSIG	4 Hrs
144 - 205 PSIG	2 Hrs
113 - 143 PSIG	1 Hr

- 2) Dispatch operator to perform Enclosure 12 (Placing RN Strainers in Manual Backwash) as time allows, not to exceed time limit in table above.

- 3) Discontinue monitoring of accumulator tank pressures **PER** this enclosure.

- 4) Exit this enclosure.

- d. Perform this enclosure again in 6 hours.

- e. Have STA or other licensed operator assist in tracking elapsed time.

Examination KEY for: ILT 20-1 MNS SRO NRC Exa

<i>Question Number</i>	<i>Answer</i>
1	C
2	D
3	C
4	D
5	B
6	A
7	D
8	C
9	C
10	A
11	C
12	C
13	A
14	A
15	D
16	D
17	A
18	C
19	B
20	D
21	B
22	B
23	C
24	C
25	D

Examination KEY for: ILT 20-1 MNS SRO NRC Exa

<i>Question Number</i>	<i>Answer</i>
26	A
27	B
28	B
29	B
30	C
31	A
32	A
33	B
34	D
35	D
36	B
37	D
38	A
39	A
40	A
41	C
42	A
43	B
44	A
45	A
46	C
47	B
48	D
49	B
50	D

Examination KEY for: ILT 20-1 MNS SRO NRC Exa

<i>Question Number</i>	<i>Answer</i>
51	A
52	D
53	A
54	A
55	C
56	A
57	C
58	D
59	A
60	B
61	B
62	A
63	D
64	B
65	C
66	C
67	A
68	C
69	C
70	B
71	B
72	B
73	C
74	A
75	D

Examination KEY for: ILT 20-1 MNS SRO NRC Exa

<i>Question Number</i>	<i>Answer</i>
76	C
77	A
78	C
79	A
80	D
81	D
82	B
83	B
84	A
85	A
86	C
87	C
88	B
89	D
90	A
91	B
92	D
93	A
94	B
95	C
96	B
97	D
98	A
99	B
100	B

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 1
(1 point)

Given the following on Unit 1:

- Unit is at 40% RTP
- Power ascension in progress
- Turbine Controls in MW-IN

Subsequently:

- 1C NC pump trips

Based on the conditions above and assuming no operator action,

- 1) **Tcold** in the unaffected NC loops _____ stabilize at a lower value.
- 2) NC Loop 1C **delta T** will stabilize at a value _____ than the other NC loops delta Ts.

Which ONE (1) of the following completes the statements above?

- A. 1. will NOT
 2. lower
 - B. 1. will NOT
 2. higher
 - C. 1. will
 2. lower
 - D. 1. will
 2. higher
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 2
(1 point)

Given the following on Unit 1:

- NCS Tavg is 215°F
- NCS pressure is 250 PSIG
- VCT pressure is 28 PSIG
- The 1A NC pump is to be started for a unit heatup

Subsequently:

- The 1A2 Oil Lift pump is started
- Oil Lift pressure is 580 PSIG

- 1) In accordance with OP/1/A/6150/002A (REACTOR COOLANT PUMP OPERATION) Attachment 1 (Startup and Operation), the MINIMUM required #1 Seal differential pressure for starting the NC pump _____ met.
- 2) Based on the conditions above, if the 1A NC PUMP SAFETY BKR "**START**" pushbutton is depressed, the pump _____ start.

Which ONE (1) of the following completes the statements above?

- A.
 1. is NOT
 2. will
 - B.
 1. is NOT
 2. will NOT
 - C.
 1. is
 2. will
 - D.
 1. is
 2. will NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 3
(1 point)

Given the following on Unit 1:

- Unit is at 75% RTP
- The U1 Boric Acid Tank (BAT) has been placed in Normal Recirculation per OP/1/A/6150/009 (BORON CONCENTRATION CONTROL)

Based on the conditions above,

- 1) the U1 BAT _____ available as a boration flowpath to the NC system.
- 2) SLC 16.9.9 (BORATION SYSTEMS FLOW PATH - OPERATING) requires that _____ of 3 boron injection flow paths be OPERABLE.

Which ONE (1) of the following completes the statements above?

- A.
 1. is
 2. one
- B.
 1. is NOT
 2. two
- C.
 1. is
 2. two
- D.
 1. is NOT
 2. one

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 4
(1 point)

Given the following on Unit 2:

- Operations is shifting from the 2A NV pump to the 2B NV pump per OP/2/A/6200/001B, (CHEMICAL AND VOLUME CONTROL CHARGING)

In accordance with OP/2/A/6200/001B,

- 1) the DP between Seal Balance Line Pressure AND suction pressure must be less than or equal to a MAXIMUM of _____ PSID.
- 2) if DP is too high, the procedure requires _____ to be notified to evaluate pump performance.

Which ONE (1) of the following completes the statements above?

- A.
 1. 40
 2. Maintenance
 - B.
 1. 50
 2. Maintenance
 - C.
 1. 40
 2. Engineering
 - D.
 1. 50
 2. Engineering
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 5
(1 point)

Given the following on Unit 1:

- Plant shutdown and cooldown to 100°F is in progress.
- NC System temperature 180°F.
- Both trains of ND are in service in accordance with station procedures.

The power supply to 1ND-1B (C NC Loop to ND Pumps) is ____ (1) ____ and the current status of its motor breaker is ____ (2) ____.

Which ONE (1) of the following completes the statement above?

- A. 1. 1EMXA4
 2. OPEN
 - B. 1. 1EMXD
 2. OPEN
 - C. 1. 1EMXA4
 2. CLOSED
 - D. 1. 1EMXD
 2. CLOSED
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 6
(1 point)

Given the following on Unit 1:

- A Reactor Trip and Safety Injection have occurred due to a LOCA
- LOCA SEQ ACTUATED TRAIN B status light on 1SI-14 is DARK
- The Phase A "RESET" lights for Trains "A" and "B" are LIT

- 1) Based on the conditions above, the "S LATCHED" light for 1NI-185A (RB SUMP TO TRAIN A ND & NS) _____ LIT.
- 2) When the "S LATCHED" lights are LIT for 1NI-185A and 1NI-184B, depressing the "SS RESET" pushbuttons _____ disable the Auto OPEN signal.

Which ONE (1) of the following completes the statements above?

- A.
 1. is
 2. will
 - B.
 1. is
 2. will NOT
 - C.
 1. is NOT
 2. will
 - D.
 1. is NOT
 2. will NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 7
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- Leak-by on ONE PZR PORV has caused PRT temperature to rise
- NO PRT level adjustments are in progress

- 1) In accordance with OP/1/A/6150/004 (PZR RELIEF TANK) Limits and Precautions, PRT temperature should be maintained less than a MAXIMUM of _____ degrees F.
- 2) In accordance with OP/1/A/6150/004, Enclosure 4.3 (PRT Cooling), the PRT will be cooled by _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. 120
 2. initiating PRT spray flow from the RMWST
 - B.
 1. 114
 2. initiating PRT spray flow from the RMWST
 - C.
 1. 120
 2. recircing PRT contents with the NCDT pump and heat exchanger
 - D.
 1. 114
 2. recircing PRT contents with the NCDT pump and heat exchanger
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 8
(1 point)

Given the following on Unit 1:

- The unit is in HOT SHUTDOWN on ND Cooling (Both Train A and B)
- B Train KC is aligned to supply Reactor and Aux Bldg Non-Essential Headers with both 1B1 and 1B2 pumps in operation
- A Train KC is aligned to supply the A ND HX Header with both 1A1 and 1A2 pumps in operation
- The 1A1 KC pump has just tripped

In accordance with the Limits and Precautions of OP/1/A/6400/005 (Component Cooling Water System), KC flow through the 1A ND Heat Exchanger shall be throttled to less than a MAXIMUM of _____.

Which ONE (1) of the following completes the statement above?

- A. 6000 GPM
 - B. 5000 GPM
 - C. 4000 GPM
 - D. 3500 GPM
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 9
(1 point)

Given the following on Unit 1:

- The Unit is at 100% RTP
- Pressurizer pressure is 2235 psig and stable
- Due to a failure on the 1EVID output breaker, power was lost to 1EKVD and 1AD-6 F/5 NC1, 2, OR 3 FLO DETECTED annunciator is lit

Based on the conditions above:

- 1) 1EKVD will be manually swapped to _____.
- 2) While 1EKVD is de-energized, alternate indication for lifting of a pressurizer safety valve _____ still available.

Which ONE (1) of the following completes the statements above?

- A. 1. KRB
 2. is
- B. 1. KRB
 2. is NOT
- C. 1. 1KRP
 2. is
- D. 1. 1KRP
 2. is NOT

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 10
(1 point)

Given the following on Unit 2:

- A Reactor Trip and Safety Injection from 100% RTP has occurred

Based on the conditions above:

- 1) The **S/G CF Control Bypass Valves** _____ receive a CLOSE signal.
- 2) Closing the Reactor Trip breakers _____ required to regain control of the **S/G CF Control Valves**.

Which ONE (1) of the following completes the statements above?

- A. 1. will
 2. is
 - B. 1. will
 2. is NOT
 - C. 1. will NOT
 2. is
 - D. 1. will NOT
 2. is NOT
-

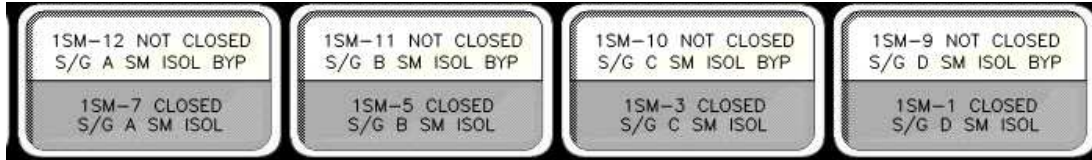
McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 11
(1 point)

Given the following on Unit 1:

- Unit is at 10% RTP
- Main Turbine is rolling at 1800 RPM in preparation for a unit startup
- Status lights on **1SI-3** indicate the following:



Subsequently,

- A steam leak occurs upstream of the 1D S/G MSIV
- 1D S/G pressure is 790 PSIG
- The status lights on **1SI-3** currently indicate the following:



- 1) Based on the indications above, the MSIVs _____ operated as designed.
(Assume No Operator Actions Taken)
- 2) When a Main Steam Isolation signal has been generated, depressing the Main Steam Isolation Reset Pushbuttons ONLY _____ regain control of the Main Steam Isolation Bypass valves.

Which ONE (1) of the following completes the statements above?

1. have
2. will NOT
1. have
2. will
1. have NOT
2. will NOT
1. have NOT
2. will

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 12
(1 point)

Given the following on Unit 2:

- Containment Pressure Channel III has failed high

Following this malfunction, a High Containment Pressure Safety Injection signal will be generated if a MINIMUM of ____ (1) ____ of the remaining channels exceed the setpoint of ____ (2) ____.

Which ONE (1) of the following completes the statement above?

- A. 1. two
 2. 1.0 PSIG
 - B. 1. two
 2. 3.0 PSIG
 - C. 1. one
 2. 1.0 PSIG
 - D. 1. one
 2. 3.0 PSIG
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 13
(1 point)

Given the following on Unit 2:

- Unit is currently in Mode 2
- Four VL AHUs are running in low speed

Subsequently,

- A small NC system leak occurs
- Containment Pressure is slowly rising

Based on the condition above,

- 1) The VL AHUs will FIRST shift to HIGH speed at a MINIMUM containment pressure of _____ PSIG.
- 2) If VL AHUs are successful in lowering containment pressure, the fans will _____ to LOW speed.

Which ONE (1) of the following completes the statements above?

- A. 1. 0.5
 2. automatically shift
- B. 1. 0.5
 2. be manually shifted
- C. 1. 1.0
 2. automatically shift
- D. 1. 1.0
 2. be manually shifted

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 14
(1 point)

Given the following on Unit 2:

- Unit is in Mode 3 performing a plant cooldown to Cold Shutdown
- NC Tave is 400 °F
- NC system Pressure is 800 PSIG

Subsequently,

- The OATC reports containment pressure is 0.5 PSIG and rising slowly
- Annunciator 2AD-9 A/5 (ICE COND LOWER INLET DOORS OPEN) alarms

- 1) Entry into AP-34 (SHUTDOWN LOCA) is allowed in MODE 3 only if _____.
- 2) Based on the conditions above, symptoms for entry into AP-34 _____ been met.

Which ONE (1) of the following completes the statements above?

- A.
 1. Cold Leg Accumulators are isolated
 2. have
 - B.
 1. Pzr pressure is less than P-11
 2. have
 - C.
 1. Cold Leg Accumulators are isolated
 2. have NOT
 - D.
 1. Pzr pressure is less than P-11
 2. have NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 15
(1 point)

Given the following on Unit 1:

- NCS temperature is 185°F and stable.
- The BOP reports that Ice Condenser Chart Recorder (1NPRC-5000) indicates temperatures on multiple ice bed RTDs are 21 °F and rising at a rate of 0.5 °F/minute (**Assume ice bed heatup rate remains constant**).

Based on the conditions above,

- 1) the Technical Specification 3.6.12 (Ice Bed) maximum allowed ice bed temperature will be reached in a MINIMUM of _____ minutes.
- 2) Technical Specification 3.6.12 (Ice Bed) _____ applicable.

Which ONE (1) of the following completes the statements above?

- A. 1. 8
 2. is
 - B. 1. 8
 2. is NOT
 - C. 1. 12
 2. is
 - D. 1. 12
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 16
(1 point)

Given the following on Unit 2:

- A Large Break LOCA has occurred
- "A" train of NS has been aligned per ES-1.3 (TRANSFER TO COLD LEG RECIRC)

- 1) The 2A NS Pump will automatically stop when containment pressure lowers to less than a MAXIMUM of _____.
- 2) Subsequently, if Containment pressure increases to greater than 1 PSIG, the 2A NS Pump _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. 1 PSIG
 2. will start automatically
 - B.
 1. 1 PSIG
 2. can be started manually
 - C.
 1. 0.35 PSIG
 2. will start automatically
 - D.
 1. 0.35 PSIG
 2. can be started manually
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 17
(1 point)

Given the following on Unit 1:

- A LOCA has occurred
- A Loss of Off-site power has occurred
- Containment pressure is 3.1 PSIG and STABLE
- NC Temperature is 395 °F
- ES-1.2 (POST LOCA COOLDOWN AND DEPRESSURIZATION) has been implemented

Based on the conditions above and in accordance with ES-1.2,

- 1) the NC system cooldown will be performed using the _____.
- 2) the crew will cooldown at a rate NOT to exceed _____.

Which ONE (1) of the following completes the statements above?

- A. 1. SM PORVs
 2. 100 °F/hour
 - B. 1. SM PORVs
 2. 85 °F/hour
 - C. 1. Condenser Dumps
 2. 100 °F/hour
 - D. 1. Condenser Dumps
 2. 85 °F/hour
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 18
(1 point)

Given the following on Unit 1:

- A reactor trip has occurred due to a secondary system malfunction
- E-0 (REACTOR TRIP OR SAFETY INJECTION) has been performed and the crew has transitioned to ES-0.1 (REACTOR TRIP RESPONSE)

Subsequently,

- The crew enters FR-H.2 (RESPONSE TO STEAM GENERATOR OVERPRESSURE)
- The crew is preparing to dump steam from the affected S/G

FR-H.2 will NOT allow steam to be released from the affected S/G if NR level exceeds a MINIMUM of ____ (1) ____ due to ____ (2) ____ concerns, without an overfill evaluation being completed.

Which ONE (1) of the following completes the statements above?

- A. 1. 83%
 2. steamline water hammer
 - B. 1. 83%
 2. condenser tube damage
 - C. 1. 92%
 2. steamline water hammer
 - D. 1. 92%
 2. condenser tube damage
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 19
(1 point)

Given the following on Unit 2:

- E-0 (Reactor Trip or Safety Injection) was entered following a Small Break LOCA
- Both trains of Safety Injection automatically actuated
- 2B Reactor Trip Breaker (RTB) failed to open from the Control Room
- All CA pumps failed to start

Subsequently:

- The crew has entered FR-H.1 (Response to Loss of Secondary Heat Sink) and is attempting to align feed flow from 2A CFPT

- 1) In order to reset 2B Train Safety Injection, 2B RTB _____ required to be locally opened.
- 2) In accordance with FR-H.1, 2A CFPT will be reset _____.

Which ONE of the following completes the statements above?

- A. 1. is
2. locally
 - B. 1. is
2. at 2MC-10
 - C. 1. is NOT
2. locally
 - D. 1. is NOT
2. at 2MC-10
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 20
(1 point)

Given the following on Unit 1:

- The unit is at 98% RTP
- In preparation for a Unit 1 TDCA pump performance test the following flow control valves are positioned with the manual loaders as follows:

1CA-64AB (TD CA PUMP TO 1A S/G) -- CLOSED
1CA-52AB (TD CA PUMP TO 1B S/G) -- CLOSED
1CA-48AB (TD CA PUMP TO 1C S/G) -- OPEN
1CA-36AB (TD CA PUMP TO 1D S/G) -- OPEN

Subsequently,

- An inadvertent U1 TDCA pump auto-start signal was generated

After the inadvertent auto-start signal is initiated, ____ (1) ____ U1 TDCA Flow Control valves will be OPEN and the CA MODULATING VALVES RESET [TURB] indicating light will be ____ (2) ____ . (**No operator actions have been taken**)

Which ONE (1) of the following completes the statement above?

- A. 1. ONLY two
 2. illuminated
 - B. 1. ONLY two
 2. dark
 - C. 1. all
 2. illuminated
 - D. 1. all
 2. dark
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 21
(1 point)

Given the following on Unit 2:

- A loss of voltage has occurred on 2ETA
- Blackout loading is in progress

Subsequently:

- A Safety Injection signal is received before Blackout loading is completed on 2ETA

Based on the conditions above, the Blackout load sequence ____ (1) ____ be completed and 2ETA will be cleared of ____ (2) ____.

Which ONE (1) of the following completes the statement above?

- A. 1. will NOT
 2. all loads
 - B. 1. will NOT
 2. non-SI loads ONLY
 - C. 1. will
 2. all loads
 - D. 1. will
 2. non-SI loads ONLY
-

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ILT 20-1 MNS SRO NRC Examination

Question: 22
(1 point)

Given the following on Unit 1:

- Unit is shutdown in MODE 5
- Auxiliary Transformer 1ATA is tagged out for repairs
- All unit loads are being supplied by Auxiliary Transformer 1ATB

- 1) A Blackout will occur if _____ open.
- 2) The DG Committed Sequence _____ require emergency bus minimum voltage and frequency setpoints to be met.

Which ONE (1) of the following completes the statements above?

- A.
 1. PCBs 8 & 9
 2. does NOT
 - B.
 1. PCBs 11 & 12
 2. does NOT
 - C.
 1. PCBs 8 & 9
 2. does
 - D.
 1. PCBs 11 & 12
 2. does
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 23
(1 point)

Given the following initial conditions:

- Both Units are operating at 100% RTP
- An equalizing charge is being performed on vital battery EVCB

1) When performing a normal equalizing charge, battery EVCB will be charged by battery charger _____.

AND

2) Subsequently, if a loss of offsite power occurs on Unit 1 and 1B DG fails to start, 125 VDC Distribution Center (EVDB) _____ be energized.

Which ONE (1) of the following completes the statements above?

- A. 1. EVCS
 2. will
 - B. 1. EVCS
 2. will not
 - C. 1. EVCB
 2. will
 - D. 1. EVCB
 2. will not
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 24
(1 point)

Given the following on Unit 1:

- 1AD-11 A6, D/G A PANEL TROUBLE is in alarm
- An AO has been dispatched to the 1A D/G local panel

Subsequently, the AO reports the following;

- AD-19 (Diesel Generator Panel 1A) C5, STARTING AIR PRESSURE LOW, is in alarm
- 1VGPS-5040, Starting Air Tank 1A1, is 208 PSIG and lowering
- 1VGPS-5050, Starting Air Tank 1A2, is 220 PSIG and lowering
- VG compressors have just automatically started

- 1) Based on the conditions above, VG compressors will automatically stop if header pressure rises to a MINIMUM of _____ PSIG.
- 2) In accordance with the VG System Design Basis, one air receiver with pressure greater than a MINIMUM of _____ PSIG will provide at least one fast start and five total starts.

Which ONE (1) of the following completes the statements above?

- A. 1. 225
 2. 210
- B. 1. 225
 2. 220
- C. 1. 235
 2. 210
- D. 1. 235
 2. 220

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 25
(1 point)

Given the following on Unit 2:

- Unit is in Mode 6
- VP is in service and refueling is in progress

Subsequently:

- A power supply failure occurs on 2EMF-38(L) (CONTAINMENT PARTICULATE MONITOR)

- 1) Based on the conditions above, the VP Supply and Exhaust _____.
- 2) In accordance with OP/2/A/6100/010 Q (Annunciator Response for 2EMF 38 CONT PART HI RAD), to regain control of VP components, _____ must be reset.

Which ONE (1) of the following completes the statements above?

- A.
 1. fans will be "OFF" ONLY
 2. Containment Ventilation (S_H) ONLY
 - B.
 1. fans will be "OFF" ONLY
 2. Containment Ventilation (S_H) AND 2EMF-38
 - C.
 1. fans will be "OFF" AND dampers will be CLOSED
 2. Containment Ventilation (S_H) ONLY
 - D.
 1. fans will be "OFF" AND dampers will be CLOSED
 2. Containment Ventilation (S_H) AND 2EMF-38
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 26
(1 point)

Given the following on Unit 1:

Initial Conditions:

- The Unit is at 100% power
- Both trains of KC and RN are in service

Subsequently:

- 1A RN pump TRIPS
- A B/O occurs on **2ETA**

Based on the conditions above: (Assuming no operator actions)

- 1) 1A KC HX will lose RN flow due to the closure of _____.
- 2) 1B RN suction _____ automatically swap to the SNSWP.

Which ONE (1) of the following completes the statements above?

- A.
 1. 1RN-43A (Train B to Non-Ess Hdr Isol)
 2. will NOT
 - B.
 1. 1RN-43A (Train B to Non-Ess Hdr Isol)
 2. will
 - C.
 1. 1RN-40A (Train A to Non-Ess Hdr Isol)
 2. will NOT
 - D.
 1. 1RN-40A (Train A to Non-Ess Hdr Isol)
 2. will
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 27
(1 point)

Given the following on Unit 1

- A Loss of Offsite Power has occurred
- A loss of VI to the Auxiliary Building has occurred
- Safety Injection has NOT actuated
- D/G speed is at 96%

- 1) Based on the conditions above, the VG to VI Auxiliary Building Air tank isolation valves _____ auto OPEN after the time delay is met.
- 2) When conditions are met, auto OPENING of the VG to VI Auxiliary Building Air tank isolation valves ONLY _____ complete the VG to VI alignment.

Which ONE (1) of the following completes the statements above?

- A. 1. will
 2. does
 - B. 1. will
 2. does NOT
 - C. 1. will NOT
 2. does
 - D. 1. will NOT
 2. does NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 28
(1 point)

Given the following on Unit 2:

- Unit is at 100% RTP
- The Upper Airlock, Reactor Side Door will not CLOSE and has been declared INOPERABLE

In accordance with T.S. 3.6.2 (CONTAINMENT AIR LOCKS), the OPERABLE door in the affected air lock must be ____ (1) ____ CLOSED ____ (2) ____.

Which ONE (1) of the following completes the statement above?

- A. 1. verified
 2. IMMEDIATELY
 - B. 1. verified
 2. within ONE hour
 - C. 1. locked
 2. IMMEDIATELY
 - D. 1. locked
 2. within ONE hour
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 29
(1 point)

Given the following on Unit 1:

- Unit is at 50% RTP
- Control Rod Bank Select Switch is in "Auto"
- Control Bank "D" is at 195 steps withdrawn

Subsequently:

- Selected TIN1 (Turbine Inlet Pressure) output fails to the 100% value

Assuming no operator action, Control Bank "D" will _____ .

Which ONE (1) of the following completes the statement above?

- A. remain at 195 steps
 - B. withdraw 5 steps
 - C. withdraw 31 steps
 - D. withdraw until Reactor Power reaches 103%
-

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ILT 20-1 MNS SRO NRC Examination

Question: 30
(1 point)

Given the following on Unit 2:

- The Unit is operating at 40% RTP
- Power ascension in progress
- Turbine controls in MW-IN

Subsequently,

- NCP 2A trips on overcurrent

Assuming no operator action,

- 1) DNBR will _____.
- 2) Reactor power will _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. LOWER
 2. lower and stabilize at a new lower power
 - B.
 1. RISE
 2. lower and stabilize at a new lower power
 - C.
 1. LOWER
 2. initially lower and then return to 40% RTP
 - D.
 1. RISE
 2. initially lower and then return to 40% RTP
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 31
(1 point)

Given the following conditions on Unit 1:

- A Loss of Offsite Power has occurred
- 1ETA and 1ETB are energized from their respective DGs

Based on the conditions above, power can be restored to Pressurizer Heater Group(s)
_____.

Which ONE (1) of the following completes the statement above?

- A. A and B ONLY
 - B. C and D ONLY
 - C. C ONLY
 - D. D ONLY
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 32
(1 point)

In accordance with E-0 (Reactor Trip or Safety Injection):

- 1) Below P-10, a reactor trip signal will be generated if 1/2 Intermediate Range NIs increase to a MINIMUM power of _____.
- 2) One indication that is used in the immediate actions to verify that the reactor is tripped is _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. 25%
 2. IR Power - GOING DOWN
 - B.
 1. 25%
 2. IR SUR - NEGATIVE
 - C.
 1. 20%
 2. IR Power - GOING DOWN
 - D.
 1. 20%
 2. IR SUR - NEGATIVE
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 33
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- Pzr pressure channels indicate as follows:

Channel I	2239 PSIG
Channel II	2226 PSIG
Channel III	2235 PSIG
Channel IV	2230 PSIG

Subsequently,

- Channel I experiences a loss of power

1) Prior to the Channel I failure, SELECTED Pzr pressure value was _____ PSIG.

2) After the Channel I failure, SELECTED Pzr pressure value is _____ PSIG.

Which ONE (1) of the following completes the statements above?

REFERENCE PROVIDED

- A.
 - 1. 2235
 - 2. 2230.5
 - B.
 - 1. 2235
 - 2. 2232.5
 - C.
 - 1. 2230
 - 2. 2230.5
 - D.
 - 1. 2230
 - 2. 2232.5
-

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ILT 20-1 MNS SRO NRC Examination

Question: 34
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- "A" Train KC is in service
- 1A KF Pump is in service

Subsequently:

- 1KC-50A (Aux Bldg Non-Ess Hdr Isol) has spuriously CLOSED
- 1) In accordance with OP/1/A/6200/005 (SPENT FUEL COOLING SYSTEM) Limits and Precautions, the spent fuel pool must be maintained less than a MAXIMUM of _____.
 - 2) 1KC-149 (A KF Hx Outlet Flow) _____ AUTOMATICALLY reposition in order to attempt to maintain Spent Fuel Pool temperature.

Which ONE of the following completes the statements above?

- A.
 1. 90°F
 2. will
- B.
 1. 90°F
 2. will NOT
- C.
 1. 140°F
 2. will
- D.
 1. 140°F
 2. will NOT

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 35
(1 point)

Given the following on Unit 2:

- The unit is at 100% RTP
- The VF (Fuel Handling Building Ventilation) system is in its normal alignment for current plant conditions

Subsequently:

- A loss of power to 2EMF-42 (Fuel Building Ventilation Radiation Monitor) occurs

Based on the conditions above,

1) The Exhaust Filter Bypass Damper (D-5) _____ close.

2) The Supply and Exhaust Fans _____ stop.

Which ONE (1) of the following completes the statements above:

- A. 1. will NOT
 2. will NOT
 - B. 1. will
 2. will
 - C. 1. will NOT
 2. will
 - D. 1. will
 2. will NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 36
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- A minimally decayed Waste Gas Decay Tank is being released

Subsequently,

- A significant packing leak starts on isolation valve 1WG-160 (WG DECAY TANK OUTLET TO UNIT VENT CONTROL)
- 1EMF-37 (UNIT VENT IODINE) Trip 2 alarms

Based on the conditions above,

- 1) Unit(s) _____ Aux Bldg Ventilation unfiltered exhaust fans will be secured.
- 2) If a Trip 2 occurs on _____, Aux Bldg Ventilation filters will be placed in service.

Which ONE (1) of the following completes the statements above?

LEGEND:

1EMF-35 (UNIT VENT PART HI RAD)
0EMF-41 (AUX BLDG VENT HI RAD)

- A. 1. 1 ONLY
2. 0EMF-41
 - B. 1. 1 AND 2
2. 0EMF-41
 - C. 1. 1 ONLY
2. 1EMF-35
 - D. 1. 1 AND 2
2. 1EMF-35
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 37
(1 point)

Given the following on Unit 1:

- Unit is in Mode 4
- The "HI Flux At Shutdown" switch for N31 ONLY has been placed in "BLOCK"

- 1) Based on the conditions above, if a Trip 2 is received on 1EMF-16 (Cont Refueling Bridge), the containment evacuation alarm _____ activate.
- 2) 1EMF-16 uses a _____ detector.

Which ONE (1) of the following completes the statements above:

- A.
 1. will NOT
 2. Ionization Chamber
 - B.
 1. will NOT
 2. Geiger Mueller
 - C.
 1. will
 2. Ionization Chamber
 - D.
 1. will
 2. Geiger Mueller
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 38
(1 point)

Given the following:

- A Zone 5 alarm has occurred on the Fire Detection System Processing Control Center (EFAPCC) for the 2A NC Pump

Based on the conditions above,

- 1) An annunciator for "Fire Detection System Alert" will be received on _____ AD-13.
- 2) After the annunciator on AD-13 is acknowledged, depressing the "RESET" pushbutton on the EFAPCC panel _____ required to allow subsequent fire alarms to be annunciated on AD-13.

Which ONE (1) of the following completes the statements above?

- A.
 1. Unit 1
 2. is
 - B.
 1. Unit 1
 2. is NOT
 - C.
 1. Unit 2
 2. is
 - D.
 1. Unit 2
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 39
(1 point)

Given the following sequence of events on Unit 1:

- 0210 ▯ reactor tripped due to a LOCA
- 0300 ▯ crew enters ECA-1.1, (LOSS OF EMERGENCY COOLANT RECIRC)

Current conditions at time 0320:

- The crew is at step 17.b of ECA-1.1
- 1A NI pump is running, indicating 180 GPM
- 1B NI pump is running, indicating 160 GPM
- Both NV pumps are running, indicating 350 GPM (**Consider that the NV pumps have equal capacity**)
- Subcooling is +35°F

Based on the conditions above, at time 0320:

- 1) the MINIMUM flow from the ECCS pumps which will match the decay heat removal requirements of ECA-1.1 is _____.

AND

- 2) to meet the ECCS requirements of ECA-1.1, the crew will _____.

Which ONE (1) of the following completes the statements above?

REFERENCE PROVIDED

- A. 1. 350 GPM
 2. stop both NI pumps
 - B. 1. 350 GPM
 2. stop the 1B NI pump AND one NV pump
 - C. 1. 335 GPM
 2. stop both NV pumps
 - D. 1. 335 GPM
 2. stop the 1A NI pump AND one NV pump
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 40
(1 point)

Given the following on Unit 1

- Unit is at 95% RTP
- A pressure transient has resulted in an NC system pressure increase
- 1NC-34A (PZR PORV) opened but did NOT re-close
- 1NC-34A is manually isolated using 1NC-33A (PZR PORV Isol)
- 1NC-34A is NOT capable of being manually cycled

Based on the conditions above and in accordance with TS 3.4.11 (PZR PORVs),

- 1) Power to 1NC-33A (PZR PORV Isol) _____ required to be removed.
- 2) PZR PORVs are required to be OPERABLE in Modes _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. is
 2. 1, 2 and 3 ONLY
 - B.
 1. is
 2. 1, 2, 3 and 4 with all RCS cold leg temperatures $\leq 300^{\circ}\text{F}$
 - C.
 1. is NOT
 2. 1, 2 and 3 ONLY
 - D.
 1. is NOT
 2. 1, 2, 3 and 4 with all RCS cold leg temperatures $\leq 300^{\circ}\text{F}$
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 41
(1 point)

Given the following on Unit 2:

- A SBLOCA has occurred

As a result of equipment malfunctions, the following conditions are observed:

- Containment pressure is 1.5 PSIG and lowering
- NC system subcooling is (-) 5°F
- All NC pumps have been secured
- CETs indicate 710°F and rising
- Reactor Vessel LR Level is 45% and slowly lowering.

Based on the conditions above, the Core Cooling CSF status tree is currently ____ (1) ____, and continuous monitoring of the CSF status trees ____ (2) ____ required.

Which ONE (1) of the following completes the statement above?

- A. 1. YELLOW
 2. is
 - B. 1. YELLOW
 2. is NOT
 - C. 1. ORANGE
 2. is
 - D. 1. ORANGE
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 42
(1 point)

Regarding ES-1.4 (HOT LEG RECIRCULATION),

- 1) Transition to ES-1.4 should be made _____ hours after event initiation.
- 2) **One** of the reasons for transition _____ to terminate core boiling.

Which ONE (1) of the following completes the statements above?

- A. 1. 6
 2. is
 - B. 1. 6
 2. is NOT
 - C. 1. 4
 2. is
 - D. 1. 4
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 43
(1 point)

Given the following on Unit 1

- 1KC-338B (NC Pump Sup Hdr Cont Outside Isol) has failed CLOSED and will NOT OPEN using pushbutton on 1MC-11

In accordance with annunciator response procedures, entry into ____ (1) ____ is required due to NC pump ____ (2) ____ temperatures going up.

Which ONE (1) of the following completes the statement above?

PROCEDURE LEGEND:

AP-08, (MAFUNCTION OF NC PUMP)
AP-21, (LOSS OF KC OR KC SYSTEM LEAKAGE)

- A. 1. AP-08
 2. Motor Stator Winding
- B. 1. AP-08
 2. Motor Bearing
- C. 1. AP-21
 2. Motor Stator Winding
- D. 1. AP-21
 2. Motor Bearing

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 44
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- A VCT automatic make-up is in progress

Subsequently the following occurs:

- 1AD-7/D3, (VCT ABNORMAL LVL) is lit
- 1NV-221A and 1NV-222B (Unit 1 NV Pump Suction From FWST Isol) are OPEN
- 1NV-141A and 1NV-142B (Unit 1 VCT Outlet Isol) are CLOSING

Based on the above conditions:

- 1) VCT level is currently NO GREATER THAN _____.
- 2) The cause of the continued VCT low level condition during automatic make-up is a failure of _____.

Which ONE (1) of the following completes the statements above?

LEGEND:

- **1NV-137A (NC Filters Otlt 3-Way Cntl)**
- **1NV-171A (BA Blender to VCT Inlet)**

- A. 1. 4%
 2. 1NV-137A
 - B. 1. 16%
 2. 1NV-171A
 - C. 1. 4%
 2. 1NV-171A
 - D. 1. 16%
 2. 1NV-137A
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 45
(1 point)

Given the following on Unit 1:

- The Unit is in Mode 6
- AP/1/A/5500/019 (LOSS OF RESIDUAL HEAT REMOVAL SYSTEM) has been implemented due to lowering NC system level
- The CRS has decided to makeup to the NC system using gravity feed through 1ND-35 (U1 ND TO FWST ISOL) and 1NI-173A (1A ND TO A & B COLD LEGS ISOL)

In accordance with AP-19,

- 1) Flow to the NC system will be established by throttling 1ND-35 _____.
- 2) ND pump operation is not allowed with 1ND-35 OPEN because _____ will occur.

Which ONE (1) of the following completes the statements above?

- A. 1. locally
2. a loss of NC system inventory outside containment
 - B. 1. locally
2. ND pump runout conditions
 - C. 1. from the Control Room
2. a loss of NC system inventory outside containment
 - D. 1. from the Control Room
2. ND pump runout conditions
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 46
(1 point)

Given the following on Unit 2:

- KC Surge Tank level is lowering slowly
- The crew has implemented AP-21 (LOSS OF KC OR KC SYSTEM LEAKAGE)

- 1) A possible location of the KC system leakage is into the _____ heat exchanger.
- 2) The assured supply of makeup water to the KC Surge tank is _____.

Which ONE (1) of the following completes the statements above?

- A. 1. Letdown
 2. RN
 - B. 1. Letdown
 2. YM
 - C. 1. Seal Water Return
 2. RN
 - D. 1. Seal Water Return
 2. YM
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 47
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- Pzr Pressure is 2235 PSIG

Subsequently:

- The Pressurizer Pressure Master controller has suffered an internal failure resulting in a "Pressurizer Pressure Error" of +100 PSIG
- Actual Pressurizer Pressure is 2100 PSIG and lowering

1) Pressurizer Spray valves are currently _____.

2) _____ has received a signal to open.

Which ONE (1) of the following completes the statements above?

- A. 1. OPEN
 2. all Pressurizer PORVs
 - B. 1. OPEN
 2. 1NC-34A ONLY
 - C. 1. CLOSED
 2. all Pressurizer PORVs
 - D. 1. CLOSED
 2. 1NC-34A ONLY
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 48
(1 point)

Given the following on Unit 1:

- Reactor trip from 100% power has occurred
- Crew is implementing EP/1/A/5000/ECA-2.1 (UNCONTROLLED DEPRESSURIZATION OF ALL STEAM GENERATORS)
- Containment pressure peaked at 3.1 PSIG and is currently 2.7 PSIG
- All S/G N/R levels are 4%
- CA flow to each S/G was throttled to 110 GPM in E-0

Based on the conditions above,

- 1) A RED path on the Heat Sink Critical Safety Function _____ exist.
- 2) and in accordance with ECA-2.1, minimum feed flow must be maintained to any S/G with a N/R level less than a MAXIMUM of _____.

Which ONE (1) of the following completes the statements above?

- A. 1. does NOT
 2. 11%
 - B. 1. does NOT
 2. 32%
 - C. 1. does
 2. 11%
 - D. 1. does
 2. 32%
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 49
(1 point)

Given the following on Unit 1:

- The crew has entered FR-H.1 (Response to Loss of Secondary Heat Sink)
- All Pzr PORVs are available
- Trend of parameters are as follows:

Time	1400	1410	1420	1430
S/G 1A WR [%]	43	37	30	26
S/G 1B WR [%]	41	32	25	20
S/G 1C WR [%]	42	34	29	25
S/G 1D WR [%]	40	33	26	21
Total feed flow [GPM]	0	0	0	0
Cont press [PSIG]	0.75	2.1	3.2	2.8

- 1) Based on the conditions above, the **EARLIEST** time that the crew would be required to initiate NC system Feed and Bleed is _____.
- 2) To establish adequate heat removal during feed and bleed, FR-H.1 requires a MINIMUM of _____ Pzr PORV(s) to be OPENED.

Which ONE (1) of the following completes the statements above?

- A. 1. 1420
 2. one
 - B. 1. 1420
 2. two
 - C. 1. 1430
 2. one
 - D. 1. 1430
 2. two
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 50
(1 point)

Given the following on Unit 1:

- The unit is in Mode 5 with both trains of ND in operation

Subsequently,

- A loss of off-site power occurs
- 1) Based on the conditions above the ND pumps _____ start automatically after 20 seconds.
 - 2) The reason for this configuration is that the sequencer will enter _____ mode due to the LOOP.

Which ONE (1) of the following completes the statements above?

- A. 1. will
2. Priority
 - B. 1. will
2. Secondary
 - C. 1. will NOT
2. Priority
 - D. 1. will NOT
2. Secondary
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 51
(1 point)

Given the following:

- A loss of 2EKVD has occurred
- The crew has implemented AP-15 (LOSS OF VITAL OR AUX CONTROL POWER)

In accordance with AP-15,

- 1) when checking Vital AC panelboards ENERGIZED, the crew will check _____.
- 2) Annunciator 2AD-2/F-1 (SSPS TRN B GENERAL WARNING) _____ be LIT.

Which ONE (1) of the following completes the statements above?

- A.
 1. bottom row of status lights - NORMAL
 2. will
 - B.
 1. switch indication on any pump powered from 2ETB - DARK
 2. will
 - C.
 1. bottom row of status lights - NORMAL
 2. will NOT
 - D.
 1. switch indication on any pump powered from 2ETB - DARK
 2. will NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 52
(1 point)

Given the following on Unit 1:

- Unit is at 75% RTP
- 1A Train in service

Subsequently,

- A loss of 1A RN pump occurs
- The crew implements AP/20 (LOSS OF RN, CASE I, LOSS OF OPERATING RN TRAIN)
- 1B RN Pump has been started

In accordance with AP-20, ____ (1) ____ will be used to establish the desired flow rate while maintaining 1B RN pump flow less than a MAXIMUM of ____ (2) ____ GPM.

Which ONE (1) of the following completes the statement above?

LEGEND:

- **1RN-187B (B KC HX INLET ISOLATION)**
- **1RN-190B (RN to B KC HX CONTROL)**

- A. 1. 1RN-187B
 2. 16,000
 - B. 1. 1RN-187B
 2. 14,000
 - C. 1. 1RN-190B
 2. 16,000
 - D. 1. 1RN-190B
 2. 14,000
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 53
(1 point)

Given the following:

- A complete loss of Instrument Air has occurred.
- AP-22, Enclosure 13 for Unit 2, RN Strainer Surveillance During Loss of VI, was implemented at 1200.
- An Operator was not available for dispatch to perform Enclosure 12, Placing RN Strainers in Manual Backwash, until 1315.

The following readings were obtained from the OAC:

Time	2RN-21A Accumulator Pressure (OAC Point M2A0000)	2RN-25B Accumulator Pressure (OAC Point M2A0006)
1200	305.5 PSIG	285.5 PSIG
1300	294.4 PSIG	204.4 PSIG

Based on the above readings, ____ (1) ____ required to be placed in backwash no later than time ____ (2) ____.

Which ONE (1) of the following completes the statements above?

REFERENCE PROVIDED

- A. 1. both 2A AND 2B RN Strainers are
 2. 1500
 - B. 1. both 2A AND 2B RN Strainers are
 2. 1600
 - C. 1. 2B RN Strainer ONLY is
 2. 1500
 - D. 1. 2B RN Strainer ONLY is
 2. 1600
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 54
(1 point)

Given the following on Unit 2:

- The crew has implemented ECA-1.2 (LOCA OUTSIDE CONTAINMENT)
- U2 FWST level is slowly lowering
- NC system pressure is 1600 PSIG and slowly lowering

In accordance with ECA-1.2,

- 1) the crew will FIRST stop and isolate the _____ pumps from the FWST.
- 2) the overall mitigation strategy includes cooldown and depressurization of the NCS to allow the _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. ND
 2. ND isolation valves (2NI-173A and 2NI-178B) to be closed
 - B.
 1. ND
 2. Cold Leg Accumulators to inject
 - C.
 1. NI
 2. ND isolation valves (2NI-173A and 2NI-178B) to be closed
 - D.
 1. NI
 2. Cold Leg Accumulators to inject
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 55
(1 point)

Given the following on Unit 1:

- A Large Break LOCA has occurred inside Containment
- A and B ND pumps are NOT available
- The Control room crew has implemented ECA-1.1 (LOSS OF EMERGENCY COOLANT RECIRC) but, NO actions have been taken
- Containment pressure is 8 PSIG and slowly rising
- FWST level is 105 inches and lowering

- 1) When the FWST Level LO setpoint is reached, 1NI-184B (1B ND PUMP SUCTION FROM CONT SUMP ISOL) **AND** 1NI-185A (1A ND PUMP SUCTION FROM CONT SUMP ISOL) _____ automatically OPEN.
- 2) Per ECA-1.1 Foldout Page, when FWST level decreases to less than a MAXIMUM of _____ inches ALL ECCS pumps must be secured.

Which ONE (1) of the following completes the statements above?

- A. 1. will
 2. 95
 - B. 1. will NOT
 2. 95
 - C. 1. will
 2. 20
 - D. 1. will NOT
 2. 20
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 56
(1 point)

Given the following on Unit 1:

- A Reactor trip and Safety Injection have occurred
- Containment pressure peaked at 2.7 PSIG and is slowly lowering
- The crew has implemented EP/1/A/5000/FR-H.1 (RESPONSE TO LOSS OF SECONDARY HEAT SINK)
- All attempts to restore CA flow have been unsuccessful

Based on the conditions above and in accordance with FR-H.1:

- 1) All NC pumps _____ required to be stopped.
- 2) The NEXT source of feed water ATTEMPTED for restoration of flow to the S/Gs is through the CM/CF system using _____ pump(s).

Which ONE (1) of the following completes the statements above?

- A.
 1. are
 2. either Main Feed Water
 - B.
 1. are NOT
 2. either Main Feed Water
 - C.
 1. are
 2. Hotwell and Booster
 - D.
 1. are NOT
 2. Hotwell and Booster
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 57
(1 point)

Given the following on Unit 1:

- Unit is currently refueling
- The refueling crew is lowering an irradiated fuel assembly into the core

Subsequently,

- The assembly drops completely into the core
- Gas bubbles are observed originating from the dropped assembly
- 1EMF-39 (CONTAINMENT GAS HI RAD) is in Trip 1 alarm
- NO other annunciators have been received
- The crew has implemented AP/1/A/5500/025 (SPENT FUEL DAMAGE)

- 1) Based on the conditions above, the Containment Evacuation Alarm _____ require manual actuation.
- 2) AP-25 _____ direct VP to be manually secured.

Which ONE (1) of the following completes the statements above?

- A.
 1. will NOT
 2. does
 - B.
 1. will NOT
 2. does NOT
 - C.
 1. will
 2. does
 - D.
 1. will
 2. does NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 58
(1 point)

Given the following on Unit 2:

- The unit is at 75% RTP
- 2EMF-33 (CONDENSER AIR EJECTOR EXHAUST) is in Trip 2 alarm
- 2EMF-73 (S/G C LEAKAGE) is in Trip 2 alarm
- The crew has implemented AP-10 (NC SYSTEM LEAKAGE), Case 1 (S/G TUBE LEAKAGE)
- Pressurizer level has been stabilized
- Letdown flow is 75 GPM
- Charging flow is 125 GPM

- 1) Based on the above conditions, the estimated leak rate is _____ GPM.
- 2) In accordance with AP-10, the MAXIMUM allowed charging flow to stabilize Pressurizer level is _____ GPM.

Which ONE (1) of the following completes the statements above?

- A. 1. 50
 2. 155
 - B. 1. 50
 2. 200
 - C. 1. 38
 2. 155
 - D. 1. 38
 2. 200
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 59
(1 point)

Given the following Unit 1 initial conditions:

- Unit is at 40% RTP and stable
- Rod Control is in automatic
- The MW feedback loop is OUT of service
- NC T-Avg is 567°F

Subsequently,

- Control Bank [D] Rod M-12 drops fully into the core
- The crew has implemented AP-14 (ROD CONTROL MALFUNCTION)
- NC T-Avg is 563°F

- 1) Turbine power _____ stabilize at a lower value.
- 2) In accordance with AP-14, the crew _____ FIRST restore T-Avg to T-Ref by adjusting turbine load.

Which ONE (1) of the following completes the statements above?

- A. 1. will
 2. will
 - B. 1. will
 2. will NOT
 - C. 1. will NOT
 2. will
 - D. 1. will NOT
 2. will NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 60
(1 point)

In Modes 1 - 4, which ONE (1) of the following statements represents a loss of Containment Integrity?

- A. Submarine (Emergency Access) hatch is found open
 - B. Both lower personnel airlock doors closed with all seals deflated
 - C. Annulus doors blocked open for maintenance
 - D. Discovery of major divider barrier seal degradation
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 61
(1 point)

Given the following on Unit 1:

- A LOCA has occurred
- The crew entered FR-C.1, RESPONSE TO INADEQUATE CORE COOLING
- S/G depressurization was not effective in restoring adequate core cooling
- Core Exit Thermocouples (CET) are 1200°F and rising

In accordance with FR-C.1,

- 1) the crew will _____ until CETs lower below 1200°F.
- 2) normal conditions for starting a NC pump _____ required.

Which ONE (1) of the following completes the statements above?

- A.
 1. start NC pumps one at a time
 2. are
 - B.
 1. start NC pumps one at a time
 2. are NOT
 - C.
 1. start all available NC pumps and monitor
 2. are
 - D.
 1. start all available NC pumps and monitor
 2. are NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 62
(1 point)

Given the following on Unit 1:

- A Reactor Trip and Safety Injection have occurred
- The crew has implemented ES-1.1, (SAFETY INJECTION TERMINATION)
- While checking if S/I flow is required, the BOP reports Pzr level is 15% and lowering

If Pzr level can NOT be maintained greater than a MINIMUM of ____ (1) ____, ES-1.1 Foldout page directs the crew to raise S/I flow, restore Pzr level **AND** transition to procedure ____ (2) ____.

Which ONE (1) of the following completes the statement above?

PROCEDURE LEGEND:

E-0 (REACTOR TRIP OR SAFETY INJECTION)

E-1 (LOSS OF REACTOR OR SECONDARY COOLANT)

- A. 1. 11%
 2. E-1
 - B. 1. 11%
 2. E-0
 - C. 1. 4%
 2. E-1
 - D. 1. 4%
 2. E-0
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 63
(1 point)

Given the following on Unit 2:

- A Large Break LOCA has occurred
- The CRS has elected to implement FR-Z.3 (RESPONSE TO HIGH CONTAINMENT RADIATION LEVEL)
- Current Containment conditions:
 - Containment Pressure - 2.5 PSIG and stable
 - Containment Radiation Level - 36 R/HR and slowly rising
 - Containment Sump Level - 5.5 FEET and slowly rising

Based on the conditions above,

- 1) FR-Z.3 _____ direct the crew to start the Containment Aux Carbon Filter fan.
- 2) FR-Z.3 _____ require the crew to start the VE fans.

Which ONE (1) of the following completes the statements above?

- A. 1. will
 2. does NOT
- B. 1. will
 2. does
- C. 1. will NOT
 2. does NOT
- D. 1. will NOT
 2. does

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 64
(1 point)

Given the following on Unit 1:

- The Crew entered ES-1.2, (POST LOCA COOLDOWN AND DEPRESSURIZATION), after a small break LOCA occurred
- Containment Pressure peaked at 3.2 PSIG and is now stable at 2.5 PSIG

Based on the condition above:

- 1) The operator will first use _____ to depressurize the NC system.
- 2) After NC system depressurization has commenced, a rapid rise in pressurizer level would be caused by _____.

Which ONE (1) of the following completes the statements above?

- A.
 - 1. NV aux spray
 - 2. voiding in the upper head region
- B.
 - 1. one Pzr PORV
 - 2. voiding in the upper head region
- C.
 - 1. NV aux spray
 - 2. increased S/I flow
- D.
 - 1. one Pzr PORV
 - 2. increased S/I flow

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 65
(1 point)

Given the following on Unit 2:

- Unit tripped from 100% RTP
- A Loss of Off-Site Power (LOOP) has occurred
- One CRDM fan is running
- ES-0.2 (NATURAL CIRCULATION COOLDOWN) has been implemented

Based on the conditions above and in accordance with ES-0.2, an NC system cooldown to cold shutdown will be performed using the ____ (1) ____ at a rate NOT to exceed ____ (2) ____ in an hour.

Which ONE (1) of the following completes the statement above?

- A. 1. steam dumps
 2. 100°F
 - B. 1. steam dumps
 2. 70°F
 - C. 1. S/G PORVs
 2. 100°F
 - D. 1. S/G PORVs
 2. 70°F
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 66
(1 point)

In accordance with OMP 5-12 (COMMUNICATION OF DAY-TO-DAY PLANT ISSUES),

- 1) Communications of detailed instructions or major guidance to the Control Room will be communicated using _____.
- 2) The Operations Target Contact for this type of communication is the _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. the Ops Work List
 2. CRS
 - B.
 1. the Ops Work List
 2. SM
 - C.
 1. Engineering Group Guidance Sheets
 2. CRS
 - D.
 1. Engineering Group Guidance Sheets
 2. SM
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 67
(1 point)

In accordance with AD-HS-ALL-0103 (FALL PROTECTION),

- 1) Continuous Fall Protection (100% tie-off) is required when there is a free-fall risk of greater than or equal to a MINIMUM of _____ feet above a working or walking surface.
- 2) A body belt _____ be used to meet Personal Fall Arrest System (PFAS) requirements.

Which ONE (1) of the following completes the statements above?

- A.
 1. 4
 2. can NOT
 - B.
 1. 4
 2. can
 - C.
 1. 10
 2. can NOT
 - D.
 1. 10
 2. can
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 68
(1 point)

Given the following on Unit 2:

- Unit is in Mode 6
- Core off-load is in progress
- 2EMF-42 (FUEL BLDG VENT HI RAD) Trip 2 is in alarm
- 2EMF-4 (SPENT FUEL BLDG REFUEL BRDG) Trip 2 is in alarm

In accordance with the annunciator response procedure for 2EMF-4 HI RAD,

- 1) the operating crew is required to _____.
- 2) evacuation of the Spent Fuel Building _____ required.

Which ONE (1) of the following completes the statements above?

- A.
 1. place the Refueling Cavity in purification
 2. is
 - B.
 1. place the Refueling Cavity in purification
 2. is NOT
 - C.
 1. ensure at least one train of VC Outside Air Pressure Filtration is in service
 2. is
 - D.
 1. ensure at least one train of VC Outside Air Pressure Filtration is in service
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 69
(1 point)

In accordance with AD-HU-ALL-004 (PROCEDURE AND WORK INSTRUCTION USE AND ADHERENCE),

- 1) if it is determined that an in progress surveillance PT can NOT be performed as written, out of sequence step performance _____ allowed with supervisor approval, if taking credit for surveillance.
- 2) verbal approval for out of sequence step performance _____ allowed.

Consider Each Statement Separately

Which ONE (1) of the following completes the statements above?

- A.
 1. is
 2. is
 - B.
 1. is
 2. is NOT
 - C.
 1. is NOT
 2. is
 - D.
 1. is NOT
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 70
(1 point)

In accordance with AD-OP-ALL-1000 (CONDUCT OF OPERATIONS),

- 1) A nuisance alarm _____ a situation that warrants disabling an annunciator.
- 2) A disabled annunciator _____ required to be restored prior to the end of shift.

Which ONE (1) of the following completes the statements above?

- A. 1. is
 2. is
 - B. 1. is
 2. is NOT
 - C. 1. is NOT
 2. is
 - D. 1. is NOT
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 71
(1 point)

Given the following on Unit 1:

- A liquid waste release from the Ventilation Unit Condensate Drain Tank (VUCDT), through the NORMAL discharge path, has been initiated

- 1) If 1EMF-44 (CONT VENT DRN TK OUTLET) reaches Trip 2 status, _____ will automatically CLOSE to terminate the release.
- 2) Following a Trip 2 signal, the VUCDT release _____ be re-started without additional sampling.

Which ONE (1) of the following completes the statements above?

LEGEND:

- 1WP-35 (WMT & VUCDT TO RC CNTRL)
- 1WM-46 (0EMF-49 OUTLET HI RAD SHUTOFF ISOL)

- A.
 1. 1WM-46
 2. can
 - B.
 1. 1WP-35
 2. can
 - C.
 1. 1WP-35
 2. can NOT
 - D.
 1. 1WM-46
 2. can NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 72
(1 point)

Given the following:

- The NV system is being aligned for startup
- The procedure in use requires independent verification of a single valve located in a room with a general dose rate of 130 mREM/hr
- Estimated time to independently verify the valve's position is 10 minutes
- There are no known hot spots in the area
- There is no airborne activity in this room
- The room has no surface contamination areas

In accordance with AD-HU-ALL-0005 (HUMAN PERFORMANCE TOOLS), independent verification of the valve above ____ (1) ____ be waived because the ____ (2) ____ .

Which ONE (1) of the following completes the statement above?

- A.
 - 1. can
 - 2. general area dose rate is greater than 100 mREM/hr
 - B.
 - 1. can
 - 2. radiation exposure for a single verification would exceed the allowable limit
 - C.
 - 1. can NOT
 - 2. general area dose rate is less than 1 REM/hr
 - D.
 - 1. can NOT
 - 2. radiation exposure for a single verification is within the allowable limit
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 73
(1 point)

Given the following:

- Security has reported an active fire at the McGuire Office Complex (MOC)

- 1) Site Fire Brigade _____ responsible for fire suppression and fire alarm response.
- 2) If required, _____ contains the guidance for dispatching offsite fire departments.

Which ONE (1) of the following completes the statements above?

PROCURE LEGEND:

AP/0/A/5500/045 (PLANT FIRE OR TURBINE BLDG OIL LEAK)
RP/0A/5700/025 (FIRE BRIGADE RESPONSE)

- A.
 1. is
 2. RP-25
 - B.
 1. is
 2. AP-45
 - C.
 1. is NOT
 2. RP-25
 - D.
 1. is NOT
 2. AP-45
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 74
(1 point)

Given the following:

- A Fire alarm has actuated in the Unit 1 CA Pump Room
- An Operator dispatched to the area reports that there is smoke and some cables with glowing embers but, **NO** visible flames

- 1) In accordance with AP/0/A/5500/045 (PLANT FIRE), this _____ classified as an ACTIVE fire.
- 2) In accordance with RP/0/A/5700/025 (FIRE BRIGADE RESPONSE), in addition to making an announcement on the Fire Brigade Radio and activating the Fire Brigade Pagers, a Plant PA announcement _____ required when dispatching the Fire Brigade.

Which ONE (1) of the following completes the statements above?

- A. 1. is NOT
 2. is
 - B. 1. is NOT
 2. is NOT
 - C. 1. is
 2. is
 - D. 1. is
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 75
(1 point)

Regarding AD-OP-ALL-1001 (CONDUCT OF ABNORMAL OPERATIONS),

- 1) When Reactor Operators (ROs) identify that a fold-out page condition is met, SRO concurrence _____ required PRIOR to performing any required actions.
- 2) The dispatch of Auxiliary Operators (AOs) to perform tasks outside the control room _____ performed by the Reactor Operators (ROs).

Which ONE (1) of the following completes the statements above?

- A. 1. is NOT
 2. is NOT
 - B. 1. is
 2. is NOT
 - C. 1. is NOT
 2. is
 - D. 1. is
 2. is
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 76
(1 point)

Given the following on Unit 1:

- The crew tripped the reactor 65 minutes ago due to a main steam line break
- The crew has transitioned to ECA-2.1 (UNCONTROLLED DEPRESSURIZATION OF ALL S/Gs) due to a failure of all MSIVs
- The following indications are observed:
 - Feed flow to each S/G = 125 GPM
 - All S/G NR Levels = 0%
 - All S/G WR Levels = 20%
 - NC T-Colds = 410°F and lowering

- 1) Based on the conditions above, and in accordance with ECA-2.1, the crew will throttle feed flow to a MAXIMUM flowrate of _____ GPM to each S/G.
- 2) A basis for the action taken by the crew _____ because a thermal shock concern would exist if the S/G's were allowed to dry out.

Which ONE (1) of the following completes the statements above?

- A. 1. 100
 2. is
 - B. 1. 100
 2. is NOT
 - C. 1. 25
 2. is
 - D. 1. 25
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 77
(1 point)

Given the following on Unit 1:

- The Unit is increasing power following a Refueling Outage
- At 42% reactor power, the P-8 permissive bistable fails "AS IS"

Subsequently:

- Reactor power is currently 52%
- 1A NCP trips

Consider Each Statement Separately

- 1) Based on the conditions above, an automatic Reactor trip signal _____ be generated.
- 2) If subsequent conditions require implementation of FR-S.1 (RESPONSE TO NUCLEAR POWER GENERATION/ATWS), the crew will transition from FR-S.1 to E-0 (REACTOR TRIP OR SAFETY INJECTION) _____.

Which ONE of the following completes the statements above?

- A. 1. will NOT
2. after FR-S.1 is performed to completion
 - B. 1. will
2. after FR-S.1 is performed to completion
 - C. 1. will NOT
2. immediately upon a successful Reactor trip
 - D. 1. will
2. immediately upon a successful Reactor trip
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 78
(1 point)

Given the following:

- On August 15th, both Units are at 100% RTP
- The BOP operator reports the following trend of SNSWP parameters:

<u>Time</u>	<u>1600</u>	<u>1700</u>
SNSWP Level (Ft)	739.90	739.70
SNSWP Temp (°F)	81.0	82.5

- 1) The EARLIEST time that the Standby Nuclear Service Water Pond (SNSWP) is **required** to be declared INOPERABLE is _____.
- 2) Based on the parameter requirement REQUIRING INOPERABILITY, and in accordance with T.S 3.7.8 (STANDBY NUCLEAR SERVICE WATER POND - SNSWP) Bases, not meeting this surveillance requirement affects the SNSWP's ability to _____.

Which ONE (1) of the following completes the statements above?

- A.
 1. 1600
 2. cool KC to at least its maximum design temperature
 - B.
 1. 1600
 2. provide sufficient NPSH to operate the RN pumps
 - C.
 1. 1700
 2. cool KC to at least its maximum design temperature
 - D.
 1. 1700
 2. provide sufficient NPSH to operate the RN pumps
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 79
(1 point)

Given the following:

- The VI system has become contaminated with oil
- The VI air dryer packages rapidly clog
- VI pressure is 88 PSIG and lowering
- Both units have implemented AP-22 (LOSS OF VI)

Based on the conditions above and in accordance with AP-22,

- 1) The VI Dryer Purge Exhaust Valves _____ auto CLOSED.
- 2) The CRS will direct implementation of Enclosure 5 (VI DRYER and VI TO VS ISOLATION) if VI pressure lowers to less than a MAXIMUM of _____.

Which ONE (1) of the following completes the statements above?

- A. 1. have
 2. 82 PSIG
 - B. 1. have
 2. 70 PSIG
 - C. 1. have NOT
 2. 82 PSIG
 - D. 1. have NOT
 2. 70 PSIG
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 80
(1 point)

Given the following on Unit 1:

- A LOCA has occurred inside Containment
- Containment pressure is 11 PSIG
- ES-1.3 (TRANSFER TO COLD LEG RECIRC), has been implemented
- The 1A NS pump has been started

Subsequently:

- The 1A NS pump trips
- Containment pressure is 6.5 PSIG

Based on the conditions above,

the current condition of the Containment Critical Safety Function is ____ (1) ____
AND alignment of 1B NS will be performed per ____ (2) ____.

Which ONE (1) of the following completes the statement above?

PROCEDURE LEGEND:

FR-Z.1 (RESPONSE TO HIGH CONTAINMENT PRESSURE)
ES-1.3 (TRANSFER TO COLD LEG RECIRC)

- A. 1. RED
 2. FR-Z.1
 - B. 1. ORANGE
 2. FR-Z.1
 - C. 1. RED
 2. ES-1.3
 - D. 1. ORANGE
 2. ES-1.3
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 81
(1 point)

Given the following on Unit 1:

- The crew has implemented EP/1/A/5000/E-1 (LOSS OF REACTOR OR SECONDARY COOLANT) following a LOCA
- Containment Pressure is 2.2 psig
- Containment Sump Level is 10.6 ft
- Containment Radiation is 28 R/Hr
- Containment Hydrogen Concentration is 6.8%

- 1) MINIMUM requirements for entry into EP/1/A/5000/FR-Z.4 (RESPONSE TO HIGH CONTAINMENT HYDROGEN CONCENTRATION) _____ met.
- 2) Based on the conditions above, the CRS _____ required to direct energizing the Hydrogen Ignitors.

Which ONE of the following completes the statements above?

- A. 1. are NOT
 2. is
 - B 1. are NOT
 2. is NOT
 - C. 1. are
 2. is
 - D 1. are
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 82
(1 point)

Given the following on Unit 1:

- Unit is cooling down for a refueling outage
- Containment purge has been initiated in preparation for Containment entry

Subsequently,

- 1EMF-39L (CONTAINMENT GAS - LOW RANGE) experiences a loss of power and is subsequently declared INOPERABLE

Based on the conditions above and in accordance with OP/1/A/6450/015 (CONTAINMENT PURGE SYSTEM),

- 1) VP will be aligned for shutdown using _____.
- 2) when 1EMF-39 is restored to OPERABLE, VP _____ be re-started using the current GWR permit.

Which ONE (1) of the following completes the statements above?

- A.
 1. Enclosure 4.3 (VP SHUTDOWN)
 2. can
 - B.
 1. Enclosure 4.3 (VP SHUTDOWN)
 2. can NOT
 - C.
 1. Enclosure 4.6 (TEMPORARY SHUTDOWN OF VP)
 2. can
 - D.
 1. Enclosure 4.6 (TEMPORARY SHUTDOWN OF VP)
 2. can NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 83
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- An approved Waste Monitor Tank discharge to RC is occurring

Subsequently,

- 0EMF-49 HI RAD annunciator alarms but the release fails to automatically terminate
- 1) If the unmonitored release continues, the SLC 16.11.3 (DOSE - LIQUID EFFLUENTS) MAXIMUM dose commitment for any calendar quarter of _____ to the total body could be exceeded.
 - 2) If the SLC 16.11.3 dose commitment is exceeded, a(an) _____ is required to be provided to the NRC.

Which ONE (1) of the following completes the statements above?

- A.
 1. 1.5 mrem
 2. immediate notification
 - B.
 1. 1.5 mrem
 2. 30 day special report
 - C.
 1. 3.0 mrem
 2. immediate notification
 - D.
 1. 3.0 mrem
 2. 30 day special report
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 84
(1 point)

Given the following on Unit 1:

- The unit is at 30% RTP
- NC pump 1C trips during I&E testing

Five minutes after the NCP trip,

- A lockout occurs on 1A Busline due to a fault
- The Reactor Trip breakers remain CLOSED

Based on the conditions above,

- 1) annunciator 1FO-1/F3 (LO FLO P7 PERMIS RX TRIP) _____ be in alarm.
- 2) a required subsequent action and basis for the action is to _____.

Which ONE (1) of the following completes the statements above?

PROCEDURE LEGEND:

Technical Specification 3.4.4 (RCS LOOPS MODES 1 & 2)

- A.
 1. will
 2. manually trip the turbine to conserve SG inventory
 - B.
 1. will
 2. manually trip the turbine to generate a redundant reactor trip signal
 - C.
 1. will NOT
 2. restart 1C NC pump within 6 hours to comply with TS 3.4.4
 - D.
 1. will NOT
 2. place the unit in MODE 3 within 6 hours to comply with TS 3.4.4
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 85
(1 point)

Given the following on Unit 2:

- The crew has implemented E-3 (STEAM GENERATOR TUBE RUPTURE)
 - Initial cooldown of the NC system to the target CET temperature has been completed
 - The OATC reports subcooling based on CETs is 25°F and lowering
- 1) In accordance with the E-3 background document, the purpose of the INITIAL cooldown of the NC system _____ to establish a MINIMUM of 20°F subcooling.
- 2) If the above amount of subcooling can NOT be maintained after the cooldown is stopped, The CRS will direct the crew to GO TO _____ in accordance with E-3.

Which ONE (1) of the following completes the statements above?

PROCEDURE LEGEND

ECA-3.1 (SGTR WITH LOSS OF REACTOR COOLANT SUBCOOLED RECOVERY DESIRED)

ECA-3.2 (SGTR WITH LOSS OF REACTOR COOLANT SATURATED RECOVERY DESIRED)

- A. 1. is
 2. ECA-3.1
- B. 1. is
 2. ECA-3.2
- C. 1. is NOT
 2. ECA-3.1
- D. 1. is NOT
 2. ECA-3.2
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 86
(1 point)

Given the following on Unit 2:

- Unit was at 100% RTP
- A feedwater line break inside containment has occurred
- 2A and 2B MDCA Pumps did NOT auto start
- TDCA pump tripped on mechanical overspeed and can NOT be reset
- The operating crew entered FR-H.1, (RESPONSE TO LOSS OF SECONDARY HEAT SINK)

Subsequently,

- All S/G WR Levels are 48% and lowering slowly
- The BOP operator is able to manually start 2A MDCA pump
- An AO reports the 2B MDCA pump breaker tripped on over-current
- The crew determines the discharge path to the associated S/Gs from 2A MDCA pump can NOT be established

Based on the conditions above and in accordance with FR-H.1,

- 1) the CRS will direct implementation of FR-H.1, Enclosure _____.
- 2) after implementation of the enclosure, TOTAL CA flow to all S/Gs will be limited to a MAXIMUM of _____ GPM.

Which ONE (1) of the following completes the statements above?

PROCEDURE LEGEND:

Enclosure 5 (MD CA PUMP TRAIN A/B CROSS-TIE ALIGNMENT)
Enclosure 6 (LOCAL CA VALVE ALIGNMENT)

- A. 1. 6
 2. 600
- B. 1. 6
 2. 700
- C. 1. 5
 2. 600
- D. 1. 5
 2. 700

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 87
(1 point)

Given the following on Unit 1:

- The crew has implemented ECA-0.0 (LOSS OF ALL AC POWER)
- The Standby Makeup pump has failed to start
- All S/Gs are being depressurized to 290 PSIG

In accordance with ECA-0.0,

- 1) if Rx vessel upper head voiding occurs, the crew _____ required to stop the S/G depressurization.
- 2) if the 1A S/G depressurization continues below 290 PSIG and can NOT be controlled from the control room, the CRS will dispatch an operator to _____ the 1A SM PORV.

Which ONE (1) of the following completes the statements above?

- A. 1. is
 2. locally operate
 - B. 1. is
 2. bypass the solenoid for
 - C. 1. is NOT
 2. locally operate
 - D. 1. is NOT
 2. bypass the solenoid for
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 88
(1 point)

Given the following on Unit 1:

- The unit is at 100% RTP
- A loss of Battery Charger EVCA has occurred

Following restoration, Battery EVCA conditions are as follows:

- For two connected cells, the Specific Gravity is 1.180
- For all connected cells, the average Specific Gravity is 1.202
- Electrolyte temperature is 76 °F

- 1) Based on the conditions above, Battery EVCA _____ OPERABLE.
- 2) One DC CHANNEL _____ adequate to satisfy the MINIMUM requirements of operability for the DC Distribution System.

Which ONE (1) of the following completes the statements above?

REFERENCE PROVIDED

- A.
 1. is NOT
 2. is
 - B.
 1. is NOT
 2. is NOT
 - C.
 1. is
 2. is
 - D.
 1. is
 2. is NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 89
(1 point)

Given the following on Unit 1:

- Unit is at 100% RTP
- The TCC has reported that "Real Time Contingency Analysis" (RTCA) indicates INADEQUATE switchyard voltage
- The crew has entered AP/1/A/5500/05 (GENERATOR VOLTAGE AND ELECTRIC GRID DISTURBANCES)
- Main Generator operating conditions are as follows
 - Hydrogen Pressure (PSIG) 60
 - Generator VARS 660
 - Generator MW 1200
 - Generator Voltage (kV) 23.6

In accordance with AP/05:

- 1) the CRS will direct the OATC to lower _____.
- 2) once the required jumpers are placed in accordance with Enclosure 3 (RTCA ACTIONS with UNIT ON-LINE), both trains of OFFSITE power will _____.

Which ONE (1) of the following completes the statements above?

REFERENCE PROVIDED

- A. 1. turbine load
 2. be restored to OPERABLE
 - B. 1. turbine load
 2. remain INOPERABLE
 - C. 1. generator voltage
 2. be restored to OPERABLE
 - D. 1. generator voltage
 2. remain INOPERABLE
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 90
(1 point)

Given the following on Unit 2:

- The unit is at 45% RTP
- A failure of the RC system has occurred resulting in a reduction in RC flow to the main condenser
- Main Condenser vacuum is at 25" Hg and DEGRADING
- AP-23 (LOSS OF CONDENSER VACUUM) has been implemented

Based on the conditions above and in accordance with AP-23,

- 1) which one of the following procedurally directed actions will have the most affect on vacuum?
- 2) when turbine trip criteria is exceeded, the CRS will transition to _____.

Which ONE (1) of the following completes the statements above?

PROCEDURE LEGEND:

AP-02 (TURBINE GENERATOR TRIP)
E-0 (REACTOR TRIP OR SAFETY INJECTION)

- A.
 1. reduce turbine load
 2. E-0
 - B.
 1. start main vacuum pumps
 2. E-0
 - C.
 - 1 reduce turbine load
 2. AP-02
 - D.
 1. start main vacuum pumps
 2. AP-02
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 91
(1 point)

Given the following plant conditions:

- Due to a plant event, Unit 1 was tripped at 0820
- An unexplained increase in plant radiation levels is occurring and RP is currently attempting to determine the source of the increased radiation levels
- The SM is preparing to make an emergency declaration based on observation of the following OAC EMF Graphic indications:

		<u>TIME</u>		
<u>Units</u>	<u>EMF</u>	<u>08:30</u>	<u>08:50</u>	<u>09:10</u>
mr/Hr	1EMF-51A	90 R/hr	80 R/hr	50 R/hr
CPM	EMF-36L	3.20E+03	4.50E+04	1.00E+06
	EMF-36H	1.80E+02	3.80E+03	4.80E+03

- 1) The Emergency Classification in accordance with RP-000 (EMERGENCY CLASSIFICATION) based on OAC radiation monitor indications at 08:30 is _____.
- 2) After the Initial Notification, the SM re-evaluates the OAC radiation monitor indications at 09:10 and the Emergency Classification is _____.

Which ONE (1) of the following completes the statements above?

REFERENCE PROVIDED

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

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 92
(1 point)

Given the following on Unit 1:

- The unit has tripped from 100% RTP
- The crew has implemented EP/1/A/5000/F-0, (Critical Safety Function Status Trees)
- 1B S/G pressure is being maintained at approximately 1210 PSIG following failure of the associated S/G PORV

- 1) To mitigate this event, the CRS will direct the crew to enter _____.
- 2) Per T.S. 3.7.4 (SG PORVs) Bases, the most limiting event assumed in the safety analysis is an NC cooldown _____.

Which ONE (1) of the following completes the statements above?

PROCEDURE LEGEND:

FR-H.2 (RESPONSE TO STEAM GENERATOR OVERPRESSURE)
FR-H.4 (RESPONSE TO LOSS OF NORMAL STEAM RELEASE CAPABILITIES)

- A.
 1. FR-H.2
 2. coincident with a loss of offsite power
 - B.
 1. FR-H.2
 2. following a S/G tube rupture
 - C.
 1. FR-H.4
 2. coincident with a loss of offsite power
 - D.
 1. FR-H.4
 2. following a S/G tube rupture
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 93
(1 point)

Given the following on Unit 1:

- Unit is in Mode 6
- Fuel offload in progress
- N-31 and N-32 are in service
- "A" Train Wide Range (Gamma-Metrics) is in service

Subsequently,

- Source Range Instrument (N-31) fails

- 1) The CRS _____ required to enter the action statement of LCO 3.9.3 (Nuclear Instrumentation).
- 2) In order to meet the operability requirements of LCO 3.9.3, source range audible indication _____ required.

Which ONE (1) of the following completes the statements above?

- A. 1. is NOT
 2. is NOT
 - B. 1. is NOT
 2. is
 - C. 1. is
 2. is NOT
 - D. 1. is
 2. is
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 94
(1 point)

In accordance with Tech Spec 5.1 (RESPONSIBILITY), an STA with an active SRO license on the unit, may assume the duties of the Control Room Supervisor provided:

- 1) the CRS or relief SRO is available to return to the control room within _____ minutes

AND

- 2) the periods during which the STA assumes SRO duties _____ exceed 15 minutes in duration.

(Assume MODE 1 conditions)

Which ONE (1) of the following completes the statements above?

- A. 1. 10
 2. can
 - B. 1. 10
 2. can NOT
 - C. 1. 15
 2. can
 - D. 1. 15
 2. can NOT
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 95
(1 point)

Given the following on Unit 2:

- Refueling is in progress
- NC W/R Level is 372.75 inches and stable
- No water additions are being made to the system
- 2A ND train is OPERABLE and has been in continuous operation for the previous 24 hours
- 2B ND train is INOPERABLE

Subsequently:

- Fuel Handling SRO desires stopping the 2A ND Pump to aid in inserting fuel assemblies
- Fuel Handling SRO expects to restart the 2A ND pump in approximately 15 minutes

- 1) To allow the above request, the CRS _____ be required to enter one or more Tech Spec CONDITIONS/REQUIRED ACTIONS.
- 2) Tech Spec bases states that only one RHR loop is required to be OPERABLE, because _____ provides adequate backup decay heat removal capability.

Which ONE (1) of the following completes the statements above?

- A.
 1. will
 2. the volume of water above the reactor vessel flange
 - B.
 1. will
 2. the Spent Fuel Cooling system
 - C.
 1. will NOT
 2. the volume of water above the reactor vessel flange
 - D.
 1. will NOT
 2. the Spent Fuel Cooling system
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 96
(1 point)

In accordance with AD-OP-ALL-106, CONDUCT OF INFREQUENTLY PERFORMED TESTS OR EVOLUTIONS (IPTE):

- 1) The Operations Manager (or designee) _____ required to participate in the IPTE Brief.
- 2) An IPTE Brief _____ be held a MAXIMUM of 7 days prior to task execution.

Which ONE (1) of the following completes the statements above?

- A.
 1. is NOT
 2. can NOT
 - B.
 1. is NOT
 2. can
 - C.
 1. is
 2. can NOT
 - D.
 1. is
 2. can
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 97
(1 point)

In accordance with AD-OP-ALL-200 (CLEARANCE AND TAGGING):

- 1) A previously licensed SRO _____ sign as clearance APPROVER.
- 2) If a clearance is designated as an Exceptional Clearance, at a minimum, it is required to be approved by an Operations _____ and a Work Group Supervisor.

Which ONE (1) of the following completes the statements above?

- A.
 1. can
 2. Shift Supervisor
 - B.
 1. can
 2. Shift Manager
 - C.
 1. can NOT
 2. Shift Supervisor
 - D.
 1. can NOT
 2. Shift Manager
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 98
(1 point)

Given the following on Unit 2:

- The crew is responding to a large LOCA with 10% failed fuel
 - The SM has determined that manual alignment of 2NI-184B (1B ND PUMP SUCTION FROM CONT SUMP ISOL) is required to protect Valuable Property
 - Expected dose rates in the area of the valve are 120 REM/hr
- 1) In accordance with RP/004 (GENERAL EMERGENCY), Attachment 4, (Request for Emergency Exposure), the MAXIMUM time allowed for opening 2NI-184B, prior to exceeding the Total Effective Dose Equivalent (TEDE) dose, is _____ minutes.
(Disregard any dose received in transit to and from 2NI-184B)
- 2) In accordance with RP/004 and considering ALL other administrative requirements are met, the EOF Director or _____ is authorized to APPROVE the Emergency Exposure.

Which ONE of the following completes the statements above?

- A. 1. 5.0
2. Emergency Coordinator
 - B. 1. 5.0
2. RP Manager
 - C. 1. 12.5
2. Emergency Coordinator
 - D. 1. 12.5
2. RP Manager
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 99
(1 point)

Given the following:

- The Control Room has been notified by the NRC Headquarters Operations Center that a 747 commercial aircraft has been hijacked
- Ground intelligence indicates a nuclear plant is the intended target
- The airplane's current flight path will intersect with McGuire in **20 minutes**

In accordance with AP-47 (SECURITY EVENTS),

- 1) the CRS will transition to _____.
- 2) all non-essential personnel on site will be directed to _____.

Which ONE (1) of the following completes the statements above?

PROCEDURE LEGEND:

Enclosure 1 (AIRCRAFT IMMINENT THREAT)
Enclosure 2 (AIRCRAFT PROBABLE THREAT)

- A.
 1. Enclosure 1
 2. relocate to the MOC
 - B.
 1. Enclosure 2
 2. relocate to the MOC
 - C.
 1. Enclosure 1
 2. seek shelter in the nearest building
 - D.
 1. Enclosure 2
 2. seek shelter in the nearest building
-

McGuire Nuclear Station

ILT 20-1 MNS SRO NRC Examination

Question: 100
(1 point)

Given the following:

0800	A LOCA occurs on Unit 1
0810	The SM declared an Alert
0815	The SM completed the Emergency Notification Form

- 1) The **LATEST** allowable notification time to the state and counties is _____ as required by RP/0/B/5700/029 (NOTIFICATIONS TO OFFSITE AGENCIES FROM THE CONTROL ROOM).
- 2) The **LATEST** allowable notification time to the NRC is _____ as required by RP/0/A/5700/010 (NRC IMMEDIATE NOTIFICATION REQUIREMENTS).

Which ONE (1) of the following completes the statements above?

- A. 1. 0825
 2. 0900
 - B. 1. 0825
 2. 0910
 - C. 1. 0830
 2. 0900
 - D. 1. 0830
 2. 0910
-

Reference List for: ILT 20-1 MNS SRO NRC Examination

Copy of AP-22 Enclosure 13 (Unit 2)

Copy of TS 3.8.6

EAL Wallcharts

ECA-1.1 (Step 17)

ECA-1.1 (Enclosure 9)

Generator Capability Curve.

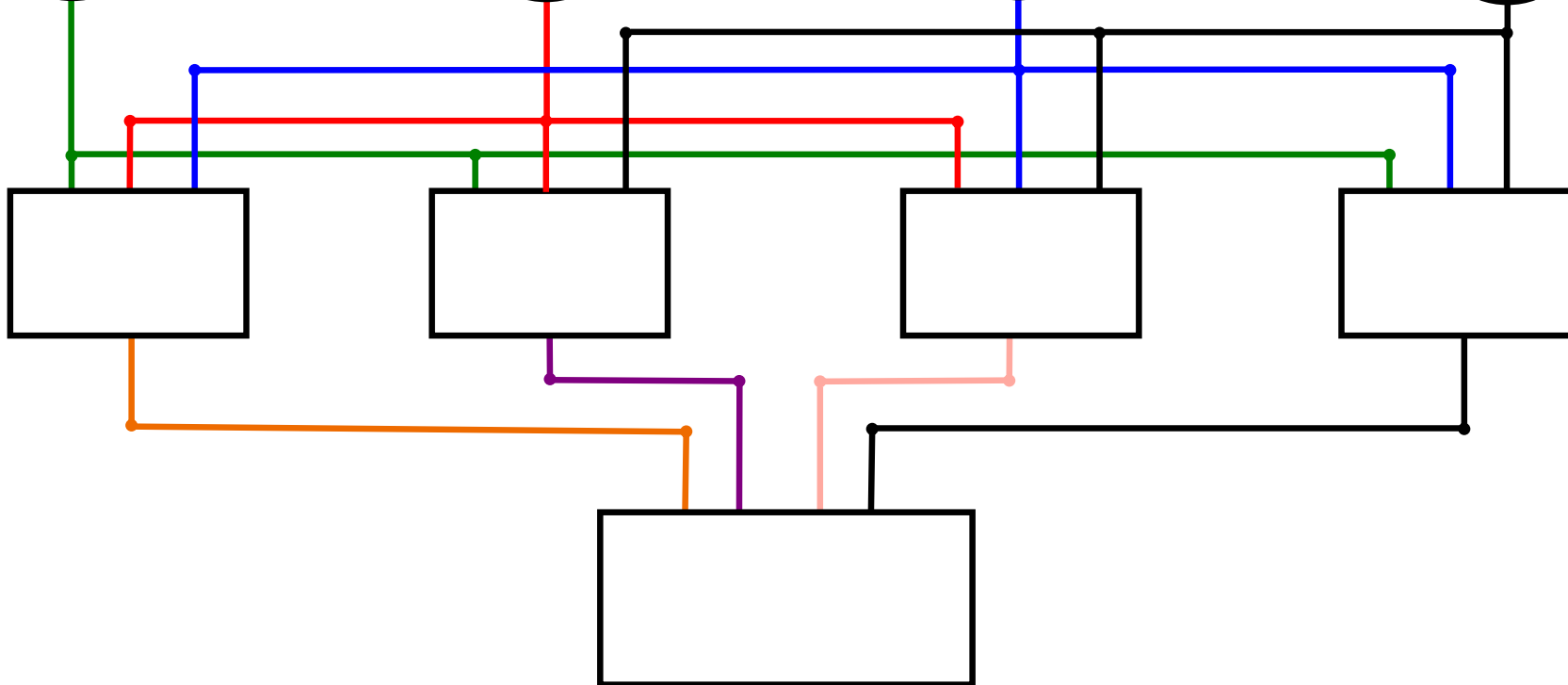
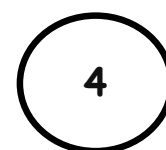
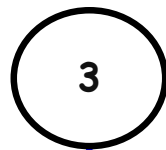
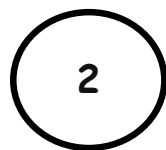
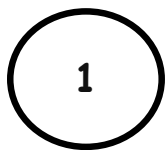
Pressurizer Pressure Block Diagram

2239 PSIG

2226 PSIG

2235 PSIG

2230 PSIG



SELECTED P_{zr} Pressure

MNS EP/1/A/5000/ECA-1.1 UNIT 1	LOSS OF EMERGENCY COOLANT RECIRC	PAGE NO. 20 of 113 Rev. 17
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ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

17. **Check if S/I can be terminated:**

a. Check RVLIS indication:

- ___ • **IF** all NC pumps off, **THEN** check "REACTOR VESSEL LR LEVEL" - GREATER THAN 60%.

OR

- ___ • **IF** at least one NC pump on, **THEN** check "REACTOR VESSEL D/P" - GREATER THAN REQUIRED DELTA P FROM Enclosure 7 (Minimum Dynamic RVLIS Indication).

- ___ b. NC subcooling based on core exit T/Cs - GREATER THAN 50°F.

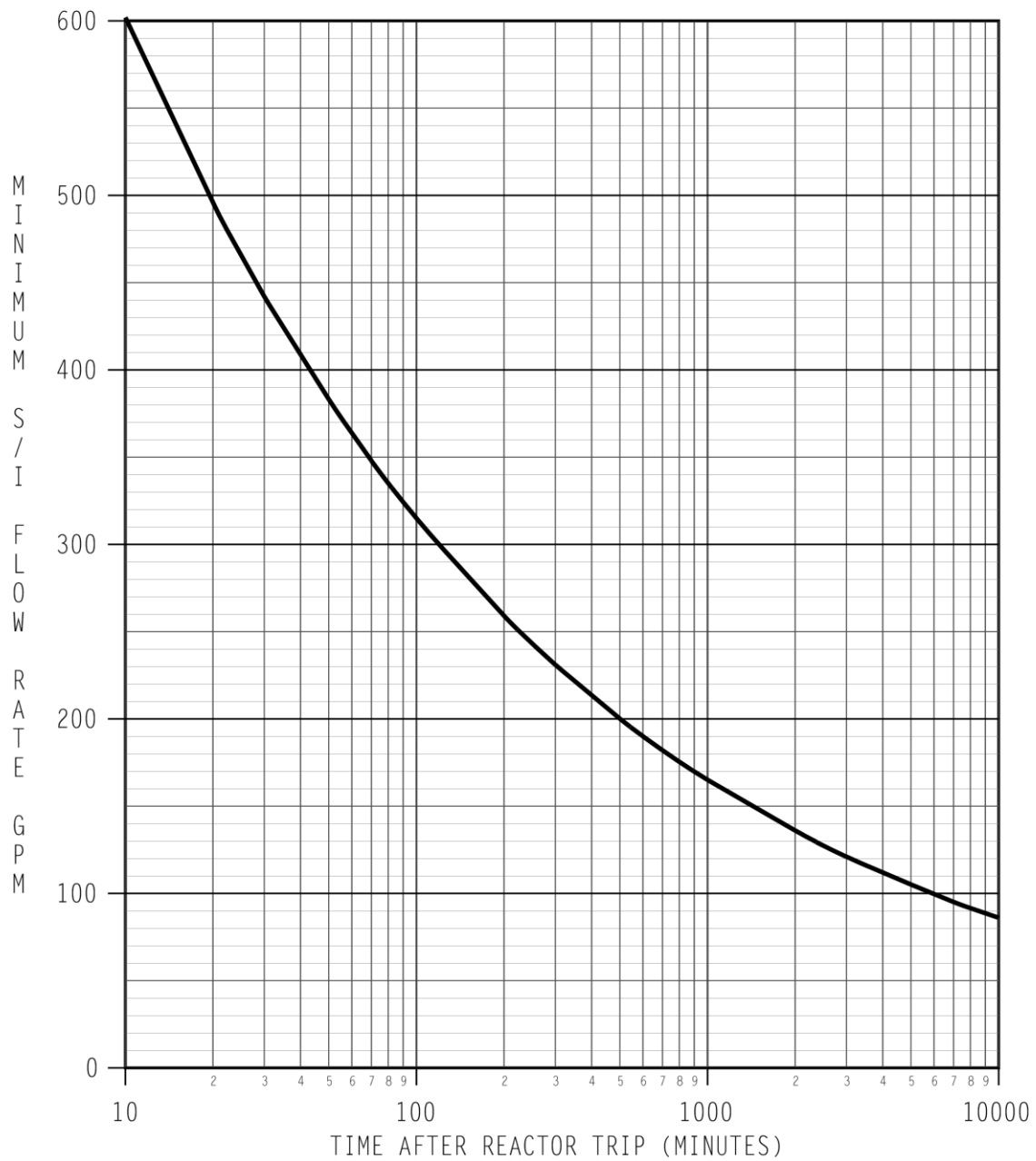
- ___ a. Observe Caution prior to Step 23 and **GO TO** Step 23.

b. Perform the following:

- ___ 1) Determine minimum S/I flow required **PER** Enclosure 9 (Flow Required to Match Decay Heat).
- ___ 2) Minimize S/I flow by stopping one or more S/I pumps while maintaining greater than or equal to flow required by Enclosure 9 (Flow Required to Match Decay Heat).
- ___ 3) Observe Caution prior to Step 23 and **GO TO** Step 23.

18. **Reset the following:**

- ___ • Phase A Isolation
- ___ • Phase B Isolation.



ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. **Perform the following steps once every 6 hours:**

___ a. Check OAC - IN SERVICE.

a. Perform the following:

- ___ 1) Dispatch operator to obtain RN strainer accumulator tank pressure readings **PER** Enclosure 11 (Local Pressure Check of RN Strainer Accumulator Tanks).
- ___ 2) **WHEN** 15 minutes have elapsed from time of dispatch, **THEN** contact dispatched operator to check on status of local action.
- ___ 3) Do not continue until pressure readings obtained.

___ b. Record RN strainer backwash assured VI accumulator tank pressures in table below:

Date/Time	2RN-21A Accumulator Tank Pressure (OAC point M2A0000)	2RN-25B Accumulator Tank Pressure (OAC point M2A0006)

ACTION/EXPECTED RESPONSE

RESPONSE NOT OBTAINED

1. (Continued)

- c. Check both accumulator tank pressures - GREATER THAN 294 PSIG.

- c. **IF** either accumulator tank pressure is less than 294 PSIG, **THEN** place both Unit 2 RN strainers in backwash as follows:

- 1) Determine time limit from table below for placing both Unit 2 RN strainers in backwash:

Lowest Strainer Accumulator Tank Pressure	Time Limit
206 - 294 PSIG	4 Hrs
144 - 205 PSIG	2 Hrs
113 - 143 PSIG	1 Hr

- 2) Dispatch operator to perform Enclosure 12 (Placing RN Strainers in Manual Backwash) as time allows, not to exceed time limit in table above.

- 3) Discontinue monitoring of accumulator tank pressures **PER** this enclosure.

- 4) Exit this enclosure.

- d. Perform this enclosure again in 6 hours.

- e. Have STA or other licensed operator assist in tracking elapsed time.

3.8 ELECTRICAL POWER SYSTEMS

3.8.6 Battery Cell Parameters

LCO 3.8.6 Battery cell parameters for the channels of DC batteries shall be within the limits of Table 3.8.6-1.

APPLICABILITY: When associated channels of DC sources are required to be OPERABLE.

ACTIONS

-----NOTE-----
Separate Condition entry is allowed for each battery.

CONDITION	REQUIRED ACTION	COMPLETION TIME
A. One or more batteries with one or more battery cell parameters not within Category A or B limits.	A.1 Verify pilot cells electrolyte level and float voltage meet Table 3.8.6-1 Category C limits.	1 hour
	<u>AND</u>	
	A.2 Verify battery cell parameters meet Table 3.8.6-1 Category C limits.	24 hours
	<u>AND</u>	<u>AND</u>
	A.3 Restore battery cell parameters to Category A and B limits of Table 3.8.6-1.	Once per 7 days thereafter
		31 days

(continued)

ACTIONS (continued)

CONDITION	REQUIRED ACTION	COMPLETION TIME
<p>B. Required Action and associated Completion Time of Condition A not met.</p> <p><u>OR</u></p> <p>One or more batteries with average electrolyte temperature of the representative cells < 60°F.</p> <p><u>OR</u></p> <p>One or more batteries with one or more battery cell parameters not within Category C values.</p>	<p>B.1 Declare associated battery inoperable.</p>	<p>Immediately</p>

SURVEILLANCE REQUIREMENTS

SURVEILLANCE	FREQUENCY
<p>SR 3.8.6.1 Verify battery cell parameters meet Table 3.8.6-1 Category A limits.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

(continued)

SURVEILLANCE REQUIREMENTS (continued)

SURVEILLANCE	FREQUENCY
<p>SR 3.8.6.2 Verify battery cell parameters meet Table 3.8.6-1 Category B limits.</p>	<p>In accordance with the Surveillance Frequency Control Program</p> <p><u>AND</u></p> <p>Once within 7 days after a battery discharge < 110 V</p> <p><u>AND</u></p> <p>Once within 7 days after a battery overcharge > 150 V</p>
<p>SR 3.8.6.3 Verify average electrolyte temperature of representative cells is $\geq 60^{\circ}\text{F}$.</p>	<p>In accordance with the Surveillance Frequency Control Program</p>

Table 3.8.6-1 (page 1 of 1)
Battery Cell Parameters Requirements

PARAMETER	CATEGORY A: LIMITS FOR EACH DESIGNATED PILOT CELL	CATEGORY B: LIMITS FOR EACH CONNECTED CELL	CATEGORY C: ALLOWABLE LIMITS FOR EACH CONNECTED CELL
Electrolyte Level	> Minimum level indication mark, and $\leq \frac{1}{4}$ inch above maximum level indication mark ^(a)	> Minimum level indication mark, and $\leq \frac{1}{4}$ inch above maximum level indication mark ^(a)	Above top of plates, and not overflowing
Float Voltage	≥ 2.13 V	≥ 2.13 V	> 2.07 V
Specific Gravity ^{(b)(c)}	≥ 1.200	≥ 1.195 <u>AND</u> Average of all connected cells > 1.205	Not more than 0.020 below average of all connected cells or ≥ 1.195 <u>AND</u> Average of all connected cells ≥ 1.195

- (a) It is acceptable for the electrolyte level to temporarily increase above the specified maximum during equalizing charges provided it is not overflowing.
- (b) Corrected for electrolyte temperature and level. Level correction is not required, however, when battery charging is < 2 amps when on float charge.
- (c) A battery charging current of < 2 amps when on float charge is acceptable for meeting specific gravity limits following a battery recharge, for a maximum of 7 days. When charging current is used to satisfy specific gravity requirements, specific gravity of each connected cell shall be measured prior to expiration of the 7 day allowance.

