ES-401	Site Specific SRO Written Examination Cover Sheet	Form ES-401-8

U.S. Nuclear Regulatory Commission
Site-Specific SRO Written Examination

Applicant Information	
Name:	
Date: July 31, 2020	Facility/Unit FARLEY 1 & 2
Region: I ☐ II ☒ III ☐ IV ☐	Reactor Type: W ☒ CE ☐ BW ☐ GE ☐
Start Time:	Finish Time:

Instructions

Use the answer sheets provided to document your answers. Staple this cover sheet on top of the answer sheets. To pass the examination, you must achieve a final grade of at least 80 percent overall, with 70 percent or better on the SRO-only items if given in conjunction with the RO exam; SRO-only exams given alone require a final grade of 80 percent to pass. You have 9 hours to complete the combined examination and 3 hours if you are only taking the SRO-only portion.

Applicant Certification

All work done on this examination is my own. I have neither given nor received aid.

_____
Applicant's Signature

Results

RO/SRO-Only/Total Examination Values	_____ / _____ / _____ Points
Applicant's Score	_____ / _____ / _____ Points
Applicant's Grade	_____ / _____ / _____ Percent

1. The following conditions are observed on Unit 1:

   - A Small Break LOCA has just occurred.
   - EEP-0, Reactor Trip or Safety Injection, is in progress.

   Which one of the following completes the statements below for the **EEP-0, Foldout Page**?

   _(1)_ is a parameter used to determine RCP Trip Criteria.

   The RCP Trip Criteria _(2)_ per EEB-0, FNP Specific Background Document for EEP-0.

A. (1) High Head Safety Injection Flow

   (2) prevent RCP seal damage

B. (1) High Head Safety Injection Flow

   (2) conserve RCS inventory if the RCPs were to subsequently trip

C. (1) Low Head Safety Injection Flow

   (2) prevent RCP seal damage

D. (1) Low Head Safety Injection Flow

   (2) conserve RCS inventory if the RCPs were to subsequently trip

2. The following condition exists on Unit 1:

   - Unit 1 is at 100% Power when the 1C RCP Tripped.

   Which one of the following completes the statements below **60 seconds** after the 1C RCP Tripped?

   1C SG pressure will be _(1)_ than its initial pressure was at 100% power.

   1B SG pressure will be _(2)_ than its initial pressure was at 100% power.

	(1)	(2)
A.	higher	higher
B.	higher	lower
C.	lower	higher
D.	lower	lower

3. The following conditions exist on Unit 1:

   - Unit 1 is at 30% power.
   - Unit 1 is at **MOL** (12000 MWD/MTU).
   - Excess Letdown was last in service at **BOL** (1000 MWD/MTU) for the current cycle.

   Subsequently, the following was observed:

   - A Letdown System malfunction occurred.
   - Letdown was isolated.
   - Preparations for placing Excess Letdown in service are in progress.

   Which one of the following completes the statements below per SOP-2.7, Chemical and Volume Control System Excess Letdown?

   Prior to placing Excess Letdown in service, the required 300 gallon flush will mitigate a _(1)_ of the RCS.

   Placing Excess Letdown in service will cause the IPC **calculated** Reactor Thermal Power to indicate _(2)_ than **actual** power.

	(1)	(2)
A.	dilution	LOWER
B.	boration	LOWER
C.	dilution	HIGHER
D.	boration	HIGHER

4. The following conditions exist on Unit 1:

At 1000:

- Unit 1 is in MODE 4 following shutdown for a refueling outage.
- RCS Temperature is 300°F.
- The crew is Preparing A Train RHR for RCS Cooldown from ECCS Standby Alignment in accordance with SOP-7.0, Residual Heat Removal System.

At 1500:

- Unit 1 is in MODE 5.
- **All** RHR pumps have been stopped in accordance with the NOTES in LCO 3.4.7, RCS Loops - MODE 5, Loops Filled.

Which one of the following completes the statements below?

At 1000 the _(1)_ boron concentration is the **minimum** RHR System boron concentration allowed in order to place the RHR System in Cooldown Operation.

At 1500 the crew _(2)_ permitted to reduce RCS boron concentration.

	(1)	(2)
A.	COLD SHUTDOWN	is NOT
B.	COLD SHUTDOWN	IS
C.	RCS Refueling	is NOT
D.	RCS Refueling	IS

5. The following conditions exist on Unit 1:

   - The Unit is in MODE 5.
   - Low Pressure Letdown is in service and aligned to A Train.
   - Low Pressure Letdown flowrate is 90 gpm.
   - HIK-603A, 1A RHR HX DISCH VLV, DEMAND is at 20%
   - FK-605A, 1A RHR HX BYP FLOW, is in AUTO with DEMAND at 20%.
   - FI-605A, 1A RHR HDR FLOW, indicates 3200 gpm.

   Subsequently, the following conditions are observed:

   - HV-603A, 1A RHR HX DISCH VLV, goes to its failed position.

   Which one of the following describes the response to the failure above?

   RHR Low Pressure Letdown flow will **initially** (1) .

   RCS flowrate through the 1A RHR heat exchanger bypass line (2) change.

	(1)	(2)
A.	RISE	will NOT
B.	RISE	WILL
C.	LOWER	will NOT
D.	LOWER	WILL

6. The following condition exists on Unit 1:

   - The Unit is in MODE 4.

   Which one of the following completes the statements below per LCO 3.5.4, RWST?

   The minimum required RWST boron concentration is __(1)__.

   The minimum required RWST water volume is __(2)__.

	(1)	(2)
A.	2200 ppm	164,000 gallons
B.	2200 ppm	471,000 gallons
C.	2300 ppm	164,000 gallons
D.	2300 ppm	471,000 gallons

7. The following conditions exist on Unit 1:

   - UOP-1.1, Startup of Unit from Cold Shutdown to Hot Standby, is in progress.
   - The crew is at step 5.47 to establish a steam space (draw a bubble) in the Pressurizer.

   Which one of the following completes the statement below per UOP-1.1?

   When Pressurizer temperature rises to the saturation temperature, __(1)__.

   While a steam space is being established, PRT level will __(2)__.

A. (1) Letdown flow will lower

   (2) remain constant

B. (1) RCS Pressure will rise

   (2) remain constant

C. (1) RCS Pressure will rise

   (2) rise

D. (1) Letdown flow will lower

   (2) rise

8. The following condition exists on Unit 2:

   - Unit 2 is at 100% power.

   Subsequently, the following occurs:

   <u>At 1000</u>:

   - An LOSP occurs simultaneously on **<u>both</u>** Units.

   Which one of the following completes the statement below **<u>at 1005</u>**?

   The <u>(1)</u> CCW Pump is powered by the <u>(2)</u> DG.

	<u>(1)</u>	<u>(2)</u>
A.	2A	1-2A
B.	2A	1C
C.	2C	1-2A
D.	2C	1C

9. The following conditions exist on Unit 1:

   - The Unit is at 90% power.
   - The MCB handswitch for HV-3184, CCW DISCH RCP THRM BARR ISO, is in AUTO.

   Subsequently, the following occurs:

   - HV-3045, CCW FROM RCP THRM BARR, fails closed.

   Which one of the following completes the statements below?

   HV-3184, automatically closes when CCW Thermal Barrier discharge pressure reaches a **minimum** of _(1)_ psig.

   When HV-3184 closes, the Reactor and RCPs _(2)_ required to be shutdown.

	(1)	(2)
A.	75	ARE
B.	75	are NOT
C.	160	ARE
D.	160	are NOT

10. The following conditions exist on Unit 2:

- Automatic pressure control has failed, and the crew is responding per AOP-100, Instrument Malfunction.
- PK-444A, PRZR PRESS REFERENCE, is in MANUAL and set at 50% output demand.
- RCS pressure is 2270 psig and stable.

Which one of the following completes the statements below?

To lower RCS Pressure the operator will __(1)__ DEMAND on PK-444A, PRZR PRESS REFERENCE.

The Spray Valves will be FULL OPEN at __(2)__ output demand on PK-444A, PRZR PRESS REFERENCE.

	(1)	(2)
A.	LOWER	45%
B.	RAISE	20%
C.	LOWER	20%
D.	RAISE	45%

11. Which one of the following completes the statements below per Tech Spec 3.3.1, Reactor Trip System Instrumentation?

The SG Water Level – Low Low **automatic** reactor trip setpoint is _(1)_ percent.

The SGWL transmitters that provide input to the SG Water Level - Low Low reactor trip _(2)_ the same transmitters that provide input to the Auxiliary Feedwater Pump automatic start.

	(1)	(2)
A.	34	ARE
B.	34	are NOT
C.	28	ARE
D.	28	are NOT

12. The following occurred on Unit 1:

AT 1000:

- Unit 1 was at 51% power.
- The 1B RCP tripped.
- The Reactor did **not** trip.
- The Reactor Trip handswitches failed to initiate a Reactor Trip.
- Both MG set supply breakers were manually opened.

AT 1015:

- All DRPI Rod Bottom lights are lit.
- The Main Turbine did **not** automatically trip.
- Main Feedwater Isolation did **not** occur.
- Steam Dumps are armed and controlling Tavg at 551°F.
- SRNIs indicate $5x10^3$ cps and falling.

Which one of the following completes the statements below?

At 1000 a malfunction occurred related to the _(1)_ permissive.

At 1015 the _(2)_ permissive has not actuated.

	(1)	(2)
A.	P-8	P-4
B.	P-10	P-4
C.	P-8	P-6
D.	P-10	P-6

13. The following was observed on Unit 1:

- Unit 1 was at 100% power.
- The 1B 125V Aux Building DC Bus was de-energized.

Subsequently, the following occurs:

- Safety Injection is actuated.

Which one of the following completes the statements below based upon the conditions given above?

MOV-8803B, SI Cold Leg Isolation Valve, __(1)__ automatically reposition.

If required, the 1C Charging Pump __(2)__ be operated in LOCAL from the Hot Shutdown Panel.

	(1)	(2)
A.	WILL	CAN
B.	WILL	CANNOT
C.	will NOT	CAN
D.	will NOT	CANNOT

14. The following conditions were observed on Unit 1:

At 1000:

- Unit 1 is at 100% power.
- All Containment Cooling Fans are running in FAST.
- The CTMT CLR FANS A TRN SEL SWITCH is in the 1A position.
- The CTMT CLR FANS B TRN SEL SWITCH is in the 1C position.

At 1005:

- A Large Break LOCA occurs on Unit 1.

At 1010:

- The 1A Startup Transformer is de-energized.

Which one of the following describes the Containment Cooling Fan configuration **at 1015, assuming no operator action**?

A. All 4 Containment Cooling Fans are running in Slow speed.

B. Only the 1B, 1C and 1D Containment Cooling Fans are running in Slow speed.

C. Only the 1A, 1C and 1D Containment Cooling Fans are Running in Slow speed.

D. Only the 1A and 1C Containment Cooling Fans are Running in Slow speed.

15. Which one of the following completes the statements below?

Containment Spray Pump Room Coolers _(1)_ required to be OPERABLE in MODE 5.

Cooling water to the Containment Spray Pump Room Coolers is supplied by the _(2)_.

	(1)	(2)
A.	ARE	CCW system
B.	are NOT	Service Water system
C.	ARE	Service Water system
D.	are NOT	CCW system

16. The following occurred on Unit 1:

    - Unit 1 was at 100% power.

    Subsequently, the following occurred:

    - A Main Steam Line Break has occurred on the 1C Steam Line upstream of the Main Steam Isolation Valves.
    - HV-3369B, 1B SG Main Steam Isolation Valve, is stuck OPEN.

    Which one of the following design features will prevent the 1B SG from depressurizing through the Main Steam Header and out of the 1C steam line rupture?

    A. The swing check valve feature on the 1C Main Steam Line MSIVs.

    B. The redundant isolation valve on the 1B Main Steam Line.

    C. The air reservoir tank associated with HV-3370B, 1B SG Main Steam Isolation Valve.

    D. The redundant isolation valve on the 1C Main Steam Line.

17. The following conditions were observed on Unit 1:

- Unit 1 is at 55% power.
- All SG Water Level Control Systems are in AUTO.
- FS-478Y, 1A SG FW FLOW SEL SWITCH, is in the FT-477 position.

Subsequently, the following occurs:

- FT-477, 1A SG FW FLOW, fails **low**.

Which one of the following completes the statement below, **assuming no operator action**?

The SGFP speed will _(1)_, resulting in _(2)_.

A. (1) RISE

(2) the 1A SG level rising, causing P-14 to actuate, closing **only** FCV-478, 1A SG Feed Regulating Valve, and its bypass valve, FCV-479

B. (1) RISE

(2) the 1A SG level rising, causing P-14 to actuate, closing **all** Feed Regulating Valves and their bypass valves

C. (1) LOWER

(2) **All** SG levels lowering, causing a reactor trip on LO-LO SG level

D. (1) LOWER

(2) **Only** 1A SG level lowering

18. The following conditions are observed on Unit 1:

- Unit 1 is in MODE 3.
- RCS Temperature is being maintained at 547°F.

Subsequently, the following occurs:

- The 1A Startup Transformer is de-energized due to malfunctioning equipment.

Which one of the following will automatically start as a direct result of the event described above?

A. Only the 1B MDAFWP

B. The 1B MDAFWP and TDAFWP

C. Only the 1A MDAFWP

D. The 1A MDAFWP and TDAFWP

19. The following conditions were observed on Unit 1:

- The Fire Protection Jockey Pump was running.
- The Fire Protection header pressure was at its normal pressure.

Subsequently, the following occurs:

- The 1S 600V Load Center is de-energized for maintenance.

Which one of the following completes the statements below based upon the condition given above?

Control power is **not available** to the (1).

Fire Protection header pressure will (2).

	(1)	(2)
A.	1C DG	initially lower
B.	2C DG	initially lower
C.	1C DG	remain stable
D.	2C DG	remain stable

20. The following conditions were observed on Unit 1:

- Unit 1 was at 100% power.
- A complete Loss of Offsite Power occurred.
- The 1-2A DG failed to start.

Subsequently, the following occurred:

- The 1C DG was shutdown when it was no longer required for Unit 2.

Later, the following conditions exist:

- AOP-5.1, Contingency Electrical Alignments, is in progress.
- The 1C DG has been started manually for use by Unit 1.
- 1C DG Frequency and Voltage are within acceptable limits.
- The 1C DG, DG EMERG START STATUS LIGHT, is **not** lit.
- Operators are at the step to "Close Unit 1 1C DG OUTPUT BKR DH07".

Which one of the following completes the statements below per AOP-5.1 based upon the conditions above?

Operators _(1)_ required to ensure the 1C DG OUTPUT BKR DH07 SYNCH SWITCH is in MAN prior to closing DH07 manually.

1C DG **speed droop control** _(2)_ in effect after DH07 is closed.

	(1)	(2)
A.	ARE	IS
B.	are NOT	IS
C.	ARE	is NOT
D.	are NOT	is NOT

21. The following conditions were observed on Unit 1:

- Unit 1 was at 100% power.

Subsequently, the following occurred:

- EPB Annunciator VC4, 1B BATT CHG FAULT OR DISC, alarmed.
- Operators discover the following:
  - 1B Battery Charger has experienced an internal fault that cannot be cleared.
  - The 1B Battery Charger DC output breaker is closed.
  - The 1B Battery Charger AC input breaker is closed.

Which one of the following completes the statements below per VC4 ARP and SOP-37.1, 125 Volt DC Auxiliary Building Distribution System?

Power will be restored to 1B Battery Charger loads via __(1)__.

The required re-alignment __(2)__ depend upon the use of a key interlock system.

A. (1) a bypass source using the 1B Battery Breaker Manual Bypass Switch

   (2) DOES

B. (1) the 1C Battery Charger by realigning electrical disconnects

   (2) DOES

C. (1) a bypass source using the 1B Battery Breaker Manual Bypass Switch

   (2) does NOT

D. (1) the 1C Battery Charger by realigning electrical disconnects

   (2) does NOT

22. The following conditions were observed on Unit 1:

- Unit 1 is at 100% power.

Subsequently, the following is observed:

- GB4, PRZR LO PRESS RX TRIP SI, is in alarm.
- EEP-0, Reactor Trip or Safety Injection, is in progress.
- 1-2A DG Local Alarm/Control Panel, Window #12, LUBE OIL TEMPERATURE HIGH, is in alarm.

Which one of the following completes the statements below **assuming no operator action**?

EPB Annunciator, WA3, 1-2A DG TRBL, _(1)_ alarm due to the Window #12 alarm.

The 1-2A DG is currently _(2)_.

	(1)	(2)
A.	will NOT	running
B.	WILL	running
C.	will NOT	shutdown
D.	WILL	shutdown

23. The following conditions were observed:

At 1000:

- Unit 1 is at 100% power.
- Unit 2 is at 100% power.
- The 1-2A DG Auxiliary Jacket Water Pump is **running**.

At 1005:

- **Unit 2** experiences a loss of the 2F 4160V Bus.

At 1020:

- Safety Injection actuates on Unit 1.
- 1-2A DG Local Alarm/Control Panel, Window #53, EXP. TANK JACK. COOL LEVEL LOW, is in alarm.
- *Jacket water level is stable in the sight glass.*

Which one of the following completes the statements below **assuming no operator action**?

At 1010 the 1-2A DG is (1).

At 1025 the 1-2A DG is (2).

	(1)	(2)
A.	running	running
B.	NOT running	running
C.	NOT running	NOT running
D.	running	NOT running

Added 3rd bullet under time 1020 for all applicants after one applicant asked about jacket water flow at 1020. blc

24. The following conditions are observed on Unit 2:

- Unit 2 is at 100% power.
- R-19, Steam Generator Blowdown, has lost control power.

Which one of the following completes the statements below based upon the conditions given above?

FH1, RMS HI-RAD, __(1)__ in alarm.

When drawing a SG sample, the R-19 Operator Selector Switch __(2)__ required to be maintained in the RESET position.

	(1)	(2)
A.	IS	IS
B.	IS	is NOT
C.	is NOT	IS
D.	is NOT	is NOT

25. The following conditions exist on Unit 1:

- Unit 1 is at 100% power.
- The A Train is ON SERVICE.

Which one of the following describes the power supply flowpath for the 1A CCW pump?

A. S/U Transformer 1A via 4160V Bus 1F

B. S/U Transformer 1B via 4160V Bus 1F

C. S/U Transformer 1A via 4160V Bus 1G

D. S/U Transformer 1B via 4160V Bus 1G

26. The following occurs on Unit 1:

At 1000:

- PI-4004B, INST AIR PRESS, indicates 80 psig and lowering at a stable rate of 0.5 psig per minute.

Which one of the following completes the statements below?

At 1005, KD2, IA PRESS LO, (1) in alarm.

(2) will isolate IA to the Turbine Building if the appropriate setpoint is reached.

	(1)	(2)
A.	IS	V-903, ESSENTIAL IA HDR AUTO ISO
B.	IS	V-904, NON-ESS IA HDR AUTO ISO
C.	is NOT	V-903, ESSENTIAL IA HDR AUTO ISO
D.	is NOT	V-904, NON-ESS IA HDR AUTO ISO

27. Which one of the following completes the statements below?

Nitrogen cylinders, which are designated for use as the pneumatic supply for the PORVs, are located in _(1)_.

_(2)_, is the valve used to align nitrogen to the PORVs.

A. (1) the 121 ft Piping Penetration Room

(2) HV-3885, IA to PENE RM Isolation valve

B. (1) the BTRS Chiller Room

(2) HV-3885, IA to PENE RM Isolation valve

C. (1) the 121 ft Piping Penetration Room

(2) HV-2228, Aux building instrument air header valve *(PORV BKUP AIR SUPPLY)*

D. (1) the BTRS Chiller Room

(2) HV-2228, Aux building instrument air header valve *(PORV BKUP AIR SUPPLY)*

Added parenthesis information for C2 and D2 to all applicants after one applicant questioned official noun name during administration of written exam. blc

28. The following conditions are observed on Unit 1:

- Unit 1 is at 100% power.
- A batch release is in progress per SOP-12.2, Containment Purge and Pre-access Filtration System.
- CTMT Mini-Purge Supply and Exhaust Fans are running.

Subsequently, the following occurs:

- Safety Injection is actuated.

Which one of the following completes the statements below based upon the conditions given above?

CTMT Mini-Purge supply and exhaust fans __(1)__ automatically stop.

__(2)__ automatically isolate(s).

A. (1) WILL

(2) Control Room Ventilation System dampers

B. (1) will NOT

(2) Control Room Ventilation System dampers

C. (1) WILL

(2) MOV-3046, CCW FROM RCP OIL CLRS

D. (1) will NOT

(2) MOV-3046, CCW FROM RCP OIL CLRS

29. Which one of the following completes the statements below?

A **maximum** of _(1)_ of rods is (are) allowed to be powered by the DC Hold Cabinet.

The DC Hold Cabinet ensures latching of the _(2)_ grippers.

	(1)	(2)
A.	one group	stationary
B.	two groups	moveable
C.	one group	moveable
D.	two groups	stationary

30. The following condition is observed on Unit 1:

- Unit 1 is at 100% power.

Which one of the following completes the statements below per TS 3.4.10, Pressurizer Safety Valves?

The purpose of the three Pressurizer Code Safety Valves is to ensure RCS pressure does not exceed _(1)_.

When _(2)_ Pressurizer Safety Valve(s) is (are) INOPERABLE, the Tech Spec completion time to restore operability is 15 minutes.

Do not apply Risk Informed Completion Time Program allowances

	(1)	(2)
A.	2735 psig	ONE
B.	2735 psig	TWO
C.	2400 psig	ONE
D.	2400 psig	TWO

31. Which one of the following completes the statements below?

600V LCC 1M is the power supply for the __(1)__ Pressurizer Heater Group.

Emergency power __(2)__ be aligned to the heater group selected above.

	(1)	(2)
A.	1D	CANNOT
B.	1D	CAN
C.	1E	CANNOT
D.	1E	CAN

32. The following conditions exist on Unit 2:

- UOP-1.3, Startup of Unit Following an At Power Reactor Trip, is in progress.
- All DRPI Rod Bottom lights are LIT.
- Step Demand Counters display the fully withdrawn value.

Subsequently, the following action is taken:

- An operator places the ROD CONTROL STARTUP RESET switch on the MCB in the RESET position.

Which one of the following identifies the annunciator response that occurs when the switch above is placed in the RESET position?

A. FF3, DRPI URGENT FAILURE, **clears**.

B. FF1, ROD CONTROL URGENT FAILURE, **alarms**.

C. FE3, ROD AT BOTTOM, **and** FE4, TWO OR MORE RODS AT BOTTOM, **clear**.

D. FE1, CONT ROD BANK POSITION LO, **and** FE2, CONT ROD BANK POSITION LO-LO, **alarm**.

33. The following conditions exist on Unit 1:

- ESP-0.1, Reactor Trip Response, is in progress.
- The crew is at the step to verify adequate natural circulation.
- The **two highest** indicating CHANNEL A CETCs are listed below. Neither are located in the upper head.
  - CETC A8 indicates 520°F.
  - CETC E4 indicates 490°F.

Subsequently, the following occurs:

- CETC A8 fails due to an **open** circuit.

Which one of the following completes the statements below based upon the conditions above?

The indication for CETC A8 will fail _(1)_.

The Channel A SCMM calculation _(2)_ affected by the failure of CETC A8.

	(1)	(2)
A.	LOW	is NOT
B.	LOW	IS
C.	HIGH	is NOT
D.	HIGH	IS

34. The following conditions exist on Unit 1:

- Unit 1 is in MODE 5 following a refueling outage.
- Containment Purge is running per SOP-12.2, Containment Purge and Pre-Access Filtration System.
- Containment closeout inspections are in progress.
- The Containment airlock is returned to service with interlocks reinstated.

Subsequently, the following occurs:

- HV-3203B, Containment Purge Inlet Isolation Supply Damper, fails **closed**.
- *Operators are dispatched to containment.*
- When operators arrive at the Personnel Airlock, the Differential Pressure measured between Containment and the Auxiliary Building is 0.2 psid.

Which one of the following completes the statements below?

The pressure inside Containment will _(1)_ following the failure above.

The Personnel Door ΔP Wait Cycle _(2)_ activate when the operators enter Containment through the Personnel Airlock.

A. (1) RISE

(2) will NOT

B. (1) RISE

(2) WILL

C. (1) LOWER

(2) will NOT

D. (1) LOWER

(2) WILL

In the 6th bullet, added period after the word containment and deleted the rest of the bullet that said "to investigate the damper failure" based on one applicant's question that damper was not located inside containment. blc

35. Which one of the following completes the statements below per AOP-36.0, Loss of Spent Fuel Pool Cooling?

The operational temperature limit of the Spent Fuel Pool is _(1)_.

The reason for the temperature limit above is _(2)_.

	(1)	(2)
A.	130ºF	to minimize evaporation for iodine retention
B.	130ºF	for personnel safety and limits room air temperature for habitability
C.	150ºF	to minimizing evaporation for iodine retention
D.	150ºF	for personnel safety and limits room air temperature for habitability

36. Which one of the following completes the statements below with regard to the Refueling **Manipulator Crane Interlocks**?

The _(1)_ interlock prevents damage to fuel assemblies within 10 inches of the top of the core.

Operators _(2)_ bypass the interlock described above.

	(1)	(2)
A.	Slow Zone	CAN
B.	Bridge-Trolley	CANNOT
C.	Slow Zone	CANNOT
D.	Bridge-Trolley	CAN

37. Which one of the following completes the statements below?

R-5, SFP RM, _(1)_ measure **neutron** radiation.

R-5 _(2)_ required by the Technical Specifications or Technical Requirements Manual.

	(1)	(2)
A.	DOES	IS
B.	DOES	is NOT
C.	does NOT	IS
D.	does NOT	is NOT

38. Both Units are operating at 100% with the following conditions:

- A fire header leak occurred.
- The MDFP auto started.
- The No. 1 DDFP auto started.

Subsequently, the following occurred:

- The fire header leak was repaired.
- The operating crew is in the process of shutting down the No. 1 DDFP in accordance with SOP-61.0, Fire Protection – Pump House and Yard Main, Section 4.7, Shutdown of a Diesel Driven Fire Pump.
- The MDFP is still running.

Which one of the following completes the statements below?

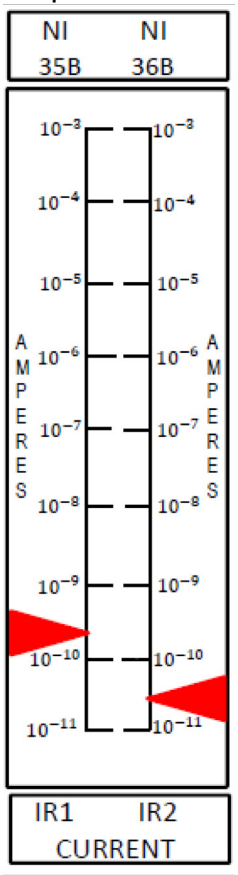
The DDFP _(1)_ be shutdown from the Main Control Room.

Once the DDFP is stopped, Section 4.7 requires the operator to verify Fire Main header pressure is being maintained at approximately _(2)_ psig.

	(1)	(2)
A.	CAN	90
B.	CANNOT	125
C.	CAN	125
D.	CANNOT	90

39. A Reactor trip occurred on Unit 1 and the following condition exists:

- The operating crew is performing ESP-0.1, Reactor Trip Response, Step 12: "Monitor nuclear instrumentation" and observes the following:



Which one of the following completes the statements below?

The Source Range detectors _(1)_ automatically energized.

If **none** of the Source Range detectors can be energized when required, then operators have no greater than _(2)_ to verify shutdown margin is adequate.

	(1)	(2)
A.	HAVE	one hour
B.	HAVE	two hours
C.	have NOT	one hour
D.	have NOT	two hours

40. Given the following conditions on Unit 1:

- EEP-1, Loss of Reactor or Secondary Coolant, is in progress and the following conditions are observed:

  – Containment pressure is 5 psig and slowly rising.
  – SCM monitor indication is 47°F subcooled in CETC Mode.
  – RCS WR pressure is 500 psig and stable.
  – AFW flow to 1A steam generator: 120 gpm and stable.
  – AFW flow to 1B steam generator: 130 gpm and stable.
  – AFW flow to 1C steam generator: 130 gpm and stable.
  – 1A steam generator NR level: 40% and stable.
  – 1B steam generator NR level: 42% and stable.
  – 1C steam generator NR level: 45% and stable.
  – Pressurizer level: 45% and stable.

Which one of the following completes the statement below In accordance with EEP-1?

SI Termination criteria is **not** met due to _____.

A. Heat Sink

B. Pressurizer level

C. RCS pressure

D. SCM monitor indication

41. Given the following conditions on Unit 2:

AT 1000:

- Reactor power is at 100%
- HH4, RCP VIB TRBL, alarms and the following conditions exist:
  - There are no instrument failures.
  - The 2B RCP bearing temperatures are slightly elevated.
  - The operating crew determines that the 2B RCP is the cause of the alarm.
- The 2B RCP Frame Vibrations indicate 7 MILS.

AT 1002:

- The 2B RCP Frame Vibrations indicate 22 MILS.

Which one of the following completes the statements below?

The earliest time the crew was required to trip the Reactor and stop the 2B RCP, is (1).

The step "Check if RCP(s) should be reconfigured to optimize RCS flow and pressurizer spray performance" will **first** be performed using (2).

	(1)	(2)
A.	1000	EEP-0, Reactor Trip or Safety Injection
B.	1000	ESP-0.1, Reactor Trip Response
C.	1002	EEP-0, Reactor Trip or Safety Injection
D.	1002	ESP-0.1, Reactor Trip Response

42. Given the following conditions on Unit 1:

At 1000:

- A Charging line rupture occurred on the discharge of the 1A Charging pump.
- AOP-16.0, CVCS Malfunction, was entered.

At 1015:

- All valves have been closed in accordance with AOP-16.0, Attachment 2, Charging System Rupture.
- The Charging line rupture has been isolated and the unaffected train is ready to be placed in service.

Which one of the following completes the statements below?

Prior to starting the unaffected Charging pump, the operating crew _(1)_ required to verify FK-122, CHG FLOW, closed.

While implementing AOP-16, Excess Letdown _(2)_ be placed in service any time it is desired.

	(1)	(2)
A.	IS	MAY
B.	IS	may NOT
C.	is NOT	MAY
D.	is NOT	may NOT

43. Given the following conditions on Unit 1:

- The Unit is in MODE 4.
- The A Train of RHR is in service.

Subsequently, the following is observed:

- 1-RHR-V-8864A (Q1E11V039B), 1A RHR HX DISCH RELIEF, begins leaking by.
- The leakage is determined to be excessive.

Which one of the following completes the statement below?

__(1)__ will alarm.

The crew is required to enter __(2)__.

A. (1) LE2, 1A RHR PMP RM SUMP LVL HI-HI OR TRBL

(2) AOP-1.0, RCS Leakage

B. (1) LE2, 1A RHR PMP RM SUMP LVL HI-HI OR TRBL

(2) AOP-12.0, RHR System Malfunction

C. (1) HE4, PRT LVL HI-LO

(2) AOP-1.0, RCS Leakage

D. (1) HE4, PRT LVL HI-LO

(2) AOP-12.0, RHR System Malfunction

44. Given the following conditions on Unit 1:

- PCV-444C, 1A LOOP SPRAY VLV, is mechanically stuck **open**.

Which one of the following completes the statements below in accordance with AOP-100, Instrumentation Malfunction?

The operating crew is required to stop a minimum of _(1)_ RCP(s).

AOP-100 _(2)_ contain an allowance for securing the RCP(s) prior to completion of all Immediate Operator Actions directed by EEP-0, Reactor Trip or Safety Injection.

	(1)	(2)
A.	one	DOES
B.	one	does NOT
C.	two	DOES
D.	two	does NOT

45. Given the following conditions on Unit 1:

- The Reactor is at 100% power.

Subsequently, the following occurs:

- A manual Reactor trip is required
- The OATC attempts to trip the reactor using the MCB hand switches
- The Reactor does NOT trip from the MCB.

While performing the Immediate Operator Actions of EEP-0, Reactor Trip or Safety Injection, both MG set supply breakers are opened with the following conditions observed:

- 8 rod bottom lights are **not** lit.
- Power Range NIs are reading as follows:
  - NI-41: 3% and lowering
  - NI-42: 4% and lowering
  - NI-43: 4% and lowering
  - NI-44: 3% and lowering
- Intermediate SUR indications are:
  - NI-35: -0.30 dpm
  - NI-36: -0.29 dpm

Which one of the following completes the statements below?

During the attempted Manual Reactor Trip from the Main Control Board, the Reactor Trip Breaker B Shunt Trip Coil failed to __(1)__.

In accordance with EEP-0, Reactor Trip or Safety Injection, the crew __(2)__ transition to FRP-S.1, Response to Nuclear Power Generation/ATWT.

	(1)	(2)
A.	energize	WILL
B.	energize	will NOT
C.	deenergize	WILL
D.	deenergize	will NOT

46. Given the following conditions on Unit 1:

- ECP-3.1, SGTR With Loss of Reactor Coolant Subcooled Recovery Desired, is in progress.
- A loss of all Offsite power has occurred.

Which one of the following completes the statements below?

Pressurizer __(1)__.

The required margin for Diesel Generator capacity for energizing Pressurizer heaters is __(2)__.

	(1)	(2)
A.	Group A and B heaters will cycle in automatic without operator action	0.3 MW per bank
B.	Group B heaters are available only after manually aligning 1C 600V LC to the 1E 600V LC	0.3 MW per bank
C.	Group A and B heaters will cycle in automatic without operator action	125 kW per bank
D.	Group B heaters are available only after manually aligning 1C 600V LC to the 1E 600V LC	125 kW per bank

47. The following conditions exist on Unit 2:

- The Reactor is at 100% power.

Subsequently, a steam leak in the Main Steam Valve Room occurs.

- The operating crew has entered AOP-14.0, Secondary System Leak and the following is observed:
  - The MSVR is not accessible.
  - The steam leak rate is stable and cannot be isolated.
  - The crew is maintaining PZR Level, Tavg, RCS Pressure, and SG Levels in the normal bands.
  - No significant hazard to personnel or equipment exists.

Subsequently, the Shift Manager determines that a plant shutdown is required.

Which one of the following completes the statements below in accordance with AOP-14.0?

During the shutdown, if the steam leak worsens, the minimum **overall Reactor power increase** caused by the steam leak, which requires the Reactor and Main Turbine to be tripped is ____.

A. 0.5%

B. 1.0%

C. 5.0%

D. 10.0%

48. The following conditions exist on Unit 1:

- FRP-H.1, Response to Loss of Secondary Heat Sink, is in progress
- Bleed and Feed is in progress.

Subsequently, an AFW pump has been started and it is desired to recover Steam Generator water level.

- RCS Hot leg temperatures are 560°F and stable.
- All SG Wide Range (WR) levels are 5% and stable.

Which one of the following completes the statement below?

SG Water Level will be recovered by initially feeding (1).

The required feed flow rate is (2).

	(1)	(2)
A.	all three SGs	less than 20 gpm per SG
B.	all three SGs	20 to 100 gpm
C.	only one SG	less than 20 gpm
D.	only one SG	20 to 100 gpm

49. The following conditions exist on Unit 1:

- ECP-0.0, Loss of All AC Power, is in progress.
- The first Steam Generator depressurization is in progress.
- Cooldown rate is 98°F per hour.
- Pressurizer level has been lost and Reactor Vessel upper head voiding is occurring.
- All SG pressures are approximately 228 psig and lowering.

Which one of the following is the basis for needing to secure the Steam Generator depressurization?

A. To ensure RCS cooldown rate does not exceed 100 degrees in the last hour.

B. To restore Pressurizer level.

C. To prevent Accumulator Nitrogen into the RCS from affecting natural circulation flow.

D. To minimize void formation in the Reactor Vessel head.

50. The following conditions exist on Unit 1:

- The Reactor is operating at 100% power.
- 120V AC Vital Bus 1D loses power.

Which one of the following completes the statements below?

FD5, BANK D FULL ROD WTHDRL AUTO ROD STOP, annunciator _(1)_ alarm.

The operating crew _(2)_ required to place Rod Control in **manual**.

	(1)	(2)
A.	DOES	IS
B.	does NOT	IS
C.	does NOT	is NOT
D.	DOES	is NOT

51. The following conditions exist on Unit 1:

- Reactor was operating at 100% power.
- 1A Auxiliary Building Battery was out-of-service for maintenance.

Subsequently, Battery Charger 1A tripped.

- Numerous annunciators alarm, including the following:
  - WE2, 1F, 4KV BUS OV-OR-UV OR LOSS OF DC.
  - ED1, MULTIPLYING RELAY CAB A TRN LOSS OF PWR.

Which one of the following completes the statements below?

A loss of _(1)_ has occurred.

When the Battery Charger 1C, Swing Battery Charger, is placed in service, it will **initially** start up in the _(2)_ mode.

	(1)	(2)
A.	125V DC Bus 1B	Float
B.	125V DC Bus 1A	Float
C.	125V DC Bus 1B	Equalize
D.	125V DC Bus 1A	Equalize

52. The following conditions exist on Unit 2:

- Reactor is operating at 100% power.
- B Train CCW is ON SERVICE.
- 2C CHG Pump is in service.
- 2B SFP HX is in service.

Subsequent, the following occurs:

- A Service Water System leak has occurred from a pipe rupture just upstream of MOV-3149, SW TO BLDN HX & BTRS CHLRS.

In accordance with AOP-10.0, Loss of Service Water, which one of the following is required to be performed?

A. Perform AOP-7.0, Loss of Turbine Building Service Water.

B. Place A train CCW ON SERVICE.

C. Place 2A SFP HX in service per SOP-54.0, Spent Fuel Pit Cooling and Purification System.

D. Start 2A Charging pump and stop 2C CHG pump.

53. The following conditions exist on Unit 1:

- 1F and 1G 4160 V bus voltages are 3845 V.
- 1G MCC is aligned to Unit 1.

Which of the following is a required action of AOP-5.2, Degraded Grid?

A. Record 1F and 1G 4160 V bus voltage every 30 minutes.

B. Isolate computer room HVAC per SOP-56.0, Control Room HVAC System.

C. Place TSC HVAC in recirc mode per SOP-56.1, Technical Support Center HVAC System.

D. Secure R-35A, CONT RM INLET AIR, pump per SOP-45, Radiation Monitoring System.

54. The following conditions exist on Unit 1:

- ECP-1.2, LOCA Outside Containment, is in progress
- The operating crew is performing Step 2: "Try to identify and isolate break"

Which one of the following completes the statements below?

The operating crew is required to isolate _(1)_ **first**.

The operating crew must monitor _(2)_ to confirm the leak isolation status.

	(1)	(2)
A.	RHR	RCS pressure
B.	RHR	Pressurizer level
C.	RCP Seal Injection	RCS pressure
D.	RCP Seal Injection	Pressurizer level

55. The following conditions exist on Unit 1:

- FRP-H.1, Response To Loss of Secondary Heat Sink, is in progress.
- The operating crew is at Step 4: “Try to Establish AFW Flow to at least one SG” when the following is observed:
  - RCS Pressure is 2235 psig and stable.
  - SG Pressures are 900 psig.
  - SG Narrow Range Levels are 15% and lowering.
  - Total AFW Flow is 0 gpm.
  - CST level is 20 ft.

Which one of the following completes the statements below per FRP-H.1, Response ?

The operating crew is required to align AFW Pump suctions to the Service Water System when CST level reaches __(1)__.

If Auxiliary Feedwater flow cannot be established, then the **next** preferred source of feed to the Steam Generators is from the __(2)__ system.

	(1)	(2)
A.	16 ft	Main Feedwater
B.	16 ft	Condensate
C.	5.3 ft	Main Feedwater
D.	5.3 ft	Condensate

56. The following conditions exist on Unit 1:

- A LOCA outside Containment is in progress.
- ECP-1.1, Loss of Emergency Coolant Recirculation, is in progress.

Which one of the following completes the statements below?

The maximum allowed cooldown rate is _(1)_.

Per ECB-1.1, Reducing RCS pressure to minimize subcooling, is to _(2)_.

Procedure Name:
ECB-1.1, FNP Specific Background Document for FNP-1/2-ECP-1.1 Loss of Emergency Coolant Recirculation.

A. (1) less than 200°F in any 60 min period

(2) lower break flow

B. (1) less than 100°F in any 60 min period

(2) lower break flow

C. (1) less than 200°F in any 60 min period

(2) permit RHR flow to the core

D. (1) less than 100°F in any 60 min period

(2) permit RHR flow to the core

57. The following conditions exist on Unit 2:

- A startup per UOP-1.2, Startup of Unit from Hot Standby to Minimum Load, is in progress and the following is observed:
  - Reactor Power is 9%.
  - The Control Rod Motion handswitch was released following a rod withdrawal.

Subsequently, the following alarms occur:

- FD1, IR HI FLUX AUTO/MANUAL ROD STOP
- FF4, DRPI NON-URGENT FAILURE

Which one of the following completes the statements below?

The plant has experienced a __(1)__.

The operating crew is required to enter __(2)__.

A. (1) Dropped Control Rod

(2) EEP-0.0, Reactor Trip or Safety Injection

B. (1) Continuous Rod Withdrawal

(2) AOP-19.0, Malfunction of Rod Control System

C. (1) Continuous Rod Withdrawal

(2) EEP-0.0, Reactor Trip or Safety Injection

D. (1) Dropped Control Rod

(2) AOP-19.0, Malfunction of Rod Control System

58. The following conditions exist on Unit 2:

- A Reactor Trip occurs and the following conditions exist:
  - PCV-445A, PRZR PORV, has failed **open**.
  - Pressurizer pressure is 1025 psig.
  - Core Exit Thermocouples read 560°F.
  - Pressurizer level is 70% and rising.
- EEP-1, Loss of Reactor or Secondary Coolant, is in progress.
  - The operating crew is at Step 7 " [CA] Check SI termination criteria".

Which one of the following completes the statements below?

The RCS is _(1)_ superheated.

Pressurizer level _(2)_ an accurate indication of RCS inventory.

REFERENCE PROVIDED

	(1)	(2)
A.	12.4°F	IS
B.	12.4°F	is NOT
C.	10.6°F	IS
D.	10.6°F	is NOT

59. The following conditions exist on Unit 2:

- Reactor power is 12% power.
- A tube leak has just started on the 2B Steam Generator.

Which one of the following completes the statements below?

In accordance with AOP-2.0, Steam Generator Tube Leakage, the counting room _(1)_ be required to determine the R-70 leak rate.

R-70B, 2B SG TUBE LEAK DET, has upper limit leak rate capability of _(2)_.

	(1)	(2)
A.	WILL	10 gpm
B.	will NOT	10 gpm
C.	WILL	1000 gpd
D.	will NOT	1000 gpd

60. The following conditions exist on Unit 1:

- The Reactor is at 30% power.
- The 1A and 1B Circulating Water (CW) Pumps are running.

Subsequently, the following occurs:

- The 1A CW Pump supply breaker trips.
- KK2, TURB COND VAC LO-LO, is in alarm.
- Condenser Pressure rises to 12.0 psia.

Which one of the following completes the statements below?

The crew _(1)_ required to manually trip the Reactor.

The C-9, COND AVAIL, light located on the BYPASS & PERMISSIVE panel is **not** LIT due to _(2)_.

	(1)	(2)
A.	is NOT	Condenser Vacuum
B.	is NOT	CW pump breaker positions
C.	IS	Condenser Vacuum
D.	IS	CW pump breaker positions

61. Given the following conditions on Unit 1:

- Operators are performing FRP-C.1, Response to Inadequate Core Cooling, and the following conditions exist:
  – Operators are unable to start any RCP.
  – All PRZR PORVs and all Reactor Vessel Head Vent valves have been opened.

Subsequently, operators are at the step to “Reduce pressure in all intact SGs to atmospheric pressure.”

Which one of the following completes the below statements in accordance with FRP-C.1?

Operators __(1)__ required to establish a minimum level in the intact SG(s) before commencing to depressurize intact SGs.

Once operators have begun to dump steam, they __(2)__ required to stop dumping steam if all intact SG level(s) lower to a predetermined minimum level in order to recover SG level before continuing.

	(1)	(2)
A.	ARE	ARE
B.	ARE	are NOT
C.	are NOT	ARE
D.	are NOT	are NOT

62. The following conditions exist on Unit 1:

- AOP-28.2, Fire in the Control Room, is in progress.
- The Main Control Room has been evacuated.

Subsequently, the following occurs:

- The Hot Shutdown Panels have been manned by the operating crew.
- Operators have been dispatched to perform Attachment 7, Placing Diesel Generators in Local Control.

Which one of the following completes the statements below in accordance with AOP-28.2, Attachment 7?

The Diesel Generators _(1)_ required to be placed in Mode 4.

Diesel Generators are capable of operating fully loaded for _(2)_ without cooling water flow.

	(1)	(2)
A.	ARE	three minutes
B.	are NOT	three minutes
C.	ARE	ten minutes
D.	are NOT	ten minutes

63. The following conditions exist on Unit 1:

- Unit 1 is operating at 100% power.
- FG5, GFFD SYS TRBL, alarms.

Which one of the following completes the statement below in accordance with AOP-32.0, High Reactor Coolant Activity?

If the Gross Failed Fuel Detector (GFFD) indication is greater than __(1)__ above normal, then Reactor power must be **reduced to** __(2)__ power.

	(1)	(2)
A.	10^4 cpm	75%
B.	10^4 cpm	25%
C.	10^5 cpm	25%
D.	10^5 cpm	75%

64. The following conditions exist on Unit 1:

- FRP-P.1, Response to Imminent Pressurized Thermal Shock, is in progress with the following conditions:
  - At 1000, the crew has determined an RCS Soak is required.
  - RCS Pressure has been stable since 1000.
  - RCS Temperature Data is represented below:

Time	RCS Temperature
1000	310°F
1030	305°F
1100	305°F
1130	300°F
1200	300°F
1230	300°F
1300	300°F

Which one of the following completes the statements below?

Based on the given data, the earliest time that the RCS Soak was completed was at _(1)_.

In accordance with FRP-P.1, the RCS soak time is based on RCS _(2)_ temperature.

	(1)	(2)
A.	1100	Hot leg
B.	1100	Cold leg
C.	1230	Hot leg
D.	1230	Cold leg

65. Which one of the following completes the statements below in accordance with ESP-0.2, Natural Circulation Cooldown to Prevent Reactor Vessel Head Steam Voiding?

An inactive RCS loop exists if the capability to feed the SG is lost __(1)__ the capability to release the steam from the SG is lost.

If one or more of the RCS loops is inactive, then a __(2)__ restrictive cooldown rate is required.

	(1)	(2)
A.	AND	LESS
B.	OR	LESS
C.	AND	MORE
D.	OR	MORE

66. The following conditions exist on Unit 1:

- I&C has performed maintenance on a safety-related transmitter, and the transmitter feeds an indicator in the main control room.
- A long-term method of monitoring the control room indicator has been established to detect post-maintenance degradation or transmitter/indicator drift.
- *No 10CFR50.59 screening/evaluation was required.*

Which one of the following completes the statements below in accordance with Operations Expectations Procedures?

The long-term monitoring method __(1)__ required to be tracked as an open item in the Narrative Log.

Standing Orders __(2)__ allowed to be used to support equipment operability.

A. (1) IS

(2) ARE

B. (1) IS

(2) are NOT

C. (1) is NOT

(2) ARE

D. (1) is NOT

(2) are NOT

Added the 3rd bullet for all applicants to address one applicant's question about 10CFR50.59 evaluation. blc

67. Given the following condition:

- Control room crew members are NOT in direct communication with a field operator performing a procedure.

Which one of the following completes the statements below per NMP-AP-003, Procedure and Work Instruction Use and Adherence?

If the field operator is using a REFERENCE USE procedure, then a copy of the applicable pages/sections _(1)_ required to be available at the job site.

If the field operator is using an INFORMATION USE procedure, then a copy of the applicable pages/sections _(2)_ required to be available at the job site.

	(1)	(2)
A.	IS	IS
B.	IS	is NOT
C.	is NOT	IS
D.	is NOT	is NOT

68. Given the following conditions:

- An Infrequently Performed Test or Evolution (IPTE) Briefing will be performed in accordance with NMP-AD-006, Infrequently Performed Tests and Evolutions, at 0800 today.
- The Infrequently Performed Evolution is being planned for later in the shift at 1500.

Which one of the following completes the statements below in accordance with NMP-AD-006, Infrequently Performed Tests and Evolutions?

The IPTE Briefing __(1)__ be led by someone from the on-shift complement.

In addition to the IPTE Briefing, NMP-AD-006 __(2)__ require a separate Pre-job Brief (PJB).

	(1)	(2)
A.	SHOULD	DOES
B.	SHOULD	does NOT
C.	should NOT	DOES
D.	should NOT	does NOT

69. Given the following plant conditions:

- Unit 1 is in **MODE 2**.
- RCS pressure has exceeded the limit of SL 2.1.2 - RCS Pressure Safety Limit.

Which one of the following describes the **maximum** time to take action if it is exceeded in accordance with Technical Specifications 2.1, Safety Limits (SLs)?

A. Restore compliance within 1 hour, the Unit may remain in MODE 2.

B. Restore compliance within 5 minutes, the Unit may remain in MODE 2.

C. Restore compliance and be in MODE 3 within 1 hour.

D. Restore compliance within 1 hour and be in MODE 3 within the following hour.

70. The following conditions exist on Unit 1:

- A MCB annunciator has come into alarm once per hour over the entire shift.
- The annunciator has been declared a “nuisance alarm.”

Subsequently, the nuisance alarm was directed to be cut out.

Which one of the following completes the statements below in accordance with NMP-OS-007-001, Conduct of Operations Standards and Expectations?

The _(1)_ is **lowest** level Operations Department crew member that may direct cutting out of the nuisance alarm.

A condition report _(2)_ required to be generated for a nuisance alarm.

	(1)	(2)
A.	Shift Supervisor	IS
B.	Shift Supervisor	is NOT
C.	Shift Manager	IS
D.	Shift Manager	is NOT

71. Given the following plant conditions on Unit 1:

- A waste gas release is in progress.

Subsequently, the following was observed:

- R29B, Plant Vent Stack Composite Gas, failed **low**.
- FH2, RMS CH FAILURE, alarms.

Which one of the following completes the statements below?

The waste gas release (1) automatically stopped.

The ODCM (2) allow a waste gas release to be commenced with compensatory action(s).

	(1)	(2)
A.	WAS	does NOT
B.	was NOT	does NOT
C.	WAS	DOES
D.	was NOT	DOES

72. The following conditions exist on Unit 1:

- The Unit is in Mode 6 for a refueling outage.
- The operating crew must enter a room for a time critical response to investigate a fire alarm.
- The room is posted as a **Locked High Radiation Area (LHRA).**

Which one of the following completes the statements below?

The lowest radiation level at which this posting is required is _(1)_.

In accordance with NMP-HP-302-001, Radiological Key Control, use of the LHRA **master** key is authorized by the _(2)_.

	(1)	(2)
A.	> 100 mrem/hr	Radiation Protection Supervisor
B.	> 100 mrem/hr	Operations Shift Manager
C.	> 1000 mrem/hr	Radiation Protection Supervisor
D.	> 1000 mrem/hr	Operations Shift Manager

73. An Unusual Event has been declared on Unit 1.

- The OATC has been directed to perform NMP-EP-142-F08, Unusual Event Public Address (PA) Announcement Script.

Which one of the following completes the statements below in accordance with NMP-EP-142-F08?

Contractors _(1)_ required to exit the protected area.

The PA announcement for the Unusual Event is required to be repeated at a **minimum** of every _(2)_ minutes.

	(1)	(2)
A.	ARE	30 minutes
B.	are NOT	30 minutes
C.	ARE	60 minutes
D.	are NOT	60 minutes

74. Which one of the following completes statements below in accordance with NMP-OS-007-001, Conduct of Operations Standards and Expectations?

The **preferred** method for documenting a critical parameter that will remain in effect greater than a shift is _(1)_.

For critical parameters being monitored in the field by a System Operator, the _(2)_ will determine the appropriate monitoring methods.

A. (1) Narrative Log Entry

(2) OATC

B. (1) Narrative Log Entry

(2) Shift Supervisor

C. (1) Attachment 5, Critical Parameter Monitoring Sheet

(2) OATC

D. (1) Attachment 5, Critical Parameter Monitoring Sheet

(2) Shift Supervisor

75. Both units are operating at 100% power when the following occurred.

- MK5, SEISMIC ALARM PANEL, alarms.
- The crew is performing step 1 of ARP for MK5. "CHECK that a seismic event has occurred..."
- The Seismic Monitoring System indicates an Event Alarm as a result of seismic activity.
- The control room operators did **not** feel the seismic activity.

Which one of the following completes the statements below in accordance with MK5?

The crew _(1)_ required to contact an outside agency to confirm whether or not a seismic event has occurred.

The lowest seismic threshold that requires a plant shutdown is _(2)_.

	(1)	(2)
A.	IS	Safe Shutdown Earthquake
B.	IS	Operating Basis Earthquake
C.	is NOT	Safe Shutdown Earthquake
D.	is NOT	Operating Basis Earthquake

76. The following was observed on Unit 1:

- Unit 1 is at 100% power.
- HE5, PRT PRESS HI, alarms.
- PRT Pressure rose to 60 psig.

Subsequently, the following is observed:

- Unit 1 has remained at 100% power.
- Operators have determined that the event described above did **not** involve the Pressurizer Code Safeties.
- PRT pressure has remained at 60 psig.

Which one of the following completes the statements below based upon the conditions given above?

The Pressurizer Code Safeties _(1)_ OPERABLE.

The ARP for HE5 directs operators to lower PRT pressure by venting the PRT per _(2)_.

A. (1) ARE

(2) SOP-51.0, Waste Gas System

B. (1) are NOT

(2) SOP-1.2, Reactor Coolant Pressure Relief System

C. (1) ARE

(2) SOP-1.2, Reactor Coolant Pressure Relief System

D. (1) are NOT

(2) SOP-51.0, Waste Gas System

77. The following conditions were observed on Unit 2:

- Unit 2 has just entered MODE 3 per UOP-1.1, Startup of Unit from Cold Shutdown to Hot Standby.
- The RTBs are closed.
- The 2A and 2B RCPs are running.
- The 2C RCP is secured.

Subsequently, the following occurred:

- A Pressurizer Spray Valve became mechanically bound in the open position.
- The crew performed the required actions of AOP-100.0, Instrumentation Malfunction.
- The crew transitioned to AOP-4.0, Loss of Reactor Coolant Flow.
- The crew entered the applicable REQUIRED ACTION statement of LCO 3.4.5, RCS Loops - MODE 3.

Which one of the following completes the statements below?

The crew __(1)__ required to open the RTBs per AOP-100.0.

The reason for performing the applicable REQUIRED ACTION of LCO 3.4.5, is to __(2)__ per BASES 3.4.5, RCS Loops - MODE 3.

A. (1) is NOT

(2) enhance natural circulation

B. (1) is NOT

(2) preclude an inadvertent power excursion

C. (1) IS

(2) enhance natural circulation

D. (1) IS

(2) preclude an inadvertent power excursion

78. The following condition is observed on Unit 1:

- The CTMT CLR FANS A TRAIN SEL SWITCH is in the **1B** position.

At 1000 the following is observed**:**

- FI-3013A, SW THROUGH CTMT CLRS INLET, indicates 3200 GPM.
- FI-3014A, SW THROUGH CTMT CLRS OUTLET, indicates 3200 GPM.

At 1005 the following occurs**:**

- FI-3013A, SW THROUGH CTMT CLRS INLET, indicates 4500 GPM.
- FI-3014A, SW THROUGH CTMT CLRS OUTLET, indicates 900 GPM.
- AF4, CTMT CLR SW FLOW HI-LO, alarms.
- BB1, CTMT CLR DRN LVL HI, is in alarm.
- LI-3396A, CNMT CLR DRN LVL, is pegged high.
- LI-3396B, C, and D indicate 0.0 feet and stable.

At 1010 the following occurs**:**

- Operators isolate Service Water for the 1A Containment Cooler per SOP-12.1, Containment Air Cooling System.
- FI-3013A, SW THROUGH CTMT CLRS INLET, indicates 2100 GPM.
- FI-3014A, SW THROUGH CTMT CLRS OUTLET, indicates 2100 GPM.

Which one of the following completes the statements below?

At 1005 the affected Containment Cooler Standpipe's drain valve _(1)_ automatically open.

At 1010 the A Train of Containment Cooling _(2)_ OPERABLE per Bases of TS 3.6.6, Containment Spray and Cooling System.

	(1)	(2)
A.	DID	IS
B.	did NOT	IS
C.	DID	is NOT
D.	did NOT	is NOT

79. Given the following conditions on Unit 2:

- The Unit is at 55% power with a power ascension in progress.

Subsequently, the following occurred:

- A Reactor Trip and Safety Injection occurred with the following conditions:
  - The following radiation monitors are in alarm:
    - R-2, Containment
    - R-7, In-Core NIS Area
    - R-11, Containment Atmosphere
  - Containment Pressure is 34 psig and lowering
  - Only Containment Cooler A is running in Emergency Mode
  - Core voiding is indicated on RVLIS
  - EEP-0, Reactor Trip or Safety Injection, Step 12 Monitor Charging Pump Miniflow Criteria, is being performed

Which one of the following completes the statement below?

Both Containment Spray pumps are required to be stopped using __(1)__ if at least 8 hours has passed since the __(2)__, and Containment Pressure is less than 16 psig.

A. (1) ESP-1.1, SI Termination

(2) start of the event

B. (1) EEP-1, Loss of Reactor or Secondary Coolant

(2) start of Containment Spray Recirculation

C. (1) ESP-1.1, SI Termination

(2) start of Containment Spray Recirculation

D. (1) EEP-1, Loss of Reactor or Secondary Coolant

(2) start of the event

80. The following occurs on Unit 1:

At 1000:

- Unit 1 is at 100% power.
- A Large Break LOCA occurs.

At 1030:

- The crew is implementing EEP-1, Loss of Reactor or Secondary Coolant.
- The crew is at Step 4 of EEP-1 to "Check secondary radiation indication - NORMAL".
- The crew determines that Secondary Radiation indications are normal.

At 1040:

- The crew implemented Step 6.1 of EEP-1 to "Close recirculation valve disconnects using ATTACHMENT 1, RECIRCULATION DISCONNECTS".
- All AFW flow to the 1A SG is secured.
- The 1A Narrow Range SG Water Level indicates 40% and rising.

Which one of the following completes the statements below?

At 1030, Step 4 of EEP-1 _(1)_ include R-15B, SJAE EXH, in the list of radiation monitors to check.

At 1040, the crew _(2)_ required to transition to EEP-3, Steam Generator Tube Rupture.

	(1)	(2)
A.	DOES	IS
B.	DOES	is NOT
C.	does NOT	IS
D.	does NOT	is NOT

In the first fill-in-the-blank statement, deleted the letter "B" from R-15B to address an applicant's question during the exam administration. blc

81. The following occurred on Unit 1:

- Unit 1 experienced a load rejection and the following indications were observed:

Time	1000	1001	1002	1003
Thermal Power	98.00%	95.00%	92.00%	90.00%
NI-41C, PERCENT FLUX DIFF	-3.00%	-11.00%	-16.50%	-18.00%
NI-42C, PERCENT FLUX DIFF	-4.00%	-12.00%	-13.00%	-16.00%
NI-43C, PERCENT FLUX DIFF	-2.00%	-10.00%	-12.00%	-13.00%
NI-44C, PERCENT FLUX DIFF	-2.50%	-11.00%	-12.50%	-13.50%

Which one of the following completes the statements below?

____ is the earliest time a REQUIRED ACTION statement of TS 3.2.3, Axial Flux Difference, is required to be entered.

REFERENCE PROVIDED

A. 1000

B. 1001

C. 1002

D. 1003

82. The following occurred on Unit 1:

- Unit 1 is at 100% power.
- AOP-2.0, Steam Generator Tube Leakage, is in progress.
- FG1, SG TUBE LEAK ABOVE SETPT, is in alarm.
- FH1, RMS HI-RAD, is in alarm.
- R-15, Steam Jet Air Ejector, indicates 5.3 x 10^2 cpm and rising.
- Operators determine that primary to secondary leakage is **100 gpd**.

Which one of the following completes the statements below based upon the conditions given above?

EEP-0, Reactor Trip or Safety Injection, entry _(1)_ required.

The highest required EAL classification is an _(2)_ per NMP-EP-141-001-F01, Farley - Hot Initiating Condition Matrix.

DO NOT BASE CLASSIFICATION ON EMERGENCY DIRECTOR JUDGEMENT

REFERENCE PROVIDED

A. (1) IS

(2) ALERT

B. (1) IS

(2) UNUSUAL EVENT

C. (1) is NOT

(2) ALERT

D. (1) is NOT

(2) UNUSUAL EVENT

83. The following conditions were observed on Unit 1:

- Unit 1 was at 90% power.
- Control Rods were in manual control

Subsequently, the following occurred:

- The 1E Steam Dump Valve failed fully open.
- The crew implemented AOP-14.0, Secondary System Leakage.

Which one of the following completes the statements below?

The 1E Steam Dump Valve capacity is approximately __(1)__ of rated steam flow.

For these conditions, AOP-14.0 __(2)__ guidance to implement AOP-17.1, Rapid Turbine Power Reduction.

	(1)	(2)
A.	5%	does NOT contain
B.	5%	contains
C.	10%	does NOT contain
D.	10%	contains

84. The following conditions were observed on Unit 2:

- Unit 2 was at 100% power.
- PCV-445A, PRZR PORV, was experiencing seat leakage.
- MOV-8000A, PRZR PORV ISO, was closed with power supplied.

Subsequently, the following occurred:

- PCV-444B, PRZR PORV, failed open.
- An automatic Reactor Trip and SI occurred.
- MOV-8000B, PRZR PORV ISO, was closed to isolate PCV-444B.

The following conditions currently exist:

- EEP-0, Reactor Trip or Safety Injection, is in progress.
- The crew has just completed Step 10: "Check PRZR PORVs and spray valves".
- RCS Pressure is 2000 psig and slowly rising.

Which one of the following completes the statements below per EEP-0?

Following completion of Step 10, __(1)__.

Following completion of Step 10, the crew is required to __(2)__.

A. (1) MOV-8000A will be OPEN

(2) transition to EEP-1, Loss of Reactor or Secondary Coolant

B. (1) MOV-8000A will be OPEN

(2) remain in EEP-0, Reactor Trip or Safety Injection

C. (1) both block valves will remain CLOSED

(2) transition to EEP-1, Loss of Reactor or Secondary Coolant

D. (1) both block valves will remain CLOSED

(2) remain in EEP-0, Reactor Trip or Safety Injection

85. The following conditions exist on Unit 1:

- A LOCA has occurred.
- EEP-1, Loss of Primary or Secondary Coolant, is in progress.
- The crew is at Step 13 to "Begin evaluation of plant status."
- The following conditions are observed:
  - Containment Pressure is 6 psig and slowly rising.
  - RCS Temperature is 20°F superheated and temperature rising.
  - RCS Pressure is 400 psig and lowering.
  - Pressurizer level is 6% and lowering.
  - RWST Level is 13.5 ft and slowly lowering.
  - S/G Levels are 42% and stable.
  - Total AFW flow is 400 gpm and stable.

Which one of the following completes the statement below?

The crew is **currently** required to ____.

A. transition to FRP-H.1, Response to Loss of Secondary Heat Sink

B. transition to ESP-1.2, Post LOCA Cooldown and Depressurization

C. transition to ESP-1.3, Transfer to Cold Leg Recirculation

D. remain in EEP-1, Loss of Reactor or Secondary Coolant

86. The following conditions were observed on Unit 1:

- Unit 1 is at 100% power.

Subsequently, the following occurs:

- The 1B CCW Room Cooler experiences a fan fault and will not start.

Which one of the following completes the statements below?

A REQUIRED ACTION STATEMENT of LCO 3.7.19, Engineered Safety Feature (ESF) Room Coolers __(1)__ required to be entered.

The B Train of CCW __(2)__ OPERABLE.

	(1)	(2)
A.	is NOT	IS
B.	is NOT	is NOT
C.	IS	IS
D.	IS	is NOT

87. The following conditions were observed on Unit 1:

- Unit 1 was at 100% power.
- The 2C DG was tagged out.

At 1000:

- Both Units experienced a Loss of All Offsite Power.
- The 1-2A DG started and immediately tripped.
- The 1B DG failed to start.
- ECP-0.0, Loss of All AC Power, is implemented.

At 1020:

- The 1B DG is manually started per SOP-38.0-1B, 1B Diesel Generator and Auxiliaries.
- The following 1B DG indications are observed at the EPB:
  - 1B DG Speed is 514 RPM.
  - 1B DG Frequency is 0 Hz.
  - 1B DG Voltage is 0.0 KV.
- ACC reports that restoration of offsite power will occur in two hours.

Which one of the following completes the statements below per ECP-0.0?

The crew _(1)_ required to reset the 1B DG exciter at the 1B DG Local Control Panel.

The crew _(2)_ required to enter NMP-OS-019-104, Farley Unit 1 FSG-4-ELAP DC Load Shed/Management.

	(1)	(2)
A.	IS	is NOT
B.	IS	IS
C.	is NOT	is NOT
D.	is NOT	IS

88. The following condition is observed on Unit 1:

- Unit 1 is at 100% power.

Subsequently, the following occurs:

At 1000:

- KD1, IA TO PENE RM PRESS LO, alarms.
- KD2, IA PRESS LOW, alarms.
- Instrument Air Pressure is 0 psig.

At 1030:

- Operators have verified backup Nitrogen in service per SOP-62.1, Backup Air or Nitrogen Supply to the PORVs.

Which one of the following completes the statements below?

At 1001 the Pressurizer level trend is _(1)_.

At 1030 the Pressurizer PORVs _(2)_ OPERABLE per Tech Spec 3.4.11, Pressurizer Power Operated Relief Valves, bases.

	(1)	(2)
A.	RISING	are NOT
B.	RISING	ARE
C.	STABLE	are NOT
D.	STABLE	ARE

89. Given the following conditions on Unit 1:

- FRP-H.1, Response to Loss of Secondary Heat Sink, is in progress
- RCS Bleed and Feed has been **secured**.
- Normal Charging has just been established.
- The TDAFW pump has been returned to service.
- AFW flow to all SGs is 400 gpm.
- RCS Pressure is 1600 psig and slowly rising.
- RCS Subcooling based on CETC MODE is 50°F and stable.
- Pressurizer level is 51% and rising.
- Containment Pressure is 5 psig and slowly falling.

Which one of the following completes the statements below?

Prior to securing Feed and Bleed SG Narrow Range Water Level was required to be greater than a minimum of _(1)_ in at least one SG.

When directed by FRP-H.1, the operating crew will transition to _(2)_.

A. (1) 31%

(2) ESP-1.1, SI Termination

B. (1) 48%

(2) ESP-1.1, SI Termination

C. (1) 31%

(2) EEP-1, Loss of Reactor or Secondary Coolant

D. (1) 48%

(2) EEP-1, Loss of Reactor or Secondary Coolant

90. Given the following conditions on Unit 1:

- The Unit is in MODE 4.
- 1B Charging pump is aligned to B train and is the standby charging pump.
- 1B BAT is in service.
- 1A BAT is on standby.
- Boric Acid Tank parameters are:

	1A BAT	1B BAT
LEVEL	12500 gal	13,360 gal
TEMP	72°F	72°F
BORON	7325 ppm	7050 ppm

Subsequently, the 1B DG is declared INOPERABLE after being tagged out.

Which one of the following completes the statement below per TRM 13.1.3, Boration Flow Path - Operating?

There is(are) ____ operable boration Flowpath(s).

A. NO

B. ONLY one

C. ONLY two

D. three

91. Given the following conditions on Unit 1:

- Core offload to the Spent Fuel Pool is in progress.
- A fuel assembly was being moved in the SFP.

Subsequently, the following occurred:

- A leak occurred at the discharge of the running SFP cooling pump.
- EH2, SFP LVL HI-LO, alarms.
- Spent fuel pool level is 153'3" and and lowering 1 inch per minute.
- R-5, SFP ROOM, indicates 2.4 mR/Hr and rising.
- R-24A and B, CONTAINMENT PURGE, indicates 550 cpm and has been stable for past two hours.

Which one of the following completes the statements below?

AOP-49.3, Spent Fuel Pool Emergency, (1) required to be entered.

The **highest** required emergency classification *for the current conditions*

is an (2) per NMP-EP-141-001-F02, Farley - Cold Initiating Condition Matrix.

DO NOT BASE CLASSIFICATION ON EMERGENCY DIRECTOR JUDGEMENT

REFERENCE PROVIDED

A. (1) IS

(2) UNUSUAL EVENT

B. (1) is NOT

(2) UNUSUAL EVENT

C. (1) IS

(2) ALERT

D. (1) is NOT

(2) ALERT

Added the phrase "for the current conditions" after the word "classification" in the 2nd fill-in-the-blank statement to address applicant's question during administration of the exam. blc

92. Given the following conditions on Unit 1:

- A LOCA has occurred.
- The operating crew is performing EEP-1, Loss of Reactor or Secondary Coolant, Step 14 "Check LHSI flow in progress."
- The following indications are observed:

  - Containment Pressure: 5 psig and rising
  - RCS Subcooling in CETC Mode: 42°F
  - RCS Pressure: 980 psig and lowering
  - The Hottest CETC temperatures are:
    - 505°F, 505°F, 502°F, 502°F, 501°F
  - All SG Pressures: 1000 psig and stable
  - All SG Levels: 50% NR and stable
  - Pressurizer Level: 40% and slowly lowering
  - A Train HHSI Flow: 500 gpm
  - RWST Level: 25.2 ft and lowering

Which one of the following completes the following statement?

Based on these conditions, transition to ESP-1.2, Post LOCA Cooldown and Depressurization, __(1)__, and the reason for this is __(2)__.

A. (1) is required

   (2) that RCS pressure is greater than the shut off head of the RHR pumps

B. (1) is required

   (2) to raise ECCS flow

C. (1) is NOT allowed

   (2) that FRP entry is required

D. (1) is NOT allowed

   (2) current ECCS flow

93. Given the following conditions on Unit 1:

- A Large Break LOCA occurred.
- The crew was implementing EEP-1, Loss of Reactor or Secondary Coolant.

Subsequently, the following occurred:

- The crew completed Step 14 of EEP-1, then immediately transitioned to FRP-Z.1, Response to High Containment Pressure.
- Containment Pressure is 28 psig and lowering.
- RWST Level is 10 ft and lowering.
- Only the 1A CS pump is running.

EEP-1 Step Descriptions:

Step 14: "Check LHSI flow in progress."
Step 15: "Check when to transfer to cold leg recirculation."

Which one of the following completes the statements below?

Based on the conditions above, per FRP-Z.1, the 1A CS pump suction _(1)_ **currently** required to be aligned to the Containment Sump.

After the crew exits FRP-Z.1 and re-enters EEP-1 at Step 15, entry to ESP-1.3, Transfer to Cold Leg Recirculation, _(2)_ required.

	(1)	(2)
A.	is NOT	IS
B.	is NOT	is NOT
C.	IS	IS
D.	IS	is NOT

94. Given the following conditions on Unit 1:

- A System Operator is going to remove two clearance tags on a safety related system.
  - Clearance Tag #1 is on a motor-operated valve (MOV): The System Operator has positioned the MOV to its required safety position (Open) using the MOV handwheel operator.
  - Clearance Tag #2 is on a manual drain valve: The System Operator desires to use a valve wrench to close the drain valve.

Which one of the following completes the statements below in accordance with NMP-OS-007-001, Conduct of Operations Standards and Expectations?

Clearance Tag #1: The MOV _(1)_ OPERABLE.

Clearance Tag #2: An Operations Supervisor's permission _(2)_ required to use the valve wrench to close the drain valve.

	(1)	(2)
A.	IS	IS
B.	is NOT	IS
C.	IS	is NOT
D.	is NOT	is NOT

95. Which of the following completes the statements below in accordance with NMP-OS-026, License Administration?

To reactivate a Senior Reactor Operator license for **supervising core alterations** an individual must complete _(1)_ shift(s) under direction of an Active SRO on the refueling floor.

_(2)_ individual at a time is allowed to reactivate under the direction and in the presence of the Senior Operator in charge of refueling.

	(1)	(2)
A.	4	ONLY one
B.	1	ONLY one
C.	4	More than one
D.	1	More than one

96. Which one of the following completes the statement below?

_____ is the procedure used to perform a Loss of Safety Function Determination required by Technical Specification LCO 3.0.6.

A. SOP-0.0, General Instructions to Operations Personnel

B. NMP-OS-027, Recording Limiting Conditions For Operations

C. NMP-GM-031, Online Configuration Risk Management Program

D. NMP-AD-012, Operability Determinations and Functionality Assessments

97. Which one of the following completes the statement below?

Compliance with Technical Specification 3.4.16, RCS Specific Activity, ensures that the resulting doses at the _(1)_ boundary will not exceed an appropriate fraction of regulatory limits following a _(2)_.

A. (1) exclusion area

(2) Steam Generator Tube Rupture

B. (1) exclusion area

(2) Loss of Coolant Accident

C. (1) protected area

(2) Steam Generator Tube Rupture

D. (1) protected area

(2) Loss of Coolant Accident

98. Which one of the following completes the statements below in accordance with NMP-EP-144-F02, Emergency Exposure Authorization?

The existing year-to-date dose __(1)__ required to be included in the emergency dose assessment for a volunteer performing an emergency mission.

The Emergency Director __(2)__ authorize emergency workers to receive doses in excess of plant administrative dose limits, up to the 10 CFR 20 radiation exposure limits

	(1)	(2)
A.	IS	MAY
B.	is NOT	MAY
C.	IS	may NOT
D.	is NOT	may NOT

99. Which one of the following lists **all** of the Emergency Response Procedures (ERPs) with possible transitions to Severe Accident Management Guideline (SAMGs) per SOP-0.8, Transient Response Procedure User's Guide?

Procedure Titles:
ECP-0.0, Loss of All AC Power
ECP-1.3, Loss of Emergency Coolant Recirculation Caused by Sump Blockage
FRP-C.1, Response to Inadequate Core Cooling
FRP-H.1, Response to Loss of Secondary Heat Sink
FRP-S.1, Response to Nuclear Power Generation/ATWT

A. FRP-C.1 FRP-H.1 FRP-S.1

B. ECP-0.0 FRP-C.1 FRP-S.1

C. ECP-0.0 ECP-1.3 FRP-C.1 FRP-S.1

D. ECP-1.3 FRP-C.1 FRP-H.1 FRP-S.1

100. Which one of the following completes the statements below in accordance with NMP-EP-142, Emergency Notification?

The Emergency Response Data System (ERDS) must be activated within __(1)__ minutes of declaration of the emergency.

A emergency classification upgrade notification message is required to be transmitted within __(2)__ minutes of the new declaration.

	(1)	(2)
A.	15	15
B.	15	30
C.	60	15
D.	60	30

References Provided:

1. Steam Tables
2. PCB-1-VOL1-CRV064, Indicated Axial Flux Difference Vs. Thermal Power
3. NMP-EP-141-001-F01, Farley – Hot Initiating Condition Matrix (FULL SIZED BOARD)
4. NMP-EP-141-001-F02, Farley – Cold Initiating Condition Matrix (FULL SIZED BOARD)

NUMBER	ANSWER	K/A
1	B	003G2.4.18
2	A	003K5.04
3	B	004A1.10
4	A	005K5.09
5	D	005K6.03
6	D	006K4.07
7	B	007K5.02
8	D	008K2.02
9	B	008K3.03
10	C	010A4.01
11	C	012K4.02
12	A	012K6.10
13	B	013K2.01
14	C	022A3.01
15	B	026K1.02
16	B	039K4.06
17	B	059K3.03
18	C	061K6.02
19	B	062A1.03
20	A	062A2.05
21	B	063G2.4.31
22	B	064G2.4.45
23	C	064K1.02
24	A	073A2.01
25	D	076K2.04
26	C	078A4.01
27	D	078K1.03
28	B	103A3.01
29	A	001K1.03
30	A	002K6.12
31	A	011K2.02
32	D	014A4.04
33	B	017A1.01
34	C	029K3.02
35	B	033G2.4.20
36	C	034K4.02
37	C	072K5.01
38	B	086A2.01
39	C	007EK1.05
40	A	009EK2.03
41	B	015AG2.4.6
42	A	022AA1.07
43	D	025AA2.02
44	C	027AG2.4.8

NUMBER	ANSWER	K/A
45	B	029EG2.2.44
46	B	038EA1.38
47	B	APE040AK3.01
48	D	054AK1.02
49	C	055EK1.02
50	A	057AK3.01
51	B	058AA2.01
52	C	062AA2.01
53	A	077AA1.04
54	A	WE04EK2.2
55	C	WE05EK2.2
56	B	WE11EK3.4
57	B	001AA2.05
58	D	028AK3.03
59	C	037AA1.06
60	C	051AK3.01
61	D	074EA1.17
62	A	068AK2.07
63	D	076AG2.4.21
64	D	WE08EG2.4.47
65	D	WE09EK1.2
66	B	G2.2.21
67	B	G2.1.23
68	C	G2.1.38
69	C	G2.2.22
70	A	G2.2.43
71	D	G2.3.11
72	D	2.3.12
73	C	G2.4.13
74	B	G2.4.31
75	B	G2.4.46
76	C	007A2.02
77	D	010G2.4.9
78	B	022A2.05
79	B	026A2.08
80	A	073G2.4.6
81	D	015A2.04
82	D	035G2.4.8
83	A	045A2.08
84	D	008AG2.4.20
85	D	011EA2.01
86	A	026AG2.1.27
87	A	056AA2.37
88	B	065AA2.02
89	B	WE05EA2.1

NUMBER	ANSWER	K/A
90	C	024AA2.04
91	B	036AG2.4.45
92	A	WE03 EA2.2
93	A	WE14EG2.2.37
94	A/B	G 2.1.32
95	B	G2.1.4
96	B	G2.2.36
97	A	G 2.3.14
98	B	G2.3.4
99	C	G2.4.16
100	C	G2.4.30