

APPENDIX E
POLICIES AND GUIDELINES FOR TAKING NRC EXAMINATIONS

PART A - GENERAL GUIDELINES

1. **[Read Verbatim]** Cheating on any part of the examination will result in a denial of your application and/or action against your license.
2. If you have any questions concerning the administration of any part of the examination, do not hesitate asking them before starting that part of the test.
3. SRO applicants will be tested at the level of responsibility of the senior licensed shift position (i.e., shift supervisor, senior shift supervisor, or whatever the title of the position may be).
4. You must pass every part of the examination to receive a license or to continue performing license duties. Applicants for an SRO-upgrade license may require remedial training in order to continue their RO duties if the examination reveals deficiencies in the required knowledge and abilities.
5. The NRC examiner is not allowed to reveal the results of any part of the examination until they have been reviewed and approved by NRC management. Grades provided by the facility licensee are preliminary until approved by the NRC. You will be informed of the official examination results about 30 days after all the examinations are complete.

PART B - WRITTEN EXAMINATION GUIDELINES

1. **[Read Verbatim]** After you complete the examination, sign the statement on the cover sheet indicating that the work is your own and you have not received or given assistance in completing the examination.
2. To pass the examination, you must achieve an overall grade of 80.00 percent or greater, with a 70.00 percent or better on the SRO-only items, if applicable. If you only take the SRO portion of the exam (as a retake or with an upgrade waiver of the RO exam), you must achieve an 80.00 percent or better to pass. SRO-upgrade applicants who do take the RO portion of the exam and score below 80.00 percent on that part of the exam can still pass overall but may require remediation. Grades will not be rounded up to achieve a passing score. Every question is worth one point.
3. For an initial examination, the nominal time limit for completing the RO examination is six hours, the 25-question, SRO-only exam is three hours, the combined RO/SRO exam is eight hours.
4. You may bring pens, pencils, and calculators into the examination room; programable memories must be erased. Use black ink to ensure legible copies; dark pencil should be used only if necessary to facilitate machine grading.

5. Print your name in the blank provided on the examination cover sheet and the answer sheet. You may be asked to provide the examiner with some form of positive identification.
6. Mark your answers on the answer sheet provided and do not leave any question blank. Use only the paper provided and do not write on the back side of the pages. If you are using ink and decide to change your original answer, draw a single line through the error, enter the desired answer, and initial the change.
7. If you have any questions concerning the intent or the initial conditions of a question, do *not* hesitate asking them before answering the question. Ask questions of the NRC examiner or the designated facility instructor *only*. When answering a question, do *not* make assumptions regarding conditions that are not specified in the question unless they occur as a consequence of other conditions that are stated in the question. For example, you should not assume that any alarm has activated unless the question so states or the alarm is expected to activate as a result of the conditions that are stated in the question. Finally, answer all questions based on actual plant operation, procedures, and references. If you believe that the answer would be different based on simulator operation or training references, you should answer the question based on the *actual plant*.
8. Restroom trips are permitted, but only one applicant at a time will be allowed to leave. Avoid all contact with anyone outside the examination room to eliminate even the appearance or possibility of cheating.
9. When you complete the examination, assemble a package including the examination questions, examination aids, answer sheets, and scrap paper and give it to the NRC examiner or proctor. Remember to sign the statement on the examination cover sheet indicating that the work is your own and that you have neither given nor received assistance in completing the examination. The scrap paper will be disposed of immediately after the examination.
10. After you have turned in your examination, leave the examination area as defined by the proctor or NRC examiner. If you are found in this area while the examination is still in progress, your license may be denied or revoked.
11. Do you have any questions?

QUESTION: 001 (1.00)

- A reactor trip occurs on Unit 1 from 100% power
- It is 0900 on Tuesday morning.
- The plant responded normally except for the problems listed below.

Which conditions will require notification of plant personnel AND preparation of a PINGP 666, "Event Notification Worksheet"?

- a. One turbine stop valve fails to close and control valves are verified closed.
- b. Both Unit 1 Auxiliary Feedwater Pumps automatically started on SG low level.
- c. 12 Feedwater Regulating Valve leakby results in 12 SG level reaching 50% NR.
- d. Bus 11 auto transfer to 1R fails, manual action was taken to restart 11 RCP.

QUESTION: 002 (1.00)

Given the following conditions:

- 11 Steam Generator is faulted inside containment.
- Both RCPs were tripped when 1E-0 "Reactor Trip or Safety Injection" information page criteria was met.
- 11 SG has just been isolated per 1E-2, "Faulted Steam Generator Isolation."

The RO reports the following levels and trends:

- RCS pressure is 850 psig and decreasing
- Pressurizer level is 35% and increasing
- RCS temperatures are:
 - Loop A Thot 495°F and increasing, Tcold 495°F and increasing
 - Loop B Thot 495°F and increasing, Tcold 470°F and increasing

Based on the above information, what additional failure has occurred and what transition should be made?

- a. A Pressurizer PORV is open. Transition to 1E-1.
- b. 11 Steam Generator tubes have ruptured. Transition to 1E-3.
- c. 12 Steam Generator is faulted. Re-enter 1E-2 at step 1.
- d. A LOCA has occurred on RCS Loop A. Transition to 1E-1.

QUESTION: 003 (1.00)

Given the following conditions:

- A Large Break LOCA has occurred on Unit 2.
- RCS and containment pressures are 38 psig.
- Train A ECCS has been transferred to recirculation per 2ES-1.2 "Transfer to Recirculation."
- Train B ECCS transfer to recirculation is waiting for RWST level to be <8% (currently 25% and lowering).

Which of the following conditions and required actions is correct?

- a. 21 RHR pump locks out, transition to 2ES-1.3 "Transfer to Recirculation with One Safeguards Train Out of Service" and place Train B in recirculation.
- b. CST level decreases to 20,000 gallons, exit 2ES-1.2 and perform C28.1 AOP2, "Loss of Condensate Supply to Auxiliary Feedwater Pump Suction" to place AFW on cooling water.
- c. 22 SI pump locks out, transition to 2ES-1.3 "Transfer to Recirculation with One Safeguards Train Out of Service" and place Train B in recirculation.
- d. A RED path is received on the Integrity CSF, transition to 2FR-P.1 "Response to Imminent Pressurized Thermal Shock Condition" and perform actions to stabilize RCS temperatures.

QUESTION: 004 (1.00)

Given the following conditions:

- RCS temperature is 225°F.
- RCS pressure is 320 psig.
- The running RHR pump locks out.
- RCS temperature and pressure are increasing.
- Both RCS loops are available for decay heat removal.

Which of the following correctly states the adequacy of overpressure protection for the RHR system, AND which procedure should be entered first?

- a. ADEQUATE because the OPPS system is in service, C15 AOP1 "RHR Flow Restoration."
- b. ADEQUATE because the RHR suction MV's and RHR return MV automatically close on high pressure, E-4 "Core Cooling following Loss of RHR Flow."
- c. NOT ADEQUATE because the OPPS system is NOT in service, E-4 "Core Cooling following Loss of RHR Flow."
- d. NOT ADEQUATE because the RHR system will not automatically isolate the system from the RCS, C15 AOP1 "RHR Flow Restoration."

QUESTION: 005 (1.00)

Given the following conditions:

- You are the Unit 2 Shift Supervisor.
- A reactor trip has failed to occur automatically or manually when required.
- You have directed entry to 2FR-S.1 "Response to Nuclear Generation/ATWS" at Step 1 and the operators have performed their Immediate Manual Actions.
- You are reading Step 1 of 2FR-S.1.
- An operator has just locally opened the reactor trip breakers.

Which ONE of the following steps is the EARLIEST step at which you may direct the crew to EXIT 2FR-S.1?

- a. After verifying the reactor is tripped in Step 1.
- b. After verifying the reactor and turbine trips have occurred in Step 5.
- c. After verifying no reactivity insertion from an uncontrolled RCS cooldown in Step 8.
- d. When directed to return to procedure and step in effect at Step 14.

QUESTION: 006 (1.00)

Given the following conditions:

- Both SGs are ruptured on Unit 2.
- 21 SG level is 50% NR and increasing at 3%/minute.
- 22 SG level is 60% NR and increasing at 2%/minute.
- Auxiliary Feedwater is isolated to both SGs.
- Both SGs are at 1005 psig.
- Both MSIVs are closed.

You are preparing to initiate an RCS cooldown.

Which SG(s) is/are preferred for cooldown and why?

- a. 21 SG, because it is at the lowest NR level and will be the last SG to reach overflow conditions (offscale high).
- b. Both SGs, to reduce the possibility of uncovering SG tubes during cooldown.
- c. 22 SG, because it will release less activity to the public during cooldown due to the smaller rupture size.
- d. Neither SG, as the offsite dose from steaming a SG is expected to exceed 10CFR100 limits.

QUESTION: 007 (1.00)

Given the following:

- A LOCA is in progress on Unit 1.
- RWST level has reached 33%.
- 1ES-1.2 "Transfer to Recirculation" is in progress.
- All equipment has operated as designed.

Which condition below will REQUIRE transition to ECA-1.1 "Loss of Emergency Coolant Recirculation"?

- a. Containment level (WR) level is 0 feet and Sump B level (NR) level is 10%.
- b. 11 RHR pump locks out.
- c. MV-32084 RWST to 11 RHR Pump will not close.
- d. 11 SI pump is aligned for recirculation, but when started SI flow does not change.

QUESTION: 008 (1.00)

Given the following conditions:

- Unit 2 was at 100% power.
- During load reduction to 80% power, the RO noted divergent IRPI indications for Control Bank D rods C7 and G11.
- IRPI and flux trace show rod C7 at 208 steps and G11 at 218 steps with bank demand at 180 steps.
- When rods were individually inserted 15 steps per 2C5 AOP5, "Misaligned Rod, Stuck Rod And/Or RPI Failure or Drift" the following was noted:

| Parameter | C7 | G11 |
|--------------|-----------|----------|
| Tavg | No change | Decrease |
| RPI | No change | Decrease |
| Step Counter | Decrease | Decrease |

- When rods were individually withdrawn 15 steps per 2C5 AOP5, the following was noted:

| Parameter | C7 | G11 |
|--------------|-----------|----------|
| Tavg | No change | Increase |
| RPI | No change | Increase |
| Step Counter | Increase | Increase |

Which of the following correctly describes ALL of the appropriate LCO 3.1.4 "Rod Group Alignment Limits" Condition(s) that should be entered?

- a. Conditions A and B for C7, No condition for G11
- b. Condition B for C7, No condition for G11
- c. Conditions A, B and D for C7, Conditions B and D for G11
- d. Conditions B and D for C7 and G11

QUESTION: 009 (1.00)

Given the following conditions:

- Plant startup is in progress per 2C1.2, "Unit 2 Plant Startup."
- Reactor power is 6%.
- N35 Intermediate Range channel has failed LOW.
- I&C estimates repair will take several days.
- The RO questions whether LCO 3.3.1 "Reactor Trip System (RTS) Instrumentation" is met.

Which of the following is correct?

- a. LCO 3.3.1 is NOT met, as Intermediate Range trips are required at power levels between the P-6 and P-10 interlocks ONLY.
- b. LCO 3.3.1 is NOT met, as Intermediate Range trips are required at ALL power levels below 40% RTP.
- c. LCO 3.3.1 is met as only one Intermediate Range channel is required OPERABLE in Mode 1 "Power Operation."
- d. LCO 3.3.1 is met as Intermediate Range trips are NOT required in Mode 1 "Power Operation."

QUESTION: 010 (1.00)

Given the following:

- The following R-15 trend is observed on Unit 1:

| | | | | | |
|-------|------|------|------|------|------|
| Time: | 0800 | 0830 | 0900 | 0930 | 1000 |
| 1R-15 | 25 | 550 | 800 | 840 | 1550 |

- The chemist calculated a 55 gpd leakrate based on the 0830 sample.
- Condenser air ejector flow is constant at 2.5 cfm.
- Chemistry confirms 12 SG is the only leaking SG.

LCO 3.4.14 "RCS Operational Leakage" was NOT met for Primary to Secondary Leakage through any one Steam Generator at time _____, and the latest time that Technical Specifications alone would require the plant to be in MODE 3 Hot Standby would be _____.

- a. 0930, 1530
- b. 0930, 1630
- c. 1000, 1600
- d. 1000, 1200

QUESTION: 011 (1.00)

The chemist brings you the following results during a power change from 50% power:

- Power is currently on hold at 75%
- Dose Equivalent I-131 is 75 $\mu\text{Ci/gm}$
- RCS gross specific activity is 48.4 $\mu\text{Ci/gm}$
- 100/ E is 57.1 $\mu\text{Ci/gm}$

Which of the following completely describes ALL the LCO 3.4.17 "RCS Specific Activity" Conditions that are MET for current plant conditions?

- a. Condition A.
- b. Condition B.
- c. Conditions A and C.
- d. Conditions A, B and C.

QUESTION: 012 (1.00)

Given the following conditions:

- Unit 1 Reactor Trip and Safety Injection has occurred.
- 11 SG was diagnosed as faulted and was isolated in 1E-2, "Faulted Steam Generator Isolation."
- 1ES-0.2 "SI Termination" has just been entered.
- RCS Tavg is 512°F and lowering.
- RCS pressure is 2010 psig and rising.
- Pressurizer level is 29% and rising.
- Containment pressure is 18 psig and stable.
- 11 SG pressure is 420 psig and lowering, 12 SG pressure is 635 psig and lowering.
- 11 SG level is 42% WR and lowering, 12 SG level is 53% WR and lowering.
- AFW flow is 180 gpm to 12 SG only.
- All steam dump and SG PORVs are closed.
- No radiation monitors are in alarm.

Which Information Page criteria is met and what action is required?

- a. SI Reinitiation, Start SI pumps as necessary and go to 1E-1 "Loss of Reactor or Secondary Coolant."
- b. Secondary Integrity Criteria, Go to 1E-2 "Faulted Steam Generator Isolation."
- c. E-3 Transition Criteria, Go to 1E-3 "Steam Generator Tube Rupture."
- d. Heat Sink Red Path, Go to 1FR-H.1 "Response to Loss of Secondary Heat Sink."

QUESTION: 013 (1.00)

Given the following conditions:

- Unit 1 was at 100% power
- A reactor trip occurred.
- All equipment started as required.
- 11 Auxiliary Feedwater Pump discharge pressure was noted to be fluctuating with no flow immediately after pump start.
- Annunciator 47010-0205 "11 TD AFWP LO SUCT OR DISCH PRESS TRIP" is in alarm.

What has occurred and what action should the Shift Supervisor direct?

- a. Steam binding of the pump due to check valve backleakage.
Immediately restart the AFWP per the ARP from the control room.
- b. Steam binding of the pump due to check valve backleakage.
Refill and restart the pump using 1C28.1 AOP4, "Restarting Unit 1 AFWP After Low Suction/Discharge Pressure Trip."
- c. Condensate buildup in the turbine caused by malfunctioning steam traps.
Immediately restart the AFWP per the ARP from the control room.
- d. Condensate buildup in the turbine caused by malfunctioning steam traps.
Open manual trap bypasses and restart the pump locally per 1C28.1 section 5.8, "Local Operation of 11 TD AFW Pump."

QUESTION: 014 (1.00)

Given the following conditions:

- 22 Charging Pump is OOS for maintenance.
- A Loss of all AC power occurs on Unit 2.
- Power to Bus 25 was restored using the bus tie to Bus 15.
- The Shift Supervisor has just transitioned from 2ECA-0.0 "Loss of All AC Power" to 2ECA-0.1, "Loss of All Safeguards AC Power Recovery Without SI Required."
- RCS pressure is 2005 psig and lowering slowly.
- 21/22 RCP #1 seal leakoff is offscale high.

What action will the Shift Supervisor direct to ensure recovery is not delayed?

- a. Proceed through 2ECA-0.1 to block automatic SI, actuate containment isolation and transition to 2ECA-0.2 "Loss of All Safeguards AC Power with SI" to start an SI pump.
- b. Immediately start SI pump(s) as needed to remain above the automatic SI setpoint and remain in 2ECA-0.1.
- c. Proceed through 2ECA-0.1 to establish maximum charging flow and restore seal injection flow to the RCP's.
- d. Manually actuate Safety Injection, return to 2ECA-0.0 when the bus tie automatically opens, and restore power via the bus tie breakers once SI has been reset.

QUESTION: 015 (1.00)

Given the following:

- 1R-15 "Condenser Air Ejector Radio Gas Monitor" alarmed at 1.5E3 cpm.
- A manual reactor trip and SI was directed based on rapidly lowering pressurizer level.

Following the trip and SI, the following occurred:

- The control valves were manually closed to trip the turbine.
- Both MSIVs automatically closed due to high steam flow from the turbine trip failure.
- E-0 has been completed up to the Diagnosis steps.

The following indications are currently present:

- RCS pressure is 1955 psig and stable.
- Pressurizer level is offscale low.
- Subcooling is 105°F and stable.
- No radiation monitors are in alarm.
- Containment pressure is 0.1 psig and stable.
- SG pressures are 1005 psig and stable.
- Both SG NR levels are offscale low.
- AFW flow is 120 gpm per SG.
- SG WR levels are 52% and rising on 11 SG, 53% and rising on 12 SG.
- Containment Sump B indication is offscale low.

Based on the above, what transition must be made and why?

- a. Remain in E-0 until SI termination criteria is met, then transition to 1ES-0.2 "SI Termination." The LOCA is not big enough to require SI.
- b. Transition to 1E-3 "Steam Generator Tube Rupture" based on the earlier R-15 alarm, even though the alarm has now cleared. A SGTR is in progress.
- c. Remain in E-0 until SG levels exceed 5% narrow range. WHEN SG NR level increases uncontrollably, THEN transition to 1E-3 "Steam Generator Tube Rupture." A SGTR is in progress.
- d. Transition to 1E-1 "Response to Loss of Reactor or Secondary Coolant" as SI termination criteria is NOT met. A LOCA is in progress.

QUESTION: 016 (1.00)

Both units are at 100% power at 0200.

- A pinhole leak has been found on the 4" branch line from Train 'A' cooling water supply header to D1 Emergency Diesel Generator, upstream of the manual isolation valve.

Which of the following actions is correct and why?

- a. Declare Train A CL Supply Header and D1 INOPERABLE because no thru-wall leakage is allowable on this piping.
- b. Isolate cooling water to D1, and declare D1 INOPERABLE because cooling water is required for diesel operability.
- c. Declare Train A Cooling Water Supply Header OPERABLE but DEGRADED because it can still perform its safety function.
- d. Declare Train A Cooling Water Supply Header OPERABLE and request an Operability Determination be performed within 24 hours.

QUESTION: 017 (1.00)

Given the following conditions:

- You are the Unit 2 Shift Supervisor.
- Unit 1 is responding to a Small Break LOCA with fuel failure.
- Containment radiation is 250 R/hr and increasing.
- Containment pressure is 4 psig and stable.

The Shift Manager directs you to investigate what can be done to reduce containment radiation levels and thus increase Aux Building stay times.

The appropriate action is to operate the...

- a. Containment Spray system per 1E-1, "Response to Loss of Reactor or Secondary Coolant."
- b. Containment Post-LOCA Ventilation system per 1FR-Z.3, "Response to High Containment Radiation."
- c. Containment Cleanup fans per 1FR-Z.3, "Response to High Containment Radiation."
- d. Dome Recirculation fans per 1E-1, "Response to Loss of Reactor or Secondary Coolant."

QUESTION: 018 (1.00)

Given the following conditions:

- Condenser pit flooding on Unit 1 caused an automatic turbine/reactor trip.
- Safety Injection actuated due to a small break LOCA.
- Bus 11 is deenergized.
- RCS pressure is stable at 1725 psig.
- RCS temperature is 370°F.
- 11 SG level is 13% NR and rising.
- 12 SG level is 48% NR and stable.
- AFW flow is 50 gpm to 11 SG only.
- 1ES-1.1 "Post-LOCA Cooldown and Depressurization" is in progress.

What method for cooldown is preferred?

- a. Dump steam to the condenser from both SGs.
- b. Dump steam to the condenser from 12 SG only.
- c. Dump steam from 11 SG PORV only.
- d. Dump steam from both SG PORVs.

QUESTION: 019 (1.00)

Given the following conditions:

- Reactor power has exceeded 100% on TPM for a period of time when a mixed bed ion exchanger was being placed in service.
- A check of the Thermal Power monitoring screen shows the following:

Last minute average power 99.52%

Last 5 minute average power 99.52%

Shift Average Power 100.12%

Shift Maximum Power 102.11%

One hour remains before the 8 hour shift ends on the screen

The RO questions whether the operating license limits for the unit have been or will be violated.

The maximum power limit _____, _____ to maintain compliance with the shift average power limit.

- a. has been met, maintain power at 100% or less
- b. has been exceeded, immediately reduce power to 99.0% or less
- c. has been met; immediately reduce power to 99.0% or less
- d. has been exceeded, maintain current power level or less

QUESTION: 020 (1.00)

Given the following:

- Multiple failures have occurred during performance of emergency procedures.
- Actions outside of the scope of the EOP in use are being considered to prevent a degradation in plant safety.
- The SM and SS concur on the need for the actions.

Which of the following is correct?

- a. The action can be taken now. A TCN form will be completed and reviewed after-the-fact and a condition report initiated.
- b. The TCN form must be initiated, reviewed and approved prior to the actions being taken.
- c. The TCN form must be completed and reviewed, including a 50.59 review and OC approval, prior to the actions being taken.
- d. The actions can NOT be taken, deviation from the EOPs is not allowed under any conditions.

QUESTION: 021 (1.00)

Given the following:

- A Temporary Change Notice (TCN) has been written to a surveillance procedure to run 21 Safety Injection pump with the discharge valve throttled 75% open and collect motor data.
- The plant conditions required for the above evolution are NOT described in current procedures or the Updated Safety Analysis Report.
- The TCN author is the System Engineer, who has brought it to you for review and approval.

The SRO can...

- a. Review and approve the TCN without restriction.
- b. Review and approve the TCN ONLY if a 50.59 screening/evaluation has been approved.
- c. Approve the TCN ONLY if another SRO with an engineering degree performs the review.
- d. NOT approve the TCN under any conditions.

QUESTION: 022 (1.00)

Given the following conditions:

- Unit 1 entered LCO 3.0.3 at 0600 today.
- Unit 1 reached MODE 3 "Hot Standby" at 0900 today.

When is Unit 1 required to be in MODE 5 "Cold Shutdown"?

- a. 1900 tonight.
- b. 1500 tomorrow.
- c. 1800 tomorrow.
- d. 1900 tomorrow.

QUESTION: 023 (1.00)

Given the following conditions:

- Unit 1 Steam Generators are blowing down to the river for chemistry control
- 123 ADT Monitor Tank is being released to the river.
- A voltage transient on Train B radiation monitors occurs.
- R-18 Liquid Release Monitor and 1R-19 SG Blowdown Monitor power fuses have blown.

Which of the following actions is correct per H4 "Offsite Dose Calculation Manual (ODCM)"?

- a. All releases to the river must be suspended until completion of sampling, release rate calculation verification and walkdown of discharge flowpath.
- b. All releases to the river may continue provided the flow rate is estimated when required by the ODCM.
- c. 123 ADT Monitor Tank release may continue provided samples are taken when required by the ODCM. Blowdown to the river must be suspended until completion of sampling, release rate calculations and walkdown of discharge flowpath.
- d. Blowdown to the river may continue provided samples are taken when required by the ODCM. 123 ADT Monitor Tank release must be suspended until completion of sampling, release rate calculation verification and discharge line walkdown.

QUESTION: 024 (1.00)

Given the following conditions:

- A LOCA into containment has occurred on Unit 2.
- 2E-1 "Loss of Reactor or Secondary Coolant" is in progress.
- You are the Unit 1 Shift Supervisor and designated Emergency Director.
- A Site Area Emergency (LOCA in excess of ECCS Capability) has been declared.
- The following radiation monitors alarms are received:

2R-48 Containment High Range Area Monitor at 7.5×10^3 R/hr.
2R-50 Shield Building Vent Hi Range at 1.5×10^4 mR/hr

Which radiation monitor alarm is the highest priority, and what action should be taken as a result?

- a. 2R-48, which indicates fuel failure has occurred and adverse containment criteria is met. Adverse containment numbers should be used in the Unit 2 Emergency Procedures.
- b. 2R-48, which indicates fuel failure has occurred. Initiate Containment Spray to reduce containment radiation levels.
- c. 2R-50, which indicates failure of containment AND cladding. Review F3-2, criteria for a General Emergency is expected to be met.
- d. 2R-50, which indicates failure of containment. Initiate Containment Spray to reduce the offsite release.

QUESTION: 025 (1.00)

An ALERT has been declared at Prairie Island.

Which ONE of the following identifies the site facilities (if any) to be activated per the site Emergency Plan?

- a. Operations Support Center, Technical Support Center, and Emergency Operations Facility.
- b. Technical Support Center and Emergency Operations Facility are required, Operations Support Center is at the Emergency Director's option.
- c. Operations Support Center and Technical Support Center are required, Emergency Operations Facility is at the Emergency Director's option.
- d. No facilities are required to be activated, all emergency response center staffing is at the Emergency Director's option.

(***** END OF EXAMINATION *****)

ANSWER: 001 (1.00)
b.
REFERENCE:
5AWI 3.6.0 C1.2 Limitation
4.6
Steam Generator Level
MEMORY
NEW
007 2.1.14 ..(KA's)

ANSWER: 002 (1.00)
a.
REFERENCE:
E-2
HIGHER
NEW
008 AA2.01 ..(KA's)

ANSWER: 003 (1.00)
a.
REFERENCE:
2ES-1.2 Bases Step 4
2FR-P.1 Step 1
HIGHER
NEW
2.4.4 011 ..(KA's)

ANSWER: 004 (1.00)
a.
REFERENCE:
Fig B15-01 LCO 3.4.12 and
bases 3.4.12-2 1C15 section
5.1
ARP 47016-0102 12 RHR
Pump Lockout 1C15
AOP1, RHR Flow Restoration
1E-4 Response to Loss of
Core Cooling
HIGHER
NEW
025 AA2.06 ..(KA's)

ANSWER: 005 (1.00)
d.
REFERENCE:
2FR-S.1
MEMORY
BANK
2.4.6 029 ..(KA's)

ANSWER: 006 (1.00)
c.
REFERENCE:
ECA-3.1 Bases
HIGHER
NEW
038 EA2.13 ..(KA's)

ANSWER: 007 (1.00)
a.
REFERENCE:
1ES-1.2 steps 4, 6, 10, 14
and bases.
MEMORY
NEW
E11 EA2.1 ..(KA's)

ANSWER: 008 (1.00)
c.
REFERENCE:
LCO 3.1.4
1C5
AOP5
HIGHER
NEW
005 AA2.01 ..(KA's)

ANSWER: 009 (1.00)
a.
REFERENCE:
LCO 3.3.1 1C51.1 N35 Low
HIGHER
MODIFIED
2.1.33 033 ..(KA's)

ANSWER: 010 (1.00)
c.
REFERENCE:
1C4 AOP 2 LCO 3.4.14
HIGHER
NEW
037 AA2.12 ..(KA's)

ANSWER: 011 (1.00)
a.
REFERENCE:
LCO 3.4.17
HIGHER
NEW
076 AA2.02 ..(KA's)

ANSWER: 012 (1.00)
b.
REFERENCE:
Information page for 1ES-0.2
HIGHER
NEW
E02 2.4.4 ..(KA's)

ANSWER: 013 (1.00)
b.
REFERENCE:
ARP 47010-0205, 0206
1C28.1 AOP4 1C28.1
HIGHER
NEW
061 A2.06 ..(KA's)

ANSWER: 014 (1.00)
a.
REFERENCE:
2C20.5 AOP5, 2C20.5 AOP2,
NF-40019-48 Bkr 26-1 logic,
2ES-0.2.
HIGHER
NEW
062 A2.05 ..(KA's)

ANSWER: 015 (1.00)
 b.
 REFERENCE:
 1E-0 steps 10-21, step 11
 bases P8197L-013 ppg 29-30
 SOER 93-1 Recommendation
 2.a (OE from Palo Verde 2
 SGTR when radiation
 monitors were not in alarm at
 the time of diagnosis)
 HIGHER
 NEW
 2.4.4 073 ..(KA's)

ANSWER: 016 (1.00)
 a.
 REFERENCE:
 5AWI 3.15.5 "Operability
 Determination" pp 37-39
 section 6.14 and 6.15 TS
 3.7.8 "CL System"
 HIGHER
 NEW
 2.1.33 076 ..(KA's)

ANSWER: 017 (1.00)
 c.
 REFERENCE:
 1FR-Z.3 Bases Step 2 F-0.5
 MEMORY
 BANK
 NEW
 2.4.6 027 ..(KA's)

ANSWER: 018 (1.00)
 d.
 REFERENCE:
 C47020:0102 Condenser Pit
 Flooding Channel Alert
 1ES-1.1 Step 5 and basis B7
 pg 15 section 3.2
 HIGHER
 NEW
 2.4.6 075 ..(KA's)

ANSWER: 019 (1.00)
 b.
 REFERENCE:
 SWI-O-50 section 6.8 1C1.4
 Power Operation limitation
 4.10 Prairie Island Unit 1
 Operating License section
 C(1)
 HIGHER
 NEW
 2.1.10 ..(KA's)

ANSWER: 020 (1.00)
 a.
 REFERENCE:
 FP-OP-COO-01 Rev 0,
 Procedure Use, section 3.11.
 5AWI 1.5.10, Procedure
 Temporary Changes, section
 6.1.8.
 MEMORY
 MODIFIED
 2.1.6 ..(KA's)

ANSWER: 021 (1.00)
 b.
 REFERENCE:
 5AWI 3.3.5
 MEMORY
 BANK
 2.2.10 ..(KA's)

ANSWER: 022 (1.00)
 d.
 REFERENCE:
 LCO 3.0.3 Bases
 HIGHER
 NEW
 2.2.25 ..(KA's)

ANSWER: 023 (1.00)
 d.
 REFERENCE:
 H4 ODCM Table 2.2
 HIGHER
 MODIFIED
 2.3.11 ..(KA's)

ANSWER: 024 (1.00)
 c.
 REFERENCE:
 F3-2 C47047 2R-50
 HIGHER
 NEW
 2.4.31 ..(KA's)

ANSWER: 025 (1.00)
 a.
 REFERENCE:
 F3-1
 MEMORY
 BANK
 2.4.42 ..(KA's)

A N S W E R K E Y

- | | |
|-------|-------|
| 001 b | 013 b |
| 002 a | 014 a |
| 003 a | 015 b |
| 004 a | 016 a |
| 005 d | 017 c |
| 006 c | 018 d |
| 007 a | 019 b |
| 008 c | 020 a |
| 009 a | 021 b |
| 010 c | 022 d |
| 011 a | 023 d |
| 012 b | 024 c |
| | 025 a |

(***** END OF EXAMINATION *****)