

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

Name:

Date: 9/5/2008

Facility/Unit: ANO-1

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 80.00 percent overall, with 70.00 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 80.00 percent to pass. You have 8 hours to complete the combined examination, and 3 hours if you are only taking the SRO 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 75 / 25 / 100 PointsApplicant's Scores / / PointsApplicant's Grade / / Percent

U.S. Nuclear Regulatory Commission

Site-Specific RO Written Examination

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Results

Examination Value 75 Points

Applicant's Score _____ Points

Applicant's Grade _____ Percent

ANO Unit 1 - 2008 RO NRC Written Exam KEY

Question No. 1 QID: 0680 Point Value: 1

Answer:

C. AC Breaker "B" and DC Breaker "C" Open and Electronic Trip "E" Tripped.

Question No. 2 QID: 0681 Point Value: 1

Answer:

A. 250 degrees F is correct.

Question No. 3 QID: 0506 Point Value: 1

Answer:

B. EFIC High Range
2" to 8"/min in Auto or 340gpm/SG in Manual

Question No. 4 QID: 0684 Point Value: 1

Answer:

C. Override and secure all HPI pumps.

Question No. 5 QID: 0682 Point Value: 1

Answer:

D. Loop "B" Tc lowering.

Question No. 6 QID: 0183 Point Value: 1

Answer:

C. If RCP seal bleedoff temperatures are >180 degrees, seal injection control valve (CV-1207) is slowly opened to minimize thermal shock to the RCP seals.

Question No. 7 QID: 0164 Point Value: 1

Answer:

A. Reduce decay heat removal flow until flow has stabilized.

ANO Unit 1 - 2008 RO NRC Written Exam KEY

Question No. 8 QID: 0683 Point Value: 1

Answer:

C. Select LIS-1002 on C04

Question No. 9 QID: 0328 Point Value: 1

Answer:

A. Depress the CRD Power Supply Breaker Trip Pushbuttons.

Question No. 10 QID: 0685 Point Value: 1

Answer:

D. RCS temperature of 420 degrees due to hydraulic lifting of fuel assemblies.

Question No. 11 QID: 0686 Point Value: 1

Answer:

A. Verify EFW isol and control valves to "A" OTSG closed.

Question No. 12 QID: 0752 Point Value: 1

Answer:

B. "B" Main Feedwater block valve CV-2675

Question No. 13 QID: 0688 Point Value: 1

Answer:

D. K12-B5, "P7A TURBINE TRIP" and K09-A2, "TRAIN A SUBCLG MARG LO"

Question No. 14 QID: 0689 Point Value: 1

Answer:

D. Initiate full HPI per RT 3.

ANO Unit 1 - 2008 RO NRC Written Exam KEY

Question No. 15 QID: 0690 Point Value: 1

Answer:

B. Pressurizer level control valve (CV1235) fails to 50%, Seal injection control valve (CV1207) fails to 50%.

Question No. 16 QID: 0513 Point Value: 1

Answer:

C. EDG #1 will NOT start automatically but may be started manually by overriding the governor run solenoid.

Question No. 17 QID: 0691 Point Value: 1

Answer:

C. Verify standby Instrument Air Compressor is running.

Question No. 18 QID: 0692 Point Value: 1

Answer:

B. Low Pressure Injection Pump

Question No. 19 QID: 0001 Point Value: 1

Answer:

B. Transfer Group 7, Rod 3 to the Aux Bus and pull programmer control fuses for the Aux Power Supply.

Question No. 20 QID: 0694 Point Value: 1

Answer:

D. Main Steam Line High Range Radiation Monitors

Question No. 21 QID: 0695 Point Value: 1

Answer:

A. Unit 1 supplies the Fire Brigade Leader, Unit 2 supplies 3 Fire Brigade members, Security supplies one support member

ANO Unit 1 - 2008 RO NRC Written Exam KEY

Question No. 22 QID: 0696 Point Value: 1

Answer:

C. Cycling HPI pump from breaker.

Question No. 23 QID: 0693 Point Value: 1

Answer:

A. CV-1221, "L/D Cooler Outlet," green light, on C18; SV-1270, "Seal Bleedoff Alternate Path," red light, on C13; CV-1270, "Seal Bleedoff Normal Path," green light, on C18.

Question No. 24 QID: 0370 Point Value: 1

Answer:

B. 1203.018, "Turbine Trip below 43% Power"

Question No. 25 QID: 0049 Point Value: 1

Answer:

B. Lake level >340 ft. and forecasted lake level at site >350 ft.

Question No. 26 QID: 0697 Point Value: 1

Answer:

C. Take manual control of "A" EFW Control Valve and reduce feed flow.

Question No. 27 QID: 0348 Point Value: 1

Answer:

D. Throttle the "A" HPI valve until "A" line flow is within 20 gpm of "D" line flow to minimize inventory loss on a line break.

Question No. 28 QID: 0698 Point Value: 1

Answer:

A. Function: Flux / delta Flux / Flow

Reason: Assures DNBR is not exceeded.

ANO Unit 1 - 2008 RO NRC Written Exam KEY

Question No. 29 QID: 0267 Point Value: 1

Answer:

C. Reactor Coolant Pump P-32B seal cooler leak.

Question No. 30 QID: 0699 Point Value: 1

Answer:

D. 150 psig;
T-11, "Aux Bldg Equip Drain Tank."

Question No. 31 QID: 0353 Point Value: 1

Answer:

D. One high pressure injection pump,
one low pressure injection pump,
and both core flood tanks.

Question No. 32 QID: 0700 Point Value: 1

Answer:

D. RCS temperature rises, RCS pressure rises, and Pressurizer level rises.

Question No. 33 QID: 0701 Point Value: 1

Answer:

A. LPI suction from BWST(CV-1436 & CV-1437) verify open
and BWST outlet valves (CV-1407 & CV-1408) verify closed.

Question No. 34 QID: 0702 Point Value: 1

Answer:

C. 100 psig

Question No. 35 QID: 0703 Point Value: 1

Answer:

D. Instrument Air Compressors C-28A,& B

ANO Unit 1 - 2008 RO NRC Written Exam KEY

Question No. 36 QID: 0521 Point Value: 1

Answer:

D. An outsurge from the pressurizer has occurred.

Question No. 37 QID: 0131 Point Value: 1

Answer:

A. The RPS would be placed in a 2 out of 2 coincidence logic.

Question No. 38 QID: 0057 Point Value: 1

Answer:

B. Removal of the RB Pressure Buffer Amplifier from Analog Channel 1.

Question No. 39 QID: 0704 Point Value: 1

Answer:

A. A108 and A208

Question No. 40 QID: 0705 Point Value: 1

Answer:

B. B6171 and B5171

Question No. 41 QID: 0706 Point Value: 1

Answer:

C. Override and Stop both RB spray pumps and override and close CV-2400 and CV-2401 RB Spray Block Valves.

Question No. 42 QID: 0707 Point Value: 1

Answer:

B. 910

ANO Unit 1 - 2008 RO NRC Written Exam KEY

Question No. 43 QID: 0229 Point Value: 1

Answer:

C. All TBVs will close,
both ADV isolations will open,
both ADV control valves control at setpoint

Question No. 44 QID: 0708 Point Value: 1

Answer:

D. MFP will speed up to 5800 RPM.

Question No. 45 QID: 0709 Point Value: 1

Answer:

B. "A" OTSG filling at 5"/minute,
"B" OTSG filling at 2"/minute.

Question No. 46 QID: 0710 Point Value: 1

Answer:

C. Delta T-cold between the loops lowering.

Question No. 47 QID: 0711 Point Value: 1

Answer:

B. Impacts: MCC starters may not pick up to energize loads; Mitigation: Motors should be started one at a time and allowed to reach run speed to minimize further voltage degradation.

Question No. 48 QID: 0384 Point Value: 1

Answer:

A. Impacts: No immediate impact.
Mitigation: Electrical maintenance support is required to determine ground location.

ANO Unit 1 - 2008 RO NRC Written Exam KEY

Question No. 49 QID: 0712 Point Value: 1

Answer:

C. D03A, "Battery Charger" inoperable and D03B, "Battery Charger" inoperable.

Question No. 50 QID: 0713 Point Value: 1

Answer:

D. In service bulk storage tank filter (F-27) clogged.

Question No. 51 QID: 0089 Point Value: 1

Answer:

A. Verify no flow on Discharge to Flume, FI-4642

Question No. 52 QID: 0388 Point Value: 1

Answer:

A. No cooling to the RCP motor and seal coolers.

Question No. 53 QID: 0714 Point Value: 1

Answer:

C. As Is

Question No. 54 QID: 0715 Point Value: 1

Answer:

B. Moisture in the air system may affect air operated equipment;
As directed by the AOP, 1203.024, "Loss of Instrument Air."

Question No. 55 QID: 0716 Point Value: 1

Answer:

C. Maximize Reactor Building Cooling.

ANO Unit 1 - 2008 RO NRC Written Exam KEY

Question No. 56 QID: 0717 Point Value: 1

Answer:

D. Sequence inhibit.

Question No. 57 QID: 0718 Point Value: 1

Answer:

B. Auto/Manual difference

Question No. 58 QID: 0134 Point Value: 1

Answer:

C. Discrimination separates out gamma and alpha pulses to provide a true neutron pulse.
With the discrimination set too high, power will indicate lower than actual power.

Question No. 59 QID: 0719 Point Value: 1

Answer:

C. Provide indication of core outlet temperature distribution, and input to margin to saturation.

Question No. 60 QID: 0723 Point Value: 1

Answer:

A. M-55A B-53; M-55B B-61

Question No. 61 QID: 0720 Point Value: 1

Answer:

B. Suspend core alterations and place the assembly in the Fuel
Handling Canal fuel storage rack.

Question No. 62 QID: 0721 Point Value: 1

Answer:

C. The "A" train Main Steam Safety valves.

ANO Unit 1 - 2008 RO NRC Written Exam KEY

Question No. 63 QID: 0100 Point Value: 1

Answer:

C. PZR makeup flow would drop.

Question No. 64 QID: 0722 Point Value: 1

Answer:

B. Open RB purge outlets CV-7401 and CV-7403,

when RB pressure equals atmospheric pressure,
then Open RB purge Inlets CV7402 and CV-7404,

place RB purge exhaust fan VEF-15 in auto,
start RB purge Supply Fan VSF-2, and
verify RB purge exhaust fan VEF-15 starts.

Question No. 65 QID: 0379 Point Value: 1

Answer:

B. Adjust the setpoint to less than or equal to max high alarm
setpoint before recording the As-Left Setpoint.

Question No. 66 QID: 0389 Point Value: 1

Answer:

C. Prior to use, eB change number.

Question No. 67 QID: 0245 Point Value: 1

Answer:

D. The valve must be stroked electrically to confirm proper clutch engagement.

Question No. 68 QID: 0724 Point Value: 1

Answer:

B. Line-up section of the System Procedure

ANO Unit 1 - 2008 RO NRC Written Exam KEY

Question No. 69 QID: 0725 Point Value: 1

Answer:

D. Operations Supervisor

Question No. 70 QID: 0487 Point Value: 1

Answer:

B. PMT Coordinator

Question No. 71 QID: 0751 Point Value: 1

Answer:

A. TEDE 2000 mrem per year, SDE, WB= 40 rem, and LDE= 12 rem

Question No. 72 QID: 0727 Point Value: 1

Answer:

B. Perform 1103.013, "RCS Leak Detection."

Question No. 73 QID: 0025 Point Value: 1

Answer:

A. Main Turbine Anticipatory trip.

Question No. 74 QID: 0728 Point Value: 1

Answer:

D. Both SG pressures 580 psig, with levels of 20" and EFW feeding.

Question No. 75 QID: 0726 Point Value: 1

Answer:

A. Reactor Building pressure 19.7 psia.

ANO Unit 1 - 2008 SRO NRC Written Exam KEY

Question No. 76 QID: 0741 Point Value: 1

Answer:

D. 1202.001, "Reactor Trip."

Question No. 77 QID: 0729 Point Value: 1

Answer:

C. Place one channel in bypass and a second in trip.

Question No. 78 QID: 0731 Point Value: 1

Answer:

D. A cooldown rate of 110F/hr with Tcold at 330F.

Question No. 79 QID: 0732 Point Value: 1

Answer:

D. Restore one channel to operable status within 7 days or
be in Mode 3 within 6 hours and be in Mode 4 in 12 hours.

Question No. 80 QID: 0733 Point Value: 1

Answer:

B. Overheating (1202.004)

Question No. 81 QID: 0734 Point Value: 1

Answer:

A. "Main Generator Winding Trouble", 1203.045

Question No. 82 QID: 0735 Point Value: 1

Answer:

A. Nuclear Overpower trip.

Question No. 83 QID: 0736 Point Value: 1

Answer:

B. 1203.019 High Activity In Reactor Coolant 50%

ANO Unit 1 - 2008 SRO NRC Written Exam KEY

Question No. 84 QID: 0421 Point Value: 1

Answer:

A. Loss of Subcooling Margin (1202.002)

Question No. 85 QID: 0737 Point Value: 1

Answer:

A. Reduce cooldown rate per 1203.013, "Natural Circulation Cooldown."

Question No. 86 QID: 0738 Point Value: 1

Answer:

C. Reduce reactor power to within the capacity of unaffected RCP combination and trip the pump per Section 5, "Motor / Bearing Trouble."

Question No. 87 QID: 0607 Point Value: 1

Answer:

C. 1203.026, Loss of Reactor Coolant Makeup, Section 2 - Large Makeup and Purification System Leak

Question No. 88 QID: 0730 Point Value: 1

Answer:

A. ESAS 1202.010

Question No. 89 QID: 0739 Point Value: 1

Answer:

B. P35A spray flow is less than 1050gpm 55 seconds after ES channel actuation, and may be mitigated by 1203.012J, "K11-C6 RB SPRAY P35A ES FAILURE."

Question No. 90 QID: 0740 Point Value: 1

Answer:

D. Valves failed open; 1203.036, "Loss of 125 V DC"

Question No. 91 QID: 0742 Point Value: 1

Answer:

A. Needed to protect the public safety.

ANO Unit 1 - 2008 SRO NRC Written Exam KEY

Question No. 92 QID: 0743 Point Value: 1

Answer:

D. Suspend operations involving positive reactivity changes..

Question No. 93 QID: 0744 Point Value: 1

Answer:

B. 1203.012F, "SASS Mismatch" ACA

Question No. 94 QID: 0745 Point Value: 1

Answer:

B. 16 hours of work including 1 hour of turnover within 24 hours.

Question No. 95 QID: 0746 Point Value: 1

Answer:

B. The fuel assembly may be hung up on a grid strap, you must lower fuel assembly to relieve overload and slowly bump fuel assembly in 1/4 inch steps until grid interface is passed

Question No. 96 QID: 0747 Point Value: 1

Answer:

D. Expedited Work Order.

Question No. 97 QID: 0748 Point Value: 1

Answer:

C. Planned dose shall not exceed 25 Rem TEDE with TSC Director's authorization.

Question No. 98 QID: 0749 Point Value: 1

Answer:

C. SPING 1 channel 5 two-minute average value exceeds set point.

Question No. 99 QID: 0520 Point Value: 1

Answer:

C. 1202.001, Reactor Trip

ANO Unit 1 - 2008 SRO NRC Written Exam KEY

Question No. 100 QID: 0750 Point Value: 1

Answer:

D. Verifying all RCP breakers stay open per Fires in Areas Affecting Safe Shutdown procedure 1203.049

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 1

QID: 0680

To ensure all Control Rod Drives are de-energized on a reactor trip, which of the following CRD breaker/electronic combinations are necessary:

- A. AC Breaker "A" or AC Breaker "B" Open and Electronic Trips "E" or "F" Tripped.
 - B. AC Breaker "A" and DC Breaker "C" and Electronic Trip "E" Tripped.
 - C. AC Breaker "B" and DC Breaker "C" Open and Electronic Trip "E" Tripped.
 - D. AC Breaker "B" and DC Breaker "D" Open and Electronic Trip "F" Tripped.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 2

QID: 0681

Given:

Reactor Trip on high pressure due to a load rejection.

RCS pressure at 2150 psig and lowering slowly.

K09-B4 "QUENCH TANK LEVEL HI / LO" annunciator in fast flash.

K09-D3 "PZR LEVEL HI" annunciator in fast flash.

K09-A1 "RELIEF VALVE OPEN" annunciator in fast flash.

Quench tank pressure 30 psig.

Reactor Building pressure is 16.1 psia.

Which of the following tail pipe temperatures would indicate the Electromatic Relief Valve / Code Safety Valves have RESET?

A. 250 degrees F.

B. 280 degrees F.

C. 290 degrees F.

D. 300 degrees F.

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 3

QID: 0506

Given:

- A Small Break LOCA has occurred.
- ATC has tripped the reactor.
- CBOT has tripped the turbine.
- Both OTSG Pressure's are at 895 psig
- SCM is 25°F.
- All RCPs are OFF.

The desired final OTSG levels will be maintained with EFW using ____?____ Level instrument(s) and obtained with a fill rate of ____?____.

- A. EFIC Low Range,
2" to 8"/min in Manual or 340gpm/SG in Auto
 - B. EFIC High Range
2" to 8"/min in Auto or 340gpm/SG in Manual
 - C. EFIC Low Range
2" to 8"/min in Auto or 340gpm/SG in Manual
 - D. EFIC High Range
2" to 8"/min in Manual or 340gpm/SG in Auto
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 4

QID: 0684

Given:

A Large Break LOCA has occurred
Full ESAS actuation.

LPI/HPI flow rates are as follows:

"A" LPI flow--3100 gpm

"B" LPI flow--3050 gpm

"A" HPI flow--475 gpm

"C" HPI flow--150 gpm

BWST level is 12 feet

Which of the following action is required per the ESAS EOP for these conditions?

- A. Restore full HPI flow on "C" HPI pump.
 - B. Secure the "C" HPI pump only.
 - C. Override and secure all HPI pumps.
 - D. Swap to RB sump recirculation.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 5

QID: 0682

Given :

Plant Power at 70%

Feedwater Loop Demands in HAND

"A" Reactor Coolant Pump Trips

No operator action.

Considering heat transfer between the RCS Loops and their associated Steam Generators, which of the following temperatures would be impacted the GREATEST and in which direction?

- A. Loop "A" Tc rising.
 - B. Loop "B" Tc rising.
 - C. Loop "A" Tc lowering.
 - D. Loop "B" Tc lowering.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 6

QID: 0183

During restoration of normal makeup and seal injection, which of the following is correct?

- A. If PZR level is <55", normal makeup is restored before seal injection to raise RCS inventory.
 - B. If RCP seal bleedoff temperatures are >180 degrees, seal injection control valve (CV-1207) is quickly opened to establish previous flow rate.
 - C. If RCP seal bleedoff temperatures are >180 degrees, seal injection control valve (CV-1207) is slowly opened to minimize thermal shock to the RCP seals.
 - D. BWST outlet valve associated with the operating HPI pump must be closed prior to opening seal injection control valve (CV-1207) to prevent borating RCS.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 7

QID: 0164

An outage is in progress with the following conditions:

- The RCS is drained to 371.5 feet as indicated by RCS hot leg level.
- Decay heat removal flow becomes erratic.
- Indicated decay heat removal flow is ~2500 gpm.

Which action should be taken first to prevent a Loss of Decay Heat?

- A. Reduce decay heat removal flow until flow has stabilized.
 - B. Start the Standby Decay Heat pump
 - C. Raise RCS level.
 - D. Raise decay heat removal flow.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 8

QID: 0683

Given:

Reactor power is 100%

K09-C3, "Pzr Level Lo" in fast flash

K09-A3, "Pzr Level Lo Lo" in fast flash

The ATC operator reports the following:

Pressurizer Level LRS-1001 on C04 reads 40 inches

Pressurizer Level LIS-1002 on C04 reads 210 inches

RCS Pressure is 2155 psig steady.

What actions are required for these conditions?

A. Isolate Letdown

B. Trip the Reactor and refer to 1202.001 Rx Trip

C. Select LIS-1002 on C04

D. Trip the Reactor and refer to 1203.039 Excess RCS leakage.

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 9

QID: 0328

Plant is operating at 100% power.

As the ATC you observe the following indications:

- "A" and "B" Main Feedwater Pumps are tripped
- CRD groups 1, 2, 3, and 4 are at the out limit.
- CRD groups 5, 6, and 7 are at the in limit.
- NI-3 indicates 1 E-8 and lowering.

What action should be performed FIRST per 1202.001, "Reactor Trip" EOP?

- A. Depress the CRD Power Supply Breaker Trip Pushbuttons.
 - B. Dispatch an operator to open the CRD AC Power Supply Breakers.
 - C. Commence Emergency Boration per RT-12.
 - D. Manually insert CRD groups 1, 2, 3, and 4.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 10

QID: 0685

Given :

Steam Generator Tube Rupture has occurred.

Per the floating steps of 1202.006, "Tube Rupture" EOP at what temperature does the procedure require securing the fourth Reactor Coolant Pump and why?

- A. RCS temperature of 390 degrees due to hydraulic lifting of fuel assemblies.
 - B. RCS temperature of 390 degrees due to RCP motor loading concerns.
 - C. RCS temperature of 420 degrees due to RCP motor loading concerns.
 - D. RCS temperature of 420 degrees due to hydraulic lifting of fuel assemblies.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 11

QID: 0686

The reactor has been tripped due to a Main Steam Line Rupture

The following post-trip conditions exist:

- "A" OTSG pressure = 425 psig
- "B" OTSG pressure = 580 psig

- "A" OTSG EFW flow = 200 gpm
- "B" OTSG EFW flow = 100 gpm

- RCS temperature = 495 degrees F
- RCS pressure = 1500 psig

- MSLI has actuated

Which of the following actions is correct for this event?

- A. Verify EFW isolation and control valves to "A" OTSG closed.
 - B. Verify EFW isolation and control valves to "B" OTSG closed.
 - C. Verify at least one EFW pump running with flow to both OTSGs.
 - D. Trip all running RCPs.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 12

QID: 0752

Which of the following plant components, if inoperable, would require entry into Technical Specification action statement?

- A. Main Feedwater Pump P-1B
 - B. "B" Main Feedwater block valve CV-2675
 - C. Control Room supply fan VSF-8A
 - D. #1 EDG Starting Air compressor C-4A-1
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 13

QID: 0688

Given:

Station Blackout,

The following alarms are in:

K02-A1, "SU 1 L.O. RELAY TRIP"
K02-A6, "A1 L.O. RELAY TRIP"
K09-A2, "TRAIN A SUBCLG MARG LO"
K12-B5, "P7A TURBINE TRIP"

Which two annunciators are the highest priority per 1202.008, "Blackout" EOP?

- A. K02-A1, "SU 1 L.O. RELAY TRIP" and K09-A2, "TRAIN A SUBCLG MARG LO"
 - B. K12-B5, "P7A TURBINE TRIP" and K02-A1, "SU 1 L.O. RELAY TRIP"
 - C. K09-A2, "TRAIN A SUBCLG MARG LO" and K02-A6, "A1 L.O. RELAY TRIP"
 - D. K12-B5, "P7A TURBINE TRIP" and K09-A2, "TRAIN A SUBCLG MARG LO"
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 14

QID: 0689

Given:

A Degraded Power event occurred.
Both EDGs are supplying associated ES buses.

Pressurizer level is 200 inches.
CET temperatures indicate 600 degrees.
RCS pressure 1850 psig.

MSLI and EFW have been actuated.

Which of the following actions is correct?

- A. Verify EFW level set point is 300 to 340 inches per RT6.
 - B. Initiate HPI cooling per RT 4.
 - C. Restore letdown for inventory control per RT 13.
 - D. Initiate full HPI per RT 3.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 15

QID: 0690

The response of the makeup and purification system to a loss of all NNI X AC and NNI X DC power is:

- A. Pressurizer level control valve (CV-1235) fails closed,
Seal injection control valve (CV-1207) fails closed.
 - B. Pressurizer level control valve (CV-1235) fails to 50%,
Seal injection control valve (CV-1207) fails to 50%.
 - C. Pressurizer level control valve (CV-1235) fails closed;
Seal injection control valve (CV-1207) fails to 50%.
 - D. Pressurizer level control valve (CV-1235) fails to 50%;
Seal injection control valve (CV-1207) fails closed.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 16

QID: 0513

Given:

- Degraded power event in progress
- K01-D1, "EDG 1 NOT AVAILABLE" is in alarm
- The Inside AO reports that engine DC control power was lost to EDG #1

What is expected effect on EDG #1 following a loss of engine DC control power?

- A. EDG #1 will NOT start automatically and CANNOT be started manually due to the governor run solenoid failed closed.
 - B. EDG #1 will start and run at idle speed but will NOT accelerate to run speed due to the governor run solenoid failed to minimum load.
 - C. EDG #1 will NOT start automatically but may be started manually by overriding the governor run solenoid.
 - D. EDG #1 will start and run at load rpm speed but CANNOT be placed on its associated 4160 VAC Essential Bus due to the governor run solenoid causing a lockout.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 17

QID: 0691

Given:

- Instrument Air pressure on both Units has been degrading for approximately 30 minutes.
- Instrument Air leak is discovered on Unit 2.

SUDDENLY, Unit One Inst. Air pressure drops to 67 psig.

Which of the following actions are required in accordance with 1203.024 "Loss of Instrument Air?"

- A. Isolate Letdown by closing, Letdown Coolers Outlet valve CV-1221
 - B. Isolate Unit 1 Inst. Air from Unit 2.
 - C. Verify standby Instrument Air Compressor is running.
 - D. Monitor ICW Surge Tank Levels due to loss of level control.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 18

QID: 0692

Given:

Unit is in Cold Shutdown

RCS is Intact

RCS Loops not filled

Steam Generators are not available

Emergency Feedwater System is not available

BWST Level 30 feet

An unidentified leak in the common suction header in the Reactor Building has caused loss of operating Decay Heat Systems.

RCS pressure has increased to 120 psig due to loss of Decay Heat Removal.

Under these conditions, what is the preferred method of RCS Makeup to provide Core Cooling?

- A. Gravity feed from BWST
 - B. Low Pressure Injection Pump
 - C. Spent fuel Cooling Pump P-40A
 - D. High Pressure Injection Pump
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 19

QID: 0001

Given:

- Plant runback to 39% power.
- Group 7 Rod 3 API indication not moving.
- Group 7, Rod 3, stator temperature is 193 °F and rising.
- A stator temperature HI alarm in.
- All other Control Rod stator temperatures are normal.

Which action would be performed FIRST per 1203.003, "Control Rod Drive Malfunction," to reduce temperature on the Group 7, Rod 3 stator?

- A. Manually trip the reactor due to Group 7, Rod 3 stator temperature exceeding 190 °F.
 - B. Transfer Group 7, Rod 3 to the Aux Bus and pull programmer control fuses for the Aux Power Supply.
 - C. Drop Group 7, Rod 3 by removing the six stator fuses for the rod in the CRD transfer cabinet.
 - D. Transfer Group 7, Rod 3 to the DC Hold Bus to reduce stator current.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 20

QID: 0694

Given:

Plant is at 100% power,
OTSG N-16 monitor alarms on both Steam Generators,
Steam Generator Tube Leak is suspected,

Which of the following may be inconclusive at verifying
which Steam Generator has the tube leakage?

- A. SGTR display on SPDS
 - B. Nuclear Chemistry Sample
 - C. Plant Monitoring System N16T screen
 - D. Main Steam Line High Range Radiation Monitors
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 21

QID: 0695

Per 1015.007, "Fire Brigade Organization and Responsibilities," which of the following describes the Ops Manning composition of the Fire Brigade for the initial response to a fire on Unit 1?

- A. Unit 1 supplies the Fire Brigade Leader,
Unit 2 supplies 3 Fire Brigade members,
Security supplies one support member.
 - B. Unit 1 supplies the Fire Brigade Leader and 2 Fire Brigade members,
Unit 2 supplies 1 Fire Brigade member,
Security supplies one support member.
 - C. Unit 2 supplies the Fire Brigade Leader,
Unit 1 supplies 3 Fire Brigade members,
Security supplies one support member.
 - D. Unit 2 supplies the Fire Brigade Leader and 1 Fire Brigade member,
Unit 1 supplies 2 Fire Brigade members,
Security supplies one support member.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 22

QID: 0696

How is RCS inventory controlled after an immediate control room evacuation per 1203.002, "Alternate Shutdown" EOP?

- A. Local manual operation of Pressurizer makeup valve.
 - B. Local manual operation of letdown isolation valve.
 - C. Cycling HPI pump from breaker.
 - D. Local manual operation of HPI motor operated valves.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 23

QID: 0693

Given:

1203.019, "High Activity in Reactor Coolant" AOP

Due to dose rates you are directed to isolate Letdown and swap RCP seal bleed-off from the Normal path to the Alternate path (Quench Tank.)

Which of the following combinations of indications and locations are correct for the desired plant line-up?

A. CV-1221, "L/D Cooler Outlet," green light, on ~~C18~~; **C16**
SV-1270, "Seal Bleedoff Alternate Path," red light, on C13;
CV-1270, "Seal Bleedoff Normal Path," green light, on C18.

B. CV-1221, "L/D Cooler Outlet," green light, on ~~C16~~; **C18**
SV-1270, "Seal Bleedoff Alternate Path," green light, on C13;
CV-1270, "Seal Bleedoff Normal Path," red light, on C18.

C. CV-1221, "L/D Cooler Outlet," red light, on ~~C18~~; **C16**
SV-1270, "Seal Bleedoff Alternate Path," red light, on C23;
CV-1270, "Seal Bleedoff Normal Path," green light, on C26.

D. CV-1221, "L/D Cooler Outlet," green light, on ~~C16~~; **C18**
SV-1270, "Seal Bleedoff Alternate Path," green light, on C23;
CV-1270, "Seal Bleedoff Normal Path," red light, on C26.

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 24

QID: 0370

Given:

Plant power 39%.

Power escalation in progress.

The following conditions are observed:

- Rapid rise in RCS temperature
- Rapid rise in RCS pressure
- Rapid rise in PZR level
- Megawatt output = zero (0)
- MSSV open alarm

No other annunciators in alarm except for those expected for the above conditions.

What procedure contains the required mitigating operator actions?

- A. 1203.001, "ICS Abnormal Operating"
 - B. 1203.018, "Turbine Trip below 43% Power"
 - C. 1203.027, "Loss of Steam Generator Feed"
 - D. 1202.001, "Reactor Trip Procedure"
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 25

QID: 0049

Given:

Lake Dardanelle level rising due to severe weather and heavy rains.

Which of the following is the minimum level to commencing a plant shutdown in accordance with 1203.025, "Natural Emergencies?"

- A. Lake level >330 ft. and forecasted lake level at site >340 ft.
 - B. Lake level >340 ft. and forecasted lake level at site >350 ft.
 - C. Lake level >350 ft. and forecasted lake level at site >360 ft.
 - D. Lake level >360 ft. and forecasted lake level at site >370 ft.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 26

QID: 0697

Given:

Degraded Power

Performing Natural Circulation Cooldown per 1203.013

SCM is 50 degrees F and slowly lowering

Cooldown rate is 70 degrees F per hour and slowly rising

"A" OTSG EFIC flow rate 350 gpm

"B" OTSG EFIC flow rate 50 gpm

The EFIC screen indicates the "A" OTSG level is above the EFIC calculated setpoint.

The EFIC screen indicates the "B" OTSG level is at the EFIC calculated setpoint.

What actions are required by RT-5?

- A. Select Reflux Boiling setpoint.
 - B. Take EFIC Control valves to Vector Override.
 - C. Take manual control of "A" EFW Control Valve and reduce feed flow.
 - D. Take manual control of "B" EFW Control Valve and raise to >340 gpm.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 27

QID: 0348

Given:

A LOCA has occurred
ES actuation of channels 1 through 4.
The "ES" HPI pump has failed.

Flow from the "OP" HPI pump is as follows:

300 gpm to "A" HPI line.
65 gpm to "B" HPI line.
85 gpm to "C" HPI line.
95 gpm to "D" HPI line.

RCS pressure is 950 psig.
All valves are in ES actuated position.

What operator action is required?

- A. No action is required since flow is greater than 500 gpm.
 - B. Close the isolation for the line with the highest flow to stop inventory loss due to a line break.
 - C. Throttle the "A" HPI valve until "A" line flow is within 20 gpm of "B" line flow to reduce red train inventory loss on a line break.
 - D. Throttle the "A" HPI valve until "A" line flow is within 20 gpm of "D" line flow to minimize inventory loss on a line break.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 28

QID: 0698

Which Reactor Protection System trip function protects the core during a Reactor Coolant Pump coast down and why?

A. Function: Flux / delta Flux / Flow

Reason: Assures DNBR is not exceeded.

B. Function: Power to Pumps

Reason: Assures DNBR is not exceeded.

C. Function: Flux / delta Flux / Flow

Reason: Assures Linear Heat Rate is not exceeded.

D. Function: Power to Pumps

Reason: Assures Linear Heat Rate is not exceeded.

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 29

QID: 0267

The ATC observes a change in seal injection flow rates and notes the following values:

"A" RCP	8.5 gpm
"B" RCP	15.0 gpm
"C" RCP	8.0 gpm
"D" RCP	8.0 gpm

Which of the following explains the seal injection flow indications?

- A. Reactor Coolant Pump P-32B trip due to a motor fault.
 - B. Seal injection line break in the Upper North Piping Penetration Room .
 - C. Reactor Coolant Pump P-32B seal cooler leak.
 - D. Seal injection flow transmitter failure.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 30

QID: 0699

During power operation the CV-1248, "Letdown 3-way Valve" is positioned to BLEED with both the degassifier inlet (CZ-8) and bypass (CZ-9) shut.

What would letdown pressure be and where would flow be going?

- A. 100 psig;
T-20, "Dirty Waste Drain Tank."
 - B. 150 psig;
T-20, "Dirty Waste Drain Tank."
 - C. 100 psig;
T-11, "Aux Bldg Equip Drain Tank."
 - D. 150 psig;
T-11, "Aux Bldg Equip Drain Tank."
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 31

QID: 0353

In the event of a double-ended break of the RCS cold leg pipe, what is the minimum equipment required to limit peak cladding temperature to less than 2,200 °F?

- A. Two high pressure injection pumps,
two low pressure injection pumps,
and both core flood tanks.
 - B. Two high pressure injection pumps,
one low pressure injection pump,
and both core flood tanks.
 - C. One high pressure injection pump,
two low pressure injection pumps,
and both core flood tanks.
 - D. One high pressure injection pump,
one low pressure injection pump,
and both core flood tanks.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 32

QID: 0700

Given:

Plant is in mode 5,
"A" Decay Heat System is in service,
RCS is intact,
Steam Generators not available,

What affect would a loss of Decay Heat Removal have
on Reactor Coolant System parameters?

- A. RCS temperature lowers,
RCS pressure rises,
Pressurizer level rises.
 - B. RCS temperature rises,
RCS pressure lowers,
Pressurizer level lowers.
 - C. RCS temperature lowers,
RCS pressure lowers,
Pressurizer level lowers.
 - D. RCS temperature rises,
RCS pressure rises,
Pressurizer level rises.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 33

QID: 0701

What is the proper alignment to transfer ECCS suction from the Borated Water Storage Tank to the Containment Building Sump per attachment 1 of 1202.010, "ESAS" after verification of RB Sump outlet valves (outside RB) and RB Sump outlet valves (inside RB) open?

- A. LPI suctions from BWST(CV-1436 & CV-1437) verify open and BWST outlet valves (CV-1407 & CV-1408) verify closed.
 - B. LPI suctions from BWST (CV-1436 & CV-1437) verify closed and BWST outlet valves (CV-1407 & CV-1408) verify open.
 - C. LPI suctions from BWST (CV-1436 & CV-1437) verify open and BWST outlet valves (CV-1407 & CV-1408) verify open.
 - D. LPI suctions from BWST (CV-1436 & CV-1437) verify closed and BWST outlet valves (CV-1407 & CV-1408) verify closed.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 34

QID: 0702

At what Quench tank pressure would you first expect the Quench tank to relieve to the Containment atmosphere?

- A. 80 psig
 - B. 90 psig
 - C. 100 psig
 - D. 110 psig
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 35

QID: 0703

Which of the following is NOT an ICW load?

- A. Waste gas compressor aftercooler E-40A,B.
 - B. Isophase bus coolers E-17A,B.
 - C. Pressurizer sample cooler E-30.
 - D. Instrument Air Compressors C-28A,B
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 36

QID: 0521

Given:

Reactor Trip from 80% power.

A malfunction of Rapid Feedwater Reduction (RFR) has caused MFW to overfeed both OTSG's.

All PZR heater banks are in AUTO.

No other operator actions are taken.

Why are the PZR heaters de-energized?

- A. The pressurizer spray valve is open.
 - B. The ERV is open.
 - C. An insurge from the pressurizer has occurred.
 - D. An outsurge from the pressurizer has occurred.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 37

QID: 0131

Given:

Channel "A" of the RPS is currently in channel bypass.

What would result if the channel bypass switch for Channel "B" was placed in the bypass position AND the channel bypass block circuit did not function as designed?

- A. The RPS would be placed in a 2 out of 2 coincidence logic. *for RPS*
 - B. Both RPS channels A and B would drop out of bypass.
 - C. The B channel would be in bypass and the A channel would drop out of bypass.
 - D. Both RPS channels A and B would trip, resulting in a Reactor Trip.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 38

QID: 0057

Which of the following would result in all ten (10) ESAS Digital Channels receiving an Analog Channel Trip signal?

- A. Removal of the low RCS Pressure Bistable from Analog Channel 1.
 - B. Removal of the RB Pressure Buffer Amplifier from Analog Channel 1.
 - C. Removal of the 30 psig RB Pressure Bistable from Analog Channel 2.
 - D. Removal of the RCS Pressure Buffer Amplifier from Analog Channel 2.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 39

QID: 0704

Which of the following supply power to the Main Chiller Motors?

- A. A108 and A208
 - B. A308 and A408
 - C. B113 and B713
 - D. B112 and B212
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 40

QID: 0705

Which of the following supply power to the Containment Spray Motor Operated Valves CV-2400 and CV-2401?

- A. B2271 and B3271
 - B. B6171 and B5171
 - C. B4171 and B3171
 - D. B6571 and B5571
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 41

QID: 0706

Given:

Large break LOCA has occurred
All 10 Channels of ESAS have actuated

Shifted to Reactor Building Sump Recirculation per Attachment 1 of 1202.010, ESAS
"A" and "B" Low Pressure Injection flows are 2800 gpm.
High Pressure Injection has been secured.
No Containment Breach

The ATC notices LPI pump flows fluctuating.

What must be performed per Attachment 1 of 1202.010, "ESAS"
to stop the pump fluctuations?

- A. Close CV-1276 and CV-1277 Decay Heat Supply to Makeup Pump Suctions.
 - B. Override and throttle CV-1400 and CV-1401 LPI Injection Valves to 1050 to 1200 gpm per train.
 - C. Override and Stop both RB spray pumps AND override and close CV-2400 and CV-2401 RB Spray Block Valves.
 - D. Initiate full HPI per RT3 and secure LPI pumps.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 42

QID: 0707

Given:

Turbine control is in ICS auto.

Generator output is 100 Megawatts.

The turbine bypass valves are full closed.

Turbine header pressure setpoint is 900 psig.

At what pressure will the turbine bypass valves first open?

- A. 890
 - B. 910
 - C. 950
 - D. 1000
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 43

QID: 0229

Given:

Plant startup in progress with Reactor Power at 5 %.

Condenser E-11A Vacuum Pressure Switch (PS-2850) fails to 0" Hg.

What effect will this have on Turbine Bypass Valve (TBV) and Atmospheric Dump Valve (ADV) operations?

- A. All TBVs will remain open,
both ADV isolations will open,
both ADV control valves will remain closed.
 - B. Only TBVs for E-11A will close,
both ADV isolations open,
'A' SG ADV will begin controlling 'A' SG pressure.
 - C. All TBVs will close,
both ADV isolations will open,
both ADV control valves control at setpoint
 - D. Only TBVs for E-11A will close,
both ADV isolations will open,
both ADV control valves control at setpoint
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 44

QID: 0708

Given:

Plant is operating at 60% power,
"A" and "B" Main Feedwater Pumps (MFP) in service.

What affect will the "B" MFP Hand/Auto station failing
to 100% demand have on the "B" MFP?

- A. MFP discharge pressure will reduce MFP speed.
 - B. MFP will shift to manual demand substitution.
 - C. MFP will shift to direct governor valve control.
 - D. MFP will speed up to 5800 RPM.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 45

QID: 0709

Given:

RCPs have been secured,

"A" OTSG pressure is 925 psig
EFW feed rate is 4"/minute

"B" OTSG pressure is 750 psig
EFW feed rate is 6"/minute

What OTSG flow rates should the operator establish for these conditions?

- A. "A" OTSG filling at 2"/ minute,
"B" OTSG filling at 5"/minute.
 - B. "A" OTSG filling at 5"/ minute,
"B" OTSG filling at 2"/minute.
 - C. "A" OTSG filling at 4"/ minute,
"B" OTSG filling at 6"/minute.
 - D. "A" OTSG filling at 6"/ minute,
"B" OTSG filling at 4"/minute.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 46

QID: 0710

Given:

The EFIC system is automatically feeding the S/Gs to the natural circulation cooldown setpoint.

Which of the following does NOT indicate Primary to Secondary Heat Transfer has been established?

- A. T-cold tracking the associated SG T-sat.
 - B. T-hot / T-cold difference stable or dropping.
 - C. Delta T-cold between the loops dropping.
 - D. T-hot tracking CET temperatures.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 47

QID: 0711

Given:

Plant recovering from a Blackout.

Startup #1 transformer voltage degraded at 18.5 KV.

Busses A1 and A3 energized from Startup #1 at 3760 V.

Attachment 1, "Blackout Breaker Alignment and UV Relay Defeat" has been performed.

Given these conditions, what are the impacts to the electrical distribution system
AND what actions would mitigate these consequences?

A. Impacts: Motors may trip on overload, overheat due to high running currents or stall;

Mitigation: No actions are necessary due to the performance of
"Blackout Breaker Alignment and UV Relay Defeat."

B. Impacts: MCC starters may not pick up to energize loads;

Mitigation: Motors should be started one at a time and allowed to
reach run speed to minimize further voltage degradation.

C. Impacts: AC Auxiliary relays may not pick up to provide interlock or
load energization features;

Mitigation: No actions are necessary due to the performance of
"Blackout Breaker Alignment and UV Relay Defeat."

D. Impacts: Low system voltages may result in low motor currents and low power output.

Mitigation: Motors should be started one at a time and allowed to reach run speed
to minimize further voltage degradation.

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 48

QID: 0384

Given:

Annunciator K01-D7, "DO1 TROUBLE," is in alarm.

The AO reports the local trouble annunciator indicates a DC ground on the positive bus.

Given these conditions, what are the impacts to the DC electrical distribution system and what actions would mitigate these consequences?

A. Impacts: No immediate impact.

Mitigation: Electrical maintenance support is required to determine ground location.

B. Impacts: No immediate impact

Mitigation: Transfer D11 to D21 and see if ground is still present on D01.

C. Impacts: The DC electrical distribution system will short.

Mitigation: Electrical maintenance support is required to determine ground location.

D. Impacts: The DC electrical distribution system will short.

Mitigation: Immediately transfer D11 to D21 and see if ground is still present on D01.

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 49

QID: 0712

Which of the following conditions requires entry into Technical Specification 3.8.4, "DC Systems, Operating?"

- A. D03A, "Battery Charger" inoperable and D07, "Battery" operable.
 - B. D03B, "Battery Charger" inoperable and D04A, "Battery Charger" inoperable.
 - C. D03A, "Battery Charger" inoperable and D03B, "Battery Charger" inoperable.
 - D. D04B, "Battery Charger" inoperable and D07, "Battery" operable.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 50

QID: 0713

Given:

The 24 hour endurance run surveillance on #1 Emergency Diesel Generator is in progress.

- Annunciator K01-F4, EDG FUEL OIL TROUBLE actuated.
- Diesel Storage Tank levels (T57A and T57B) = 147 inches.
- Fuel Oil Transfer Pump (P16A) discharge pressure = 20 psig.
- T-25 Bulk Storage Tank Level is 5 feet.
- Valve alignment verified correct.
- T-30A #1EDG Fuel Oil Day Tank is at 200 gallons and slowly lowering.

What is the most likely cause of the alarm?

- A. P16A auto start failure.
 - B. P16A discharge pressure high.
 - C. T-25 Bulk storage tank level low.
 - D. In service bulk storage tank filter (F-27) clogged.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 51

QID: 0089

Given:

- Treated Waste Monitor Tank, T16A, release in progress
- "PROC MONITOR RADIATION HIGH", K10-B2, in alarm
- Liquid Radwaste Process Monitor, RI-4642, in alarm

What should your FIRST action be?

- A. Verify no flow on Discharge to Flume, FI-4642.
 - B. Trip the running Radwaste Transfer pump, P-53A/B.
 - C. Close Liquid Waste to Flume valve, CV-4642.
 - D. Verify proper setting on RI-4642 per the release permit.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 52

QID: 0388

ESAS has actuated on RB pressure alone.
The CRS is in "Overcooling" 1202.003 procedure .

RT-10 directs you to stop all running RCP's.

Why is this action being performed?

- A. No cooling to the RCP motor and seal coolers.
 - B. Loss of subcooling margin is imminent.
 - C. RCP seal bleedoff path is isolated.
 - D. RCP seal injection is isolated.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 53

QID: 0714

A Loss of Instrument Air has occurred.

What is the expected position of the Startup (CV-2623 and CV-2673) and Low Load Control Valves (CV-2622 and 2672)?

- A. Startups fail closed,
Low Loads fail closed.
 - B. Startups fail closed,
Low Loads fail as is.
 - C. Startups fail as is,
Low Loads fail as is.
 - D. Startups fail as is,
Low Loads fail closed.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 54

QID: 0715

Procedure 1104.024, "Instrument Air System" directs the operator to avoid bypass operation of Air Dryers.

What is the reason for this precaution and what exception applies?

- A. Particulates in the air system may affect orifices in control valves;
As required by system loading.
 - B. Moisture in the air system may affect air operated equipment;
As directed by the AOP, 1203.024, "Loss of Instrument Air."
 - C. Entrained oil in the air system may affect control bellows in valve positioners;
As directed by the AOP, 1203.024, "Loss of Instrument Air."
 - D. Moisture in the air system will cause corrosion induced system piping failures;
As required by system loading.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 55

QID: 0716

Given:

Plant power 100%

Rising Reactor Building temperature

Slowly rising Reactor Building pressure

Rising Reactor Building Dew Point

Reactor Building Leak Detector rising activity

Per 1203.039, "Excess RCS Leakage", what action addresses these conditions?

- A. Initiate Reactor Building Purge.
 - B. Start the Hydrogen Recombiners.
 - C. Maximize Reactor Building Cooling.
 - D. Place a second Main Chiller in service.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 56

QID: 0717

Given:

Reactor Power is 100%.

The Group 7 Rods average position is 92% withdrawn.

An operator moves the group 6 rod 4 Relative Position Indication (RPI) to 0%.

Group 6 has 8 rods.

What is the expected result?

- A. Asymmetric rod runback.
 - B. Asymmetric rod alarm.
 - C. Out inhibit.
 - D. Sequence inhibit.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 57

QID: 0718

Given:

Performing RT-12 Emergency Boration
Letdown has been maximized

Pressurizer Level is 110 inches.

Pressurizer Level Setpoint has been changed to 220 inches.

Pressurizer Level Control Valve CV-1235 is in automatic.

What information is the Pressurizer Level control station indicating
when in Measured Variable with the station in Automatic?

- A. Proportional/Integral output
 - B. Auto/Manual difference
 - C. Analog memory output
 - D. Integral output only
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 58

QID: 0134

The Gamma Metrics system uses discrimination circuitry to provide accurate indication of source range power levels.

Why is discrimination necessary in source range nuclear instrumentation and what is the result of incorrect discrimination?

- A. Discrimination separates out alpha and neutron pulses to provide a true gamma pulse. With the discrimination set too high power will indicate higher than actual power.
 - B. Discrimination separates out gamma and neutron pulses to provide a true alpha pulse. With the discrimination set too low, power will indicate higher than actual power.
 - C. Discrimination separates out gamma and alpha pulses to provide a true neutron pulse. With the discrimination set too high, power will indicate lower than actual power.
 - D. Discrimination separates out beta and gamma pulses to provide a true neutron pulse. With the discriminator set too low, power will indicate lower than actual power.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 59

QID: 0719

What is the purpose and function of the Core Exit Thermocouples (CET)?

- A. Provide core outlet temperature distribution and monitor for Reactor Vessel head void formation.
 - B. Provide input to margin to saturation and input to the RPS high temperature trip.
 - C. Provide indication of core outlet temperature distribution, and input to margin to saturation.
 - D. Provide input to the Safety Parameter Display System and the RPS high temperature trip.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 60

QID: 0723

What are the power supplies to the Hydrogen Recombiners, M-55A and M-55B?

- A. M-55A B-53;
M-55B B-61.
 - B. M-55A B-6;
M-55B B-5.
 - C. M-55A B-61;
M-55B B-53.
 - D. M-55A B-5;
M-55B B-6.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 61

QID: 0720

Given:

- Refueling is in progress.
- A fuel assembly is being moved from the Up-ender to the Reactor Core.
- Source Range channel NI-502 power supply fails.

Which of the following actions is appropriate for these conditions?

- A. All refueling operations can continue as long as one Source Range channel is operable.
 - B. Suspend core alterations and consider placing the assembly in the Fuel Handling Canal fuel storage rack.
 - C. Place the fuel assembly in any alternate core location during repairs of NI-502.
 - D. The fuel assembly must be placed back in its original position in the Spent Fuel Pool.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 62

QID: 0721

Given:

- Plant at 100% power.
- "A" Main Steam Isolation Valve goes closed.

What is controlling pressure for the "A" Steam Generator?

- A. The "A" train Turbine Bypass valves.
 - B. The Emergency Feedwater Initiation and Control system.
 - C. The "A" train Main Steam Safety valves.
 - D. The "A" train Atmospheric Dump Control Valves
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 63

QID: 0100

Given:

Plant Power 90%

A Main Turbine EH control system malfunction causes a spurious OPC actuation.

Which of the following would occur during the transient?

- A. RCP seal injection flow would drop.
 - B. PZR spray flow would drop.
 - C. PZR makeup flow would drop.
 - D. FW flow to both OTSGs would rise.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 64

QID: 0722

Plant Shutdown in Mode 5 for refueling outage

Reactor Building pressure is 15.7 psia

An approved Reactor Building Purge permit has arrived in Control Room.

You are tasked to start the Reactor Building purge in accordance with the permit

With the above conditions, which are the correct actions to start the Reactor building purge?

A. Open RB purge Inlets CV7402 and CV-7404,

when RB pressure equals atmospheric pressure,
then open RB purge outlets CV-7401 and CV-7403,

place RB purge Supply Fan VSF-2 in Auto,
start RB purge exhaust fan VEF-15 and
verify RB purge supply fan VSF-2 starts.

B. Open RB purge outlets CV-7401 and CV-7403,

when RB pressure equals atmospheric pressure,
then Open RB purge Inlets CV7402 and CV-7404,

place RB purge exhaust fan VEF-15 in auto,
start RB purge Supply Fan VSF-2, and
verify RB purge exhaust fan VEF-15 starts.

C. Open RB purge Inlets CV7402 and CV-7404,

when RB pressure equals atmospheric pressure,
then open RB purge outlets CV-7401 and CV-7403,

place RB purge exhaust fan VEF-15 in auto,
start RB purge Supply Fan VSF-2, and
verify RB purge exhaust fan VEF-15 starts.

D. Open RB purge outlets CV-7401 and CV-7403,

when RB pressure equals atmospheric pressure,
then Open RB purge Inlets CV7402 and CV-7404,

place RB purge Supply Fan VSF-2 in Auto,
start RB purge exhaust fan VEF-15 and
verify RB purge supply fan VSF-2 starts.

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 65

QID: 0379

During performance of 1305.001, Supplement 6, Area Radiation Monitor Monthly Alarm Check, you discover Relay Room Area Monitor, RI-8002, high alarm setpoint is greater than the maximum allowable value.

What are the required actions?

- A. Record the value found, and document set-point drift in Section 3.0 of the surveillance test.
 - B. Adjust the setpoint to less than or equal to max high alarm setpoint before recording the As-Left Setpoint.
 - C. Record the value found, then have I&C make the required adjustment under a "blanket" Work Order.
 - D. Record the value found and continue, nothing else needs to be done since RI-8002 is not a Tech Spec required monitor.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 66

QID: 0389

Given:

- A job is in progress that will last for several weeks.
- The procedure has been verified at the start of the job.
- A pre-job brief has been completed for all participants.

How often should the procedure for this job be verified current and what source is used?

- A. Once every 24 hours,
eB change number.
 - B. Once every 24 hours,
the work order reference.
 - C. Prior to each use,
eB change number.
 - D. Prior to each use,
the work order reference.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 67

QID: 0245

The feedwater/condensate system startup is in progress.
A main feedwater isolation valve had been closed by
operation of the manual handwheel to isolate the system.

Prior to declaring this valve operable, what action must be taken?

- A. The valve must be fully opened using the local handwheel.
 - B. Electricians must check the torque switch adjustment.
 - C. The measured torque value required to remove the valve
from its seat is verified below the limit.
 - D. The valve must be stroked electrically to confirm proper clutch engagement.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 68

QID: 0724

What information source is used to determine the correct "At Power" configuration of plant equipment?

- A. Piping and Instrument Diagrams.
 - B. Line-up section of the System Procedure.
 - C. Work Order Instructions.
 - D. Component Database of the Indus system.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 69

QID: 0725

In the Protective Tagging process, who ensures that all compensatory measures listed on the tagout are performed?

- A. Operations Manager.
 - B. Tagout Preparer.
 - C. Tagout Reviewer.
 - D. Operations Supervisor.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 70

QID: 0487

During a Refueling outage, who is responsible for tracking a Delayed Post Maintenance Test identified as an Operability Restraint in accordance with "Control of Post -Maintenance testing" 1025.033?

- A. Outage Desk.
 - B. PMT Coordinator.
 - C. Work Week Manager.
 - D. Responsible shop (e.g., Electrical).
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 71

QID: 0751

Which of the following exposure limits are
Entergy's Routine Annual Administrative Guidelines?

- A. TEDE 2000 mrem per year, SDE, WB= 40 rem, and LDE= 12 rem
 - B. TEDE 5000 mrem per year, SDE, WB= 40 rem, LDE= 12 rem
 - C. TEDE 5000 mrem per year, SDE, WB= 50 rem, LDE= 15 rem
 - D. TEDE 2000 mrem per year, SDE, WB= 50 rem, LDE= 15 rem
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 72

QID: 0727

Given:

Unit is at 100% Power,
Received Annunciator K10-B2, "PROC MONITOR RADIATION HI"

Upon investigation you discover "RB Atmos Gaseous Monitor" RI-7461
in Radiation High alarm and slowly rising.

What action is required for this alarm in accordance with
"Annunciator K10 Corrective Action" 1203.012I?

- A. Have Radiation Protection perform an air sample.
 - B. Perform 1103.013, "RCS Leak Detection."
 - C. Adjust RI-7461 alarms setpoint per 1305.001 Sup 5
 - D. Commence plant shutdown per 1203.045, "Rapid Plant Shutdown."
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 73

QID: 0025

The following plant conditions existed just prior to an automatic reactor trip:

- Reactor power at 50%
- Loss of Bus H-1 due to an electrical fault
- "B" Main Feedwater Pump tripped
- Condenser vacuum at 23.5 inches Hg
- RCS pressure at 1950 psig

Which of the following was the cause of the automatic reactor trip?

- A. Main Turbine Anticipatory trip.
 - B. Power to Pumps trip.
 - C. Variable Low Pressure trip.
 - D. Main Feedwater Anticipatory trip.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 74

QID: 0728

Which of the following indicates proper Emergency Feedwater operation?

- A. All RCPs off and SG level stable at 32".
 - B. All RCPs on and SG level stable at 45" with EFW control valves open.
 - C. "A" SG 580 psig, "B" SG 800 psig, and EFW feeding both SGs.
 - D. Both SG pressures 580 psig, with levels of 28" and EFW feeding both SGs.
-

ANO Unit 1 - 2008 RO NRC Written Examination

Question No. 75

QID: 0726

Which of the following RCS parameters would require manual trip of the Reactor?

- A. Reactor Building pressure 19.7 psia.
 - B. Pressurizer level 105 inches and lowering.
 - C. RCS Hot Leg Temperature 614 °F.
 - D. Reactor Coolant System Pressure 1850 psig.
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 76

QID: 0741

Given:

- Plant Power 48%
- Low Pressure Turbine Boot fails causing vacuum to rapidly fall to 24 inHg.

Which procedure should be used to stabilize the plant?

- A. 1203.016, "Loss of Condenser Vacuum."
 - B. 1203.045, "Rapid Plant Shutdown."
 - C. 1203.012D, "K05-B3 Vacuum Pump Auto-start" ACA.
 - D. 1202.001, "Reactor Trip."
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 77

QID: 0729

Given:

Plant Power 40%,
I&C performing "Unit 1 DROPS Trip Test" per 1304.178,

I&C accidentally causes an AMSAC trip, resulting in a Main Turbine Trip,
EFW did not respond as required due to "A" and "D"
Emergency Feedwater Initiation Channels being inoperable.

What is the most limiting action required per Technical Specifications?

- A. Restore one channel to an operable status.
 - B. Place the plant in mode 3.
 - C. Place one channel in bypass and a second in trip.
 - D. Place the plant in mode 4.
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 78

QID: 0731

Given:

Plant transient excessive overcooling has occurred,

Which of the conditions below would have invoked PTS limits AND violate Technical Specification limits?

- A. A cooldown resulting in a step change of 51F in 10 minutes with Tcold at 360F.
 - B. A cooldown rate of 90F/hr with Tcold at 290F.
 - C. A cooldown resulting in a step change of 26F in 10 minutes with Tcold at 279F.
 - D. A cooldown rate of 110F/hr with Tcold at 330F.
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 79

QID: 0732

Reference Provided

Given:

The plant is operating at 100% power.

PZR level transmitter LT-1002 is out of service for calibration,

A loss of power occurs to Vital AC Bus RS-1 to PZR level transmitter LT-1001. 1203.015, "Pressurizer System Failure" AOP has been entered due to a loss of pressurizer level control.

Which of the following actions are required by Technical Specification 3.3.15 and Table 3.3.15-1?

- A. Restore one channel to operable status within 30 days.
 - B. Initiate actions to submit a special report immediately.
 - C. Restore one channel to operable status within 30 days or be in Mode 3 within 6 hours and be in Mode 4 in 12 hours.
 - D. Restore one channel to operable status within 7 days or be in Mode 3 within 6 hours and be in Mode 4 in 12 hours.
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 80

QID: 0733

Given:

Reactor tripped 4 minutes ago,
All four RCP are running,

T-hot 590 degrees and rising,
RCS pressure 2000 psig,

A&B OTSG pressures at 900 psig,
A&B OTSG levels at 32 inches and lowering,

The following Annunciators were received:

- K12-A5, "EFW Actuation Signal"
- K12-B5, "P-7A Turbine Trip"
- K02-B6, "A3 L.O. Relay Trip"

Considering current plant conditions and alarms,
which of the following procedures should be used to mitigate this event?

- A. Loss of Subcooling Margin (1202.002)
 - B. Overheating (1202.004)
 - C. Inadequate Core Cooling (1202.005)
 - D. Reactor Trip (1202.001)
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 81

QID: 0734

Given:

Severe Thunderstorms are resulting in changing Main Generator parameters,
Investigation finds the output current to be exceeding the Generator Capability Curve,

Annunciator K04-B6, "Generator H2 Temp High" alarms,
Temperature recorder TR-9001 point 13 (delta T) is in alarm,
Generator H2 Condition Monitor AI-9002 output is reading 0.2,

Which of the following procedures should be used for this event?

- A. "Main Generator Winding Trouble", 1203.045.
 - B. "Generator Capability Curve" 1102.004 Attachment "N".
 - C. "Generator Field Overcurrent" 1203.012C K04-B7.
 - D. "Generator Hydrogen System", 1106.002 Exhibit "A".
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 82

QID: 0735

Given:

100% power,
ICS in manual,

Turbine in Integrated control,
Loss of Condenser Vacuum in progress,

Assuming no Operator actions, which of the following Technical Specification required Core Operating Limits will be challenged FIRST?

- A. Nuclear Overpower trip.
 - B. Reactor Coolant Pressure trip.
 - C. Reactor Coolant High Temperature trip.
 - D. RCS Flow / Axial Power / Imbalance trip.
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 83

QID: 0736

Given:

- Reactor at 100% power.
- Failed fuel ratio, as indicated by the WCO logs, has dropped by 50%.

According to _____?_____, Reactor power must be reduced to _____?_____ power.

- A. 1203.045 Rapid Plant Shutdown 50%
 - B. 1203.019 High Activity In Reactor Coolant 50%
 - C. 1203.045 Rapid Plant Shutdown 60%
 - D. 1203.019 High Activity In Reactor Coolant 60%
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 84

QID: 0421

Given:

Rx trip has occurred and one minute later the following conditions are observed:

- RCS pressure is stable 1700 psig.
- CET average temperature is 600 degrees F.

Which Emergency Operating Procedure should be used to mitigate this event?

- A. Loss of Subcooling Margin (1202.002)
 - B. ESAS (1202.010)
 - C. Overheating (1202.004)
 - D. Inadequate Core Cooling (1202.005)
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 85

QID: 0737

Given:

Reactor Trip due to Degraded Power condition,
"B" OTSG is dry,

Plant is cooling down via Natural Circulation on "A" OTSG,
Tube to Shell delta T is 110 F tubes colder,
Subcooling Margin is adequate.

Which procedural action is correct for this condition?

- A. Reduce cooldown rate per 1203.013, "Natural Circulation Cooldown."
 - B. Establish 40-60 F Tube to Shell delta T per 1203.013, "Natural Circulation Cooldown."
 - C. Reduce cooldown rate per 1202.007, "Degraded Power."
 - D. Establish 40-60 F Tube to Shell delta T per 1202.007, "Degraded Power."
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 86

QID: 0738

Given:

100% Power,

"A" RCP seal bleed off temperature 30 F above 1st stage seal temp,

"A" RCP motor bearing temperature 195 F and rising slowly,

"A" RCP motor inboard vibration alert alarm,

"A" RCP seal cavity pressure oscillations of 450 psia peak to peak.

What is the appropriate action and section of 1203.031, "Reactor Coolant Pump and Motor Emergency" which will mitigate the consequences of these malfunctions?

- A. Reduce reactor power to within the capacity of unaffected RCP combination and trip the pump per Section 1, "Seal Degradation."
 - B. Trip the Reactor and trip the affected pump per Section 1, "Seal Degradation."
 - C. Reduce reactor power to within the capacity of unaffected RCP combination and trip the pump per Section 5, "Motor / Bearing Trouble."
 - D. Trip the Reactor and trip the affected pump per Section 5, "Motor / Bearing Trouble."
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 87

QID: 0607

Given:

- P-36A is the in-service Makeup Pump.
- Pressurizer level has dropped from 220" to 218" in 10 minutes.
- P-36A suction pressure is 40 psig and going down slowly.
- Makeup Tank level is 78" and trending down slowly.
- Seal Injection flow is oscillating from 38 to 43 gpm.
- MU-34D HPI temperature TE-1069A is reading 255°F.
- Aux. Building sump level is going up.

Considering the above conditions, which procedure will direct the Makeup Pump to be secured?

- A. 1203.039, Excess RCS Leakage
 - B. 1203.026, Loss of Reactor Coolant Makeup,
Section 1 - Loss of HPI Pump
 - C. 1203.026, Loss of Reactor Coolant Makeup,
Section 2 - Large Makeup and Purification System Leak
 - D. 1203.032, HPI Line Temperature High
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 88

QID: 0730

Given:

- A reactor trip has occurred.
- Reactor Building pressure is 5 psig.

- RCS pressure is 1580 psig,
- RCS T-cold is 542 degrees F,

- "A" OTSG pressure is 910 psig,
- "B" OTSG pressure is 970 psig,

- "A" OTSG level is 60 inches,
- "B" OTSG level is 30 inches,

Which emergency operating procedure should be used for this event?

- A. ESAS 1202.010
 - B. Overcooling 1202.003
 - C. Tube Rupture 1202.006
 - D. Loss of Subcooling Margin 1202.002
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 89

QID: 0739

Given:

- A Large break LOCA has been in progress for 2 minutes.
- RCS pressure at 300 psig.

- RB pressure is 34 psig and rising.
- Annunciator RB SPRAY P35A ES FAILURE, is in alarm.

Which condition caused the alarm and which procedure will be used?

- A. P35A spray pump has a high motor winding temperature >300 degrees F;
1203.012G, "K08-C6 RB SPRAY P35A ES FAILURE."
 - B. P35A spray flow is less than 1050gpm 55 seconds after ES channel actuation;
1203.012J, "K11-C6 RB SPRAY P35A ES FAILURE."
 - C. P35A spray pump has a high motor winding temperature >300 degrees F;
1203.012J, "K11-C6 RB SPRAY P35A ES FAILURE."
 - D. P35A spray flow is less than 1050gpm 55 seconds after ES channel actuation;
1203.012G, "K08-C6 RB SPRAY P35A ES FAILURE."
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 90

QID: 0740

Given:

- Unit Tripped on loss of D01
- EFW has actuated

What is the status of EFW control valve CV-2646, "P7B to A OTSG" and EFW control valve CV-2648, "P7A to B OTSG"; and which procedure should FIRST be used to address the EFW system?

- A. Valves closed; 1202.003, "Overcooling"
 - B. Valves closed; 1203.036, "Loss of 125 V DC"
 - C. Valves open; 1202.003, "Overcooling"
 - D. Valves open; 1203.036, "Loss of 125 V DC"
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 91

QID: 0742

Given:

- Degraded Power
- Natural Circulation Cooldown in progress

- Pressurizer and Spray fluid delta T is 500 F.
- It has been suggested that Aux Spray be used to lower RCS pressure

When may the SRO approve the use of Aux Spray per 1203.013, "Natural Circulation Cooldown?"

- A. Needed to protect the public safety.
 - B. It is not allowed at this differential temperature.
 - C. Aux spray may be used at any time.
 - D. Only after an Engineering evaluation has been performed.
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 92

QID: 0743

Given:

Plant at NOP NOT

All Rods Latched in preparation for plant startup.

Intermediate range channel 3 (NI505) is reading 1 E-11 amps.

Intermediate range channel 4 (NI506) is reading 1 E-11 amps.

I&C report both Source Range Nuclear Instruments are inoperable.

Which is the most limiting action required per Technical Specification 3.3.9?

- A. Open control rod drive trip breakers.
 - B. Restore the required source range channel to operable status.
 - C. Place reactor in mode 4.
 - D. Suspend operations involving positive reactivity changes.
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 93

QID: 0744

Given:

Plant power 100%

TE-1014 "A" Loop Narrow Range T-hot INSTANTLY fails low

What procedure should be used for this condition?

- A. 1203.001, "ICS Abnormal Operation"
 - B. 1203.012F, "SASS Mismatch" ACA
 - C. 1202.001, "Reactor Trip"
 - D. 1105.006, "Reactor Coolant System NNI"
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 94

QID: 0745

Per Unit 1 Technical Specifications section 5 and OM-123, "Working Hour Limits," which of the following overtime conditions is allowed without prior management approval?

- A. 18 hours of work including 1 hour turnover.
 - B. 16 hours of work including 1 hour of turnover within 24 hours.
 - C. 28 hours of work including 2 hours of turnover within 48 hours.
 - D. 78 hours of work including 4 hours of turnover within one week
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 95

QID: 0746

You are the SRO in Charge of Fuel Handling and a fuel assembly is being removed from the core.

What is the implication of the Fuel Load Cell reading 2600 pounds, and what actions are required if any?

- A. The fuel assembly is improperly grappled;
you must stop fuel handling and repair grapple mechanism .
 - B. The fuel assembly may be hung up on a grid strap;
you must lower fuel assembly to relieve overload and
slowly bump fuel assembly in 1/4 inch steps until grid interface is passed
 - C. The fuel assembly cannot be moved in fast speed;
continue with fuel handling using jog speed.
 - D. No problem exists this is within the allowed weight tolerance;
continue fuel handling.
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 96

QID: 0747

Given:

20:00 Thursday Evening,
You are the Shift Manager,
You receive a report that the Train Bay handrail on the Turbine Deck is missing,

Per EN-WM-100, "Work Request (WR) Generation, Screening and Classification,"
which work order process should be used to immediately correct this condition.

- A. Priority One Work Order
 - B. Priority Two Work Order
 - C. Priority Three Work Order
 - D. Expedited Work Order
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 97

QID: 0748

Given:

LOCA has occurred; with 5% failed fuel.
EOF, TSC, and OSC have been activated and are operational.

CV-1221, Letdown Cooler Outlet valve, failed to close, causing an offsite release due to a downstream break.

Projected dose rates will exceed EPA guidelines at site boundary in 1 hour if leak continues.

The OSC is dispatching a Repair Team of volunteers to attempt close CV-1221.

What is the maximum dose each member of the team is allowed to receive and whose authorization is required?

- A. Planned dose shall not exceed 5 Rem TEDE with RPM authorization.
 - B. Planned dose shall not exceed 10 Rem TEDE with OSC Director's authorization.
 - C. Planned dose shall not exceed 25 Rem TEDE with TSC Director's authorization.
 - D. Planned dose shall not exceed 50 Rem TEDE with EOF Director's authorization.
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 98

QID: 0749

Given:

- Plant shutdown and cool down in progress
- RCS Tave 145°F

- RB Purge in progress to lower RB atmospheric activity
- RB Purge projected release duration is 3 hours
- RB Purge release commenced one (1) hour ago

- Nuclear Chemistry stated gaseous releases projected to exceed quarterly limits by 30%
- Release report preliminary release rate 1.8 E4 cfm
- Design flow rate 1.38 E4 cfm to 2.06 E4 cfm

Which of the following would violate the RB Purge permit and require RB Purge termination?

- A. Actual (stable) RB purge flow rate of 1.5 E4 cfm.
 - B. RB Atmosphere Gaseous Detector slowly trending upward.
 - C. SPING 1 channel 5 two-minute average value exceeds set point.
 - D. Loss of Decay Heat Removal results in RCS temperature at 185°F.
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 99

QID: 0520

The plant is operating at 100% power when the ATC reports a loss of all ICS power as indicated by the ICS Instrument Power Supply status lights on C13 OFF and a loss of all HAND and AUTO lights on ICS H/A stations.

The CRS has entered AOP 1203.001, ICS Abnormal Operations.

Which procedure should be used in conjunction with this AOP?

- A. 1203.047, Loss of NNI Power
 - B. 1202.003, Overcooling
 - C. 1202.001, Reactor Trip
 - D. 1203.027, Loss of Steam Generator Feed
-

ANO Unit 1 - 2008 SRO NRC Written Examination

Question No. 100

QID: 0750

Given:

- Severe Fire in Corridor 98 on Unit 1
- Reactor has been tripped

As CRS what task would you direct the Outside AO to perform and what procedural guidance would be used to perform the this task?

- A. Fire fighting tasks per "Fire or Explosion" procedure 2203.034.
 - B. Securing Polishers per "Reactor Trip/Outage Recovery" procedure 1102.006.
 - C. Placing the Startup Boiler in service per "Startup Boiler Operation" procedure 1106.022.
 - D. Verifying all RCP breakers stay open per "Fires in Areas Affecting Safe Shutdown" procedure 1203.049
-