

## Question #1 Details

**EQ-OP-315-0121-000-B003-001**

**2004 RO NRC Exam**

### Question Text

The plant is operating at 53% power.

Preparations have been made to transition to single loop operations.

Conditions are as follows:

A MG set speed.....30%

B MG set speed.....73%

Total Core flow.....57%

Which of the following describes how B loop flow and total core flow indication will respond when the A MG set is tripped?

### Response A

B flow indication remains constant and

total flow indication lowers due to flow through loop A being subtracted from loop B.

**B flow does not remain constant. Total flow indication answer is correct.**

### Response B

B flow indication remains constant and

total flow indication lowers due to less backpressure on Recirc Pump B.

**B flow does not remain constant. Back pressure may change but is not why the indication changes.**

### Response C - Correct Answer

B flow indication will rise and

total flow indication lowers due to flow through loop A being subtracted from loop B.

**Reference [1](#)**

### Response D

B flow indication will rise and

total flow indication lowers due to less backpressure on Recirc Pump B.

**B Indication will rise. Back pressure may change but is not why the total flow indication changes.**

**Author:** BOLLINGER

**Keywords:** RRS

**Not Archived**

**Date Last Used:**

2004 NRC RO Question

**Time:** 0

**Question ID:** 35292

**Points:** 1

**Parent ID:** 0

**Difficulty:** 2

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295001    | A2.06     | 3.2      | 3.3       |

☒ RO  
☒ SRO  
☐ STAC  
☐ STAI  
☐ LOR  
☐ NOC  
☐ INO

☒ ILO  
☐ ESP  
☐ Part A  
☐ Part B  
☐ Open Ref.  
☒ Close Ref.  
☐ Static

### References:

[ST-OP-315-0021](#)

**Question #2 Details****EQ-OP-315-0165-000-C014-002****2004 RO NRC Exam****Question Text**

Emergency Diesel Generator (EDG) 14 is paralleled to EDG Bus 14ED and is loaded to 1800kW. A lightning strike causes a loss of off-site power.

Which of the following describes the EDG System response?

**Response A**

EDG 14 output breaker will trip, load shed will occur, EDG 14 will continue to run, and the output breaker will remain open

**Although the output breaker will trip, the EDG will not shut down.**

**Response B - Correct Answer**

EDG 14 output breaker will trip, load shed will occur, EDG will continue to run, and the output breaker will reclose.

**Reference: 1**

**Response C**

EDG 14 output breaker will remain closed, EDG 14 will shutdown, and then restart in isochronous mode

**The EDG will remain running, and output breaker trips. The EDG will be in isochronous, but does not restart.**

**Response D**

EDG 14 output breaker will remain closed, EDG 14 will continue running and the governor will shift to isochronous mode.

**Output breaker opens, diesel does operate in isochronous, but after the output breaker re-closes.**

**Author:** BOLLINGER

**Date Last Used:**

**Time:** 3

**Points:** 1

**Difficulty:** 2

**Keywords:** 120/345 kV  
SWITCHYARDS EDG  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35250

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295003    | K2.02     | 4.1      | 4.2       |
| 264000    | K1.01     | 3.8      | 4.1       |
| 264000    | A2.07     | 3.5      | 3.7       |

☒ RO  
☐ SRO  
☐ STAC  
☐ STAI  
☐ LOR  
☐ NOC  
☐ INO

☒ ILO  
☐ ESP  
☐ Part A  
☐ Part B  
☐ Open Ref.  
☒ Close Ref.  
☐ Static

**References:**

[ST-OP-315-0065](#)

### Question #3 Details

**EQ-OP-315-0164-000-A021-001**

**2004 RO NRC Exam**

#### Question Text

The reactor has scrammed.

A Loss of Offsite Power has occurred.

Only EDGs 13 & 14 have started and loaded.

No other operator actions have occurred.

What is the source of power to the station DC loads?

#### Response A

Div 1 DC loads - supplied by the Div 1 Batteries

Div 2 DC loads - supplied by the Div 2 Battery Chargers

**Battery Chargers do not get reenergized by the Load Sequencer. Div 2 EDGs starting make this choice plausible if this not known.**

#### Response B

Div 1 DC loads - supplied by the Div 2 Battery Chargers

Div 2 DC loads - supplied by the Div 2 Battery Chargers

**Battery Chargers do not get reenergized by the Load Sequencer. Div 2 EDGs starting and not knowing the DC system lineup make this choice plausible.**

#### Response C

Div 1 DC loads - supplied by the Div 1 Battery Chargers

Div 2 DC loads - supplied by the Div 2 Batteries

**Battery Chargers do not get reenergized by the Load Sequencer. Not knowing the DC system lineup or EDG lineup make this choice plausible.**

#### Response D - Correct Answer

Div 1 DC loads - supplied by the Div 1 Batteries

Div 2 DC loads - supplied by the Div 2 Batteries

**Battery Chargers do not get reenergized by the Load Sequencer. References: 1, 2, 3**

**Author:** BOLLINGER

**Keywords:** 2004 NRC RO Question

**Not Archived**

**Date Last Used:**

**Time:** 0

**Points:** 1

**Difficulty:** 1

**Question ID:** 35295

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295004    | K2.01     | 3.1      | 3.1       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

#### References:

[ST-OP-315-0064](#)

[20.300.OFFSITE Step AP](#)

[20.300.OFFSITE Bases](#)

## Question #4 Details

**EQ-OP-315-0055-000-A010-001**

**2004 RO NRC Exam**

### Question Text

While operating at 100% power, the Generator Field Breaker 41Cs on COP H11-P804 opens, causing a generator trip.

The generator trip occurred to protect against which ONE of the following?

### Response A

Phase to phase faults in the stator windings.

**Basis for the generator differential trip, not the loss of excitation trip.**

### Response B

Phase to ground faults in the main transformer.

**Basis for transformer over excitation trip**

### Response C - Correct Answer

Excessive current in the generator rotor.

**Reference** [1](#), [2](#)

### Response D

Over voltage on the main transformer.

**Protection for the transformer is an over excitation trip, not over voltage. (see response B) Still not the basis for the field breaker trip, although a good distractor.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 5  
**Points:** 1  
**Difficulty:** 1

**Keywords:** TURBINE STEAM  
RPS  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35284  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295005    | K3.04     | 3.2      | 3.2       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

### References:

[23.118 Step 3.11](#)

[ST-OP-315-0055](#)

## Question #5 Details

**EQ-OP-315-0104-000-B004-003**

**2004 RO NRC Exam**

### Question Text

Following a Reactor Scram from full power total feedwater flow is 15%. The Operator checks the speed of the Recirculation Pumps.

What should the Recirculation Pumps speed be?

#### Response A - Correct Answer

30%

References [1](#), [2](#)

#### Response B

37%

Close to Limiter #2/3

#### Response C

40%

Limiter #2/3, doesn't meet conditions for the limiter.

#### Response D

48%

Close to Limiter #2/3 , doesn't meet conditions for the limiter.

Author: BOLLINGER

Keywords:

**Not Archived**

Date Last Used:

Time: 0

Points: 1

Difficulty: 2

Question ID: 35285

Parent ID: 0

Child ID: 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295006    | AK3.06    | 3.2      | 3.3       |
| 295006    | A1.04     | 3.1      | 3.2       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

#### References:

[ST-OP-315-0004](#)

## Question #6 Details

EQ-OP-315-0099-000-A012-001

2004 RO NRC Exam

### Question Text

The Control Room (CR) has become uninhabitable. As a result, the plant has entered 20.000.19, Shutdown From Outside the Control Room. In accordance with the procedure, the Main Turbine has been tripped before exiting the Control Room.

What is the purpose of tripping the Main Turbine?

### Response A

Prevent MSIV isolation from low pressure.

**Nothing states there would be lowering pressure. Preferred if MSIVs open to maintain pressure with bypass valves.**

### Response B - Correct Answer

Allow bypass valves to control pressure and heat rejection.

**This is preferred, but SRV's can do the same. Reference [ST-OP-315-0099 \(1\), \(2\), 20.000.19](#)**

### Response C

Allow SRVs A and B to control pressure from the Dedicated Shutdown Panel.

**SRV G is controlled from the Dedicated Shutdown Panel. SRVs A and B can be controlled from the Remote Shutdown Panel. The differences are sometimes confused, making this a plausible distractor.**

### Response D

Prevent a high RPV level trip of the Main Turbine.

**The SULCV should be maintaining level if the RFP are running, nonetheless, this is not the reason.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 1

**Keywords:** DEDICATED S/D

**Not Archived**

**Question ID:** 35445  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295016    | K3.02     | 3.7      | 3.8       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[20.000.19](#)  
[ST-OP-315-0099](#)

## Question #7 Details

**EQ-OP-315-0167-000-B003-002**

**2004 RO NRC Exam**

### Question Text

With the plant operating at full power, P4400-F603B, Div 2 EECW Supply Iso Vlv has failed closed.

Which ONE of the following must be taken to ensure cooling to the CRD pumps?

### Response A

- Verify auto start of Div 2 EECW and EESW pumps

**Not completely correct. The pumps auto start, but further actions must be taken to ensure cooling to CRD pumps.**

### Response B - Correct Answer

- Verify auto start of Div 2 EECW and EESW pumps
- Depress Div. 2 EECW Iso Reset Switch
- Open P4400-F604, Div 2 EECW to CRD Sply Iso Vlv

**Closing P4400-F603B causes an auto start of EECW/EESW. References: [ST-OP-315-0067\(1\)](#), [\(2\)](#)**

### Response C

- Close P4400-F601B, Div 2 EECW Return Iso Vlv
- Start Div. 2 EECW and EESW pumps
- Open P4400-F604, Div 2 EECW to CRD SPLY Iso Vlv

**F601B will auto close, Div.2 EECW and EESW auto start.**

### Response D

- Place Div 2 EECW Iso Override Sw keylock switch in MANUAL OVERRD
- Depress Div 2 EECW Iso reset Switch
- Open P4400-F604, Div EECW to CRD Sply Iso Vlv

**Placing Div 2 EECW Iso Override Sw keylock switch in MANUAL OVERRD prevents all operation of EECW and EESW.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 2

**Keywords:** 2004 NRC RO Question

**Not Archived**

**Question ID:** 35313  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295018    | K3.07     | 3.1      | 3.2       |
| 295018    | K1.01     | 3.5      | 3.6       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

### References:

[ST-OP-315-0067](#)

## Question #8 Details

**EQ-OP-315-0171-000-A008-001**

**2004 RO NRC Exam**

### Question Text

Which one of the following describes the operation and function of P50-F402, Station Air to Instrument Air Isolation Valve, during a loss of air event?

### Response A - Correct Answer

Closes to isolate the safety related control air from the station air supply

**The P50-F402 closes when station air drops to 72psig. Reference [ST-OP-315-0071](#)**

### Response B

Closes to separate the two divisions of NIAS, from each other, to ensure redundancy.

**P50-F440 and P50-F440 close to isolate NIAS, P50-F402.**

### Response C

Opens to crosstie the Interruptible Air Supply to allow the Station Air Compressors to supply Division 2 NIAS.

**The valve does not open, P50-F403 crossties Div 2 NIAS to IAS.**

### Response D

Opens to allow the safety related Control Air Compressors to supply each division of NIAS.

**The valve does not open, P50-F440 and P50-F440 actually close to isolate NIAS.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 1

**Keywords:**

**Not Archived**

**Question ID:** 35317

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295019    | K3.03     | 3.2      | 3.2       |
| 295019    | 2.1.27    | 2.8      | 2.9       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[ST-OP-315-0071](#)



## Question #9 Details

**EQ-OP-802-2001-000-R008-003**

**2004 RO NRC Exam**

### Question Text

The plant is in extended maintenance shutdown in Mode 4 when a loss of shutdown cooling occurs. Shutdown cooling cannot be immediately restored to either loop of RHR. The North Reactor Recirc pump is running.

Which ONE of the following is an allowable option for alternate shutdown cooling under these conditions?

### Response A - Correct Answer

RWCU Blowdown to the Main Condenser, makeup with a SBFW pump.

**Reference :** [23.800.04 Page 7](#)

### Response B

Alternate shutdown cooling not required, Recirc pump is running.

**Recirc pump is used to promote circulation, but has no heat removal capacity.**

### Response C

Bleed Steam via SRVs when pressure reaches 100 psig, makeup with Core Spray.

**Only done when Recirc pumps are not available.**

### Response D

Bleed Steam via Bypass Valves when pressure reaches 50 psig, makeup with SBFW.

**Not an acceptable method per procedure.**

**Author:** BOLLINGER

**Keywords:**

**Not Archived**

**Date Last Used:**

**Time:** 3

**Points:** 1

**Difficulty:** 2

**Question ID:**

**Parent ID:**

**Child ID:**

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295021    | A1.01     | 3.4      | 3.4       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[20.800.04](#)

## Question #10 Details

**EQ-OP-802-2001-000-R006-004**

**2004 RO NRC Exam**

### Question Text

An irradiated fuel bundle is being removed from the core. An adjacent bundle has been lifted along with the selected bundle. When noticed, fuel movement is stopped, and the non-selected bundle falls back into the core.

Bubbles come to the pool surface, and the local Continuous Air Monitor (CAM) alarms.

16D1, Refueling Floor High Radiation has alarmed.

What other automatic actions would occur as a result of this alarm?

### Response A

RBHVAC isolates.

**RBHVAC would isolate on a refueling building exhaust high radiation, not an area alarm.**

### Response B - Correct Answer

No automatic actions happen.

**Reference: 16D1, Page 1**

### Response C

CCHVAC System shifts to PURGE mode.

**CCHVAC shifts to RECIRC mode on refueling building exhaust high radiation.**

### Response D

Primary Containment Purge / Vent valves close.

**Fuel Pool Exhaust Rad monitor will cause a secondary containment isolation, not the area alarm.**

**Author:** BOLLINGER

**Keywords:**

**Not Archived**

**Date Last Used:**

**Time:** 0

**Points:** 1

**Difficulty:** 2

**Question ID:** 35409

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295023    | A2.01     | 3.6      | 4.0       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[16D1](#)

## Question #11 Details

**EQ-OP-802-3002-000-0006-033**

**2004 RO NRC Exam**

### Question Text

Drywell sprays are initiated within the safe region of the Drywell Spray Initiation Limit Curve to preclude?

### Response A - Correct Answer

Primary containment failure due to differential pressure.

**The negative pressure capability could be challenged. Reference: ST-OP-802-3002**

### Response B

Excess hydrogen generation due to atomization of cooling water.

**Although the cooling water is assumed to vaporized instantly, there is no hydrogen generation.**

### Response C

An uncontrolled rise in drywell pressure due to the flashing of steam of the drywell spray water.

**There could be an uncontrolled drop in pressure vs. rise in pressure.**

### Response D

An uncontrolled pressure drop due to the displacement of Nitrogen from the drywell to the Torus.

**Although there could be an uncontrolled pressure drop due to the deinerting of the drywell, the flow path is from the torus to the drywell.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 1

**Keywords:** 2004 NRC RO Question

**Not Archived**

**Question ID:** 35381  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295024    | K1.01     | 4.1      | 4.0       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[ST-OP-802-3002](#)

## Question #12 Details

**EQ-OP-315-0105-000-B004-001**

**2004 RO NRC Exam**

### Question Text

A pressure transient has occurred with reactor pressure exceeding the reactor scram setpoint and initiating a reactor scram.

RPV pressure is 1000 psig and rising slowly.

Which of the following describes the expected indications if this transient resulted in a leaking SRV?

### Response A

SRV Tailpipe temperature approximately 520°F; red SRV OPEN light ON.

Temperature of 520°F would indicate SRV open, not leaking. SRV OPEN light ON is based on pressure limit, and the limit would not be reached for a leaking SRV.

### Response B

SRV Tailpipe temperature approximately 520°F; SRV OPEN Annunciator 1D61 ON.

Temperature of 520°F would indicate SRV open, not leaking. SRV OPEN Annunciator 1D61 ON is correct.

### Response C

SRV Tailpipe temperature approximately 260°F; red SRV OPEN light ON.

Temperature is correct. SRV OPEN light ON is based on pressure limit, and the limit would not be reached for a leaking SRV.

### Response D - Correct Answer

SRV Tailpipe temperature approximately 260°F; SRV OPEN Annunciator 1D61 ON.

Temperature is correct, causes Annunciator 1D61. Reference: [ST-OP-315-0005\(1\)](#) [\(2\)](#)

Author: BOLLINGER

Keywords: 2004 NRC RO Question

**Not Archived**

Date Last Used:

Time: 3

Points: 1

Difficulty: 1

Question ID: 35335

Parent ID: 0

Child ID: 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295025    | K1.03     | 3.6      | 3.8       |
| 295025    | A1.03     | 4.4      | 4.4       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[ARP 1D61](#)

[ST-OP-315-0005](#)

### Question #13 Details

**EQ-OP-315-0127-000-A018-005**

**2004 RO NRC Exam**

#### Question Text

The plant is operating at 100% power.

A failure of the governor/pressure regulator occurs which causes the turbine control valves to fully open.

Which one of the following RPS functions will scram the reactor?

#### Response A- Correct Answer

Main Steam Isolation Valve Closure

**Provided to limit the amount of fission product release. Reference: ST-OP-315-0027**

#### Response B

APRM flux - Upscale

**The setpoints are selected to provide adequate margin for the Safety Limits.**

#### Response C

Low RPV water level

**The reactor vessel water level trip setpoint was chosen far enough below the normal operating level to avoid spurious trips but high enough above the fuel to assure that there is adequate protection for the fuel and pressure limits.**

#### Response D

Turbine Stop Valve Closure

**The turbine stop valve closure trip anticipates the pressure, neutron flux, and heat flux increases that would result from closure of the stop valves**

**Author:** BOLLINGER

**Keywords:** RPS

**Not Archived**

**Date Last Used:**

**Time:** 3

**Points:** 1

**Difficulty:** 1

**Question ID:** 35370

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 212000    | 2.1.27    | 2.8      | 2.9       |
| 295025    | A2.02     | 4.2      |           |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

#### References:

[ST-OP-315-0027](#)

## Question #14 Details

**EQ-OP-802-3002-000-0006-032**

**2004 RO NRC Exam**

### Question Text

During an ATWS, boron injection must be started before torus water temperature reaches a certain limit.

What is the reason for injecting before this temperature?

### Response A - Correct Answer

Ensure the reactor is shutdown before exceeding the torus water temperature upper limit.

**Preclude exceeding the Heat Capacity Limit, which would require emergency depressurization.**

**Reference: 1**

### Response B

Prevent opening torus to drywell vacuum breakers.

**Higher temperature in the torus could cause the breakers to open, but it's not the reason boron is injected.**

### Response C

Allow continued RCIC operation.

**Although torus temperature can limit RCIC operation, it's not the specific reason boron is injected.**

### Response D

Ensure adequate NPSH for LPCI.

**Although there is a limit for NPSH, it's not related to SLC injection.**

**Author:** BOLLINGER

**Keywords:** EOP TWT

**Not Archived**

**Date Last Used:**

**Time:** 3

**Points:** 1

**Difficulty:** 1

**Question ID:** 35371

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295026    | 2.4.18    | 2.7      | 3.6       |

|                                         |                                         |
|-----------------------------------------|-----------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP            |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A         |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B         |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.      |
| <input type="checkbox"/> NOC            | <input type="checkbox"/> Close Ref.     |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static         |

### References:

29.100.01 Sh 6

ST-OP-802-3002

## Question #15 Details

**EQ-OP-802-3002-000-0005-006**

**2004 RO NRC Exam**

### Question Text

A LOCA has occurred outside of the primary containment. Plant conditions are as follows:

Reactor Building Temperature (near all instrument runs) - 220°F and stable.

Reactor Pressure - 250 psig and stable.

Drywell Temperature - 155°F and stable.

Assuming the indicated level on each of the below instruments is 163 inches, which level instrument may be used for trending indication?

### Response A

Flood Up

Minimum indicated level is 190 inches between 150 and 250°F

### Response B

Narrow Range

Maximum RB run temperature of 103 °F

### Response C - Correct Answer

Wide Range

See [Reference 29.100.01 Sheet 6 Caution 3.A](#)

### Response D

Core Level

Maximum upper range is 50 inches.

Author: BOLLINGER

Keywords: 2004 NRC RO Question

**Not Archived**

Date Last Used:

Time: 0

Points: 1

Difficulty: 2

Question ID: 35417

Parent ID: 0

Child ID: 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295028    | K1.01     | 3.5      | 3.7       |

☒ RO  
☒ SRO  
☐ STAC  
☐ STAI  
☐ LOR  
☐ NOC  
☐ INO

☒ ILO  
☐ ESP  
☐ Part A  
☐ Part B  
☐ Open Ref.  
☒ Close Ref.  
☐ Static

### References:

[29-100-01 SH 6](#)

## CAUTIONS

| INSTRUMENT                                                                      | RANGE(IN.) | MAXIMUM REACTOR BUILDING RUN TEMPERATURE (°F) | MINIMUM INDICATED LEVEL(IN.) |
|---------------------------------------------------------------------------------|------------|-----------------------------------------------|------------------------------|
| Core Level Detector<br>(B21-N085A)                                              | -150 to 50 | 327                                           | -142                         |
| Core Level Detector<br>(B21-N085B)                                              | -150 to 50 | 309                                           | -134                         |
| Narrow Range Level Detectors<br>(B21-N080A,B)<br>(B21-N095A,C)<br>(C32-N004A,C) | 160 to 220 | 103                                           | 169                          |
| Narrow Range Level Detectors<br>(B21-N080C,D)<br>(B21-N095B,D)<br>(C32-N004B,D) | 160 to 220 | 273                                           | 165                          |

- A. Wide range level detectors (10 to 220 IN.)  
(B21-N081A,B)  
(B21-N091A,C)

| HIGHEST REACTOR BUILDING RUN TEMPERATURE (°F) BETWEEN LOW | HIGH | MINIMUM INDICATED LEVEL(IN.) |
|-----------------------------------------------------------|------|------------------------------|
| -                                                         | 80   | 10                           |
| 80                                                        | 150  | 15                           |
| 150                                                       | 250  | 26                           |
| 250                                                       | 350  | 40                           |

- B. Wide range level detectors (10 to 220 IN.)  
(B21-N081C,D)  
(B21-N091B,D)

| HIGHEST REACTOR BUILDING RUN TEMPERATURE (°F) BETWEEN LOW | HIGH | MINIMUM INDICATED LEVEL(IN.) |
|-----------------------------------------------------------|------|------------------------------|
| -                                                         | 167  | 10                           |
| 167                                                       | 250  | 20                           |
| 250                                                       | 350  | 36                           |

- C. Flood up level detector (160 to 560 IN.)  
(B21-N027)

| HIGHEST DRYWELL RUN TEMPERATURE (°F) BETWEEN LOW | HIGH | MINIMUM INDICATED LEVEL(IN.) |
|--------------------------------------------------|------|------------------------------|
| -                                                | 150  | 175                          |
| 150                                              | 250  | 190                          |
| 250                                              | 350  | 210                          |
| 350                                              | 450  | 237                          |
| 450                                              | 550  | 274                          |



## Question #16 Details

**EQ-OP-315-0139-000-B003-002**

**2004 RO NRC Exam**

### Question Text

Due to a valving error the torus water level has reached a low Torus Water Level EOP entry point. What automatic action is expected to occur at this point?

### Response A

RCIC suction will shift to the CST.

**RCIC switches from the CST to the Torus based on CST level, not Torus level.**

### Response B

HPCI suction will shift to the CST.

**The EOP LOW entry condition is -2 inches, not +2 inches.**

### Response C - Correct Answer

The Torus Water Management System pumps will trip.

**Reference** [ST-OP-315-0069 \(1\)](#), [\(2\)](#)

### Response D

The Torus Water Management System torus suction valves will close.

**Action is wrong. Plausible because there is a Group 12 isolation that closes these valves on torus sump level of +39 inches.**

**Author:** BOLLINGER

**Keywords:**

**Not Archived**

**Date Last Used:**

**Time:** 2

**Points:** 1

**Difficulty:** 1

**Question ID:** 35375

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295030    | A2.1      | 4.1      | 4.2       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[ST-OP-315-0069](#)

[7D71](#)

## Question #17 Details

**EQ-OP-315-0142-000-A021-003**

**2004 RO NRC Exam**

### Question Text

While the plant was operating in Mode 1, a LOCA and Loss of Offsite Power occurred and the following conditions exist :

RPV water level.....+ 76 inches (lowering 4 inches/min)

DW pressure.....17.5 psig (slowly rising)

EDGs.....No. 14 ONLY running supplying associated ESF Bus

Given the above parameters and assuming no operator action involving ADS, identify which of the following describe the expected response of the ADS System.

If the low pressure ECCS Systems function as designed, ADS will begin depressurizing the plant:

### Response A - Correct Answer

in approximately 13 minutes.

**High DW pressure and L1 after 11 minutes plus 105 minutes ~ 13 minutes.**

**Reference:** [ST-OP-315-0042 Figure 4](#)

### Response B

in approximately 20 minutes.

**Could be thought correct if the 7 minute wait on RPV level less than Level 1 is mistaken.**

### Response C

105 seconds following EDG 11 restart.

**The logic has to satisfy high DW pressure AND L1 or L1 greater than 7 minutes, then 105 sec timer, then satisfy pumps running portion of logic.**

### Response D

525 seconds following EDG 12 restart.

**The logic has to satisfy high DW pressure AND L1 or L1 greater than 7 minutes, then 105 sec timer, then satisfy pumps running portion of logic. 7 minutes and 105 seconds = 525 seconds.**

**Author:** BOLLINGER

**Date Last Used:**

**Time:** 4

**Points:** 1

**Difficulty:** 3

**Keywords:** ADS

2004 NRC RO Question

**Not Archived**

**Question ID:** 35376

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 218000    | K5.01     | 3.8      | 3.8       |
| 218000    | 2.1.28    | 3.2      | 3.3       |
| 295031    | K2.08     | 4.2      | 4.3       |

### References:

23.201

[LP-OP-315-0142](#)

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

## Question #18 Details

**EQ-OP-802-3002-000-0008-011**

**2004 RO NRC Exam**

### Question Text

The plant has experienced an ATWS and SLC has been injected.

Which of the following items is assumed in determining the Hot Shutdown Boron Weight?

### Response A

RPV voids are at maximum.

**No voids are assumed**

### Response B

No Xenon is present in the core.

**No practical for after a power change.**

### Response C - Correct Answer

RPV water level is at the high level trip setpoint.

**Reference:** [ST-OP-8002-3002](#)

### Response D

RWCU is in normal operation.

**Would be isolated when SLC is initiated.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 2  
**Points:** 1  
**Difficulty:** 1

**Keywords:** EOP RPV Power  
EOP Alt Boron Inj  
ATWS  
SLC

**Not Archived**

**Question ID:** 35475  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295037    | K3.01     | 4.4      | 4.5       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

## Question #19 Details

**EQ-OP-832-0001-000-0005-004**

**2004 RO NRC Exam**

### Question Text

An accident has happened at Fermi 2 that causes the Shift Manager to declare an UNUSUAL EVENT.

A short time later, radiation levels at the site boundary reach 11 mr/hr, and the Shift Manager declares an ALERT.

Which ONE of the following describes what happens at an ALERT that did not happen at UNUSUAL EVENT?

### Response A

Radiological Emergency and Personnel Monitoring Teams are activated.

**Also done at an UNUSUAL EVENT**

### Response B

Offsite Protective Action Recommendations (PARS) are calculated.

**Emergency Plan provides for protection of all members of the public**

### Response C

Joint Public Information Center (JPIC) is activated.

**Done at Site Area Emergency.**

### Response D - Correct Answer

Assembly and accountability is ordered in the Protected Area.

**Reference :** [EP-103 Page 6](#)

**Author:** BOLLINGER

**Keywords:** 2004 NRC RO Question

**Not Archived**

**Date Last Used:**

**Time:** 3

**Points:** 1

**Difficulty:** 1

**Question ID:** 35394

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295038    | K3.01     | 3.6      | 4.5       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[EP-103](#)

## Question #20 Details

**EQ-OP-315-0172-000-C001-001**

**2004 RO NRC Exam**

### Question Text

A fire has occurred in the plant. A smoke damper has isolated a HVAC system due to a suppression system initiation.

What must be done to re-open the smoke damper?

The damper is....

### Response A

reset locally, then opened.

**Actually reset from the Control Room.**

### Response B

reset locally, opens automatically.

**Actually reset from the Control Room, no automatic opening.**

### Response C

disassembled and the fusible link replaced.

**This would be correct for a fire damper, not a smoke damper.**

### Response D - Correct Answer

opened from the Control Room.

**Reference:** [ST-OP-315-0072](#)

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 2  
**Points:** 1  
**Difficulty:** 1

**Keywords:** FIRE PROT/DET  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35378  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 600000    | A1.05     | 3.0      | 3.5       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[ST-OP-315-0072](#)

## Question #21 Details

**EQ-OP-315-0141-000-A015-001**

**2004 RO NRC Exam**

### Question Text

The plant is in Mode 3 with RHR Div 1 in Shutdown Cooling operation.

RHR pump A is running.

Annunciator 1D33, RHR System Overpressure, is received.

Which one of the following describes the plant response to this condition?

### Response A

Group 3 isolation and RHR pump A trip.

**Group 3 is an RHR isolation on Level 1 or Hi drywell pressure, RHR pump A trip would trip on Group 4 not a Group 3.**

### Response B

Group 4 isolation and RHR pump A continues to run.

**Group 4 isolation is based on overpressure and is correct, but the RHR pump A would trip if there was a Group 4 isolation.**

### Response C

Group 3 isolation and RHR pump A continues to run.

**Group 3 is an RHR isolation on Level 1 or Hi drywell pressure, RHR pump A continuing to run would be correct for Group 3.**

### Response D - Correct Answer

Group 4 isolation and RHR pump A trip.

**Group 4 isolation is based on overpressure, pump trips due to low suction pressure. Reference: [ST-OP-315-0048](#), [ST-OP-315-0041](#).**

**Author:** BOLLINGER

**Date Last Used:**

**Time:** 2

**Points:** 1

**Difficulty:** 2

**Keywords:** RHR - SDC

PCIS

2004 NRC RO Question

**Not Archived**

**Question ID:** 35379

**Parent ID:** 0

**Child ID:** 0

**KA System**

295007

**KA Number**

K2.06

**RO Value**

3.5

**SRO Value**

3.7

☒ RO

☒ SRO

☐ STAC

☐ STAI

☐ LOR

☐ NOC

☐ INO

☒ ILO

☐ ESP

☐ Part A

☐ Part B

☐ Open Ref.

☒ Close Ref.

☐ Static

### References:

ST-OP-315-0041

ST-OP-315-0048

## Question #22 Details

**EQ-OP-315-0139-000-C001-001**

**2004 RO NRC Exam**

### Question Text

HPCI and RCIC have automatically started following a loss of feedwater.

RPV level increases to 220 inches, and a short time later HPCI turbine speed is 0 RPM.

As RPV level begins to decrease below 160 inches the CRS directs HPCI to be restarted.

What action is taken to restart HPCI?

### Response A

Open E4150-F001 turbine steam supply isolation valve.

**The trip logic is automatically reset at Level 2, won't be able to open this valve.**

### Response B

Open E4150-F003 HPCI steam supply outboard isolation valve.

**The trip logic is automatically reset at Level 2, won't be able to open this valve.**

### Response C

Depress the HPCI initiation signal reset pushbutton and start the aux oil pump.

**There is no initiation signal present, so resetting will have no effect.**

### Response D - Correct Answer

Depress the reactor high water level signal reset pushbutton.

**The trip logic is automatically reset at Level 2, to restart before Level 2, the trip signal must be reset. Reference: [ST-OP-315-0039](#), [23.202](#) page 35.**

**Author:** BOLLINGER

**Keywords:** HPCI

**Not Archived**

**Date Last Used:**

2004 NRC RO Question

**Time:** 0

**Question ID:** 35380

**Points:** 1

**Parent ID:** 0

**Difficulty:** 2

**Child ID:** 0

**KA System**

**KA Number**

**RO Value**

**SRO Value**

295008

A1.04

3.5

3.5

☒ RO

☒ ILO

☒ SRO

☐ ESP

☐ STAC

☐ Part A

☐ STAI

☐ Part B

☐ LOR

☐ Open Ref.

☐ NOC

☒ Close Ref.

☐ INO

☐ Static

### References:

[23.202](#)

[ST-OP-315-0039](#)

## Question #23 Details

**EQ-OP-315-0121-000-A012-001**

**2004 RO NRC Exam**

### Question Text

A plant transient has occurred. Plant conditions are:

Mode 3

RPV level is 170"

RPV pressure is 950 psig.

Recirc Pumps A & B have tripped.

Which RPV level instrument would provide the most accurate level reading at this time based on its calibration conditions?

### Response A

Narrow Range

**Calibrated for best indication with jet pumps running.**

### Response B - Correct Answer

Wide Range

**Reference:** [ST-OP-315-0021](#)

### Response C

Floodup

**Calibrated for 0 Psig, 120°F, with no jet flow.**

### Response D

Core Level

**Outside the calibrated level band of 150 to 50 inches.**

**Author:** BOLLINGER

**Keywords:** RPV INST

**Date Last Used:**

**Time:** 0

**Points:** 1

**Difficulty:** 2

**Not Archived**

**Question ID:** 35453

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295009    | K2.01     | 3.9      | 4.0       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References

[ST-OP-315-0021](#)



## Question #24 Details

**EQ-OP-802-3002-000-0004-022**

**2004 RO NRC Exam**

### Question Text

During an event in the plant, an SRV has opened, causing Torus temperature to reach 120°F. What is the significance of torus water level dropping to -14 inches?

### Response A

Terminate operation of LPCI due to exceeding pump NPSH limits.

**The LPCI NPSH limits are not in effect until 167°F.**

### Response B

Obtain torus water temperatures from the T23-R800A/B, Suppression Chamber Bulk Water Temperature Recorder on the H11-P601 panel.

**All of the thermocouples providing input to this recorder are uncovered and will indicate air temperature at this level.**

### Response C - Correct Answer

Obtain torus water temperatures from T50-R800A/B, Primary Containment Air and Water Temperature recorders on the H11-P601 / P602 panels.

**Reference:** [ST-OP-802-3002](#)

### Response D

Terminate operation of HPCI due to exceeding high oil temperatures.

**This limit is not considered until 140°F.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 1

**Keywords:**

**Not Archived**

**Question ID:** 35385  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295013    | A2.01     | 3.8      | 4.0       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[ST-OP-802-3002](#)

## Question #25 Details

**EQ-OP-802-3005-000-0010-010**

**2004 RO NRC Exam**

### Question Text

The first override statement in the Secondary Containment EOP states that if RB HVAC or fuel pool vent exhaust radiation levels exceeds certain limits, then the operator shall confirm isolation of RB HVAC and initiation of SGTS.

Which of the following best describes why the above must be confirmed or manually initiated?

### Response A

Confirming isolation of RBHVAC subsequent to receipt of a high radiation signal terminates any further release of radioactivity to the Reactor Building from this system.

**RBHVAC actually exhausts air from the Reactor Building, not the other way around.**

### Response B - Correct Answer

SGTS is the normal mechanism employed under post-transient conditions to maintain Reactor Building Pressure negative with respect to the atmosphere.

**Reference:** [ST-OP-8002-3005](#)

### Response C

Exhaust from SGTS is processed and directed to an elevated release point before being discharged to the Reactor Building.

**Exhaust from the SGTS is discharged to atmosphere.**

### Response D

Operation of SGTS will ensure that the Control Room envelope is maintained at a positive pressure.

**SGTS designed to maintain negative pressure in the Reactor Building.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 1

**Keywords:**

**Archived**

**Question ID:** 28725  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295017    | K3.02     | 3.3      | 3.5       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[ST-OP-802-3005](#)

## Question #26 Details

**EQ-OP-315-0173-000-B003-001**

**2004 RO NRC Exam**

### Question Text

The plant is operating at 100% power with Division 1 of Control Center Heating, Ventilation and Air Conditioning (CCHVAC) in service, when the following alarms occur:

3D32, Div I/II RB Vent Exh Radn Monitor Upscale  
3D36, Div I/II RB Vent Exh Radn Monitor Upscale Trip

How do the following CCHVAC components respond?

### Response A

Division 2 North and South Emergency Intake Dampers opens.

**Only the Division 1 Emergency Intake Dampers Open.**

### Response B - Correct Answer

Division 1 Normal Intake Dampers close.

**Reference** [ST-OP-315-0027](#)

### Response C

Division 2 Makeup Air Fan stops.

**These fans start, but one Division must be stopped manually to prevent exceeding pressure limits.**

### Response D

Division 1 Return Air Fan stops.

**These fans will not stop.**

**Author:** BOLLINGER

**Keywords:**

**Not Archived**

**Date Last Used:**

**Time:** 5

**Points:** 1

**Difficulty:** 2

**Question ID:** 35387

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295033    | A1.08     | 3.6      | 3.8       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[LP-OP-315-0173](#)

[3D36](#)

## Question #27 Details

**EQ-OP-802-3004-000-0013-004**

**2004 RO NRC Exam**

### Question Text

The plant has experienced a transient that requires emergency depressurization due to high drywell hydrogen and oxygen levels.

Why would the crew perform this emergency depressurization?

#### Response A - Correct Answer

Burning of these gasses may damage equipment important to the safe shutdown of the plant.

**Reference:** [ST-OP-802-3002](#)

#### Response B

Hydrogen and oxygen concentrations can be prevented from exceeding explosive limits.

**The ED happens at explosive limits, so the limits have been exceeded.**

#### Response C

Hydrogen and oxygen concentrations are outside the limits for safe operation of the recombiners.

**Although this is true for the recombiners, it's not true for the reason for ED.**

#### Response D

Spraying the drywell is ineffective at these levels of hydrogen and oxygen.

**Spraying is not ineffective, has nothing to do with ED.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 0  
**Points:** 1  
**Difficulty:** 1

**Keywords:**

**Not Archived**

**Question ID:** 35224  
**Parent ID:** 34091  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 500000    | K3.04     | 3.1      | 3.9       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

#### References:

[ST-OP-802-3002](#)

## Question #28 Details

**EQ-OP-315-0141-000-A021-011**

**2004 RO NRC Exam**

### Question Text

The plant has experienced a LOCA with the following conditions:

EDG.....13 not running  
RPV Level.....25 inches  
RPV Pressure.....425 psig  
Drywell Pressure.....2.5 psig  
Torus Water Temperature.....128°F  
A Reactor Recirc MG set.....tripped  
B Reactor Recirc MG set.....tripped

B3105-F031A, Recirc Loop A discharge isolation valve, is shut.

What is the current status of the RHR system?

### Response A

RHR pumps A, C & D are running, injecting into Loop A

**No injection until about 300 psig, there's been no LOOP, so EDG 13 not running doesn't matter.**

### Response B

All RHR pumps are running, injecting into Loop A

**All pumps are running, but no injection because of the RPV pressure.**

### Response C

RHR pumps A, C & D are running and not injecting

**All pumps are running, since there's been no LOOP**

### Response D - Correct Answer

All RHR pumps are running and not injecting

**Reference:** [ST-OP-315-0041](#)

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 2

**Keywords:**

**Not Archived**

**Question ID:** 35443  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 203000    | A1.01     | 4.2      | 4.3       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[ST-OP-315-0041](#)

**Question #29 Details****EQ-OP-315-0141-000-A013-001****2004 RO NRC Exam****Question Text**

The General Operating Procedure for reactor shutdown and cooldown directs the operator to raise RPV water level to above 220" prior to entering Shutdown Cooling (SDC).

What is the reason for raising water level above the normal level?

**Response A**

Ensures adequate NPSH for RHR pumps.

**Incorrect because NPSH for RHR pumps is a function of Torus Temp and RPV level.**

**Response B**

Satisfies the interlock required for opening RHR SDC valves.

**Incorrect because RHR SDC valve interlock is >L3.**

**Response C**

Provides additional inventory for RHR system warmup in preparation for SDC.

**Incorrect because 220" has nothing to do with inventory for piping warmup**

**Response D - Correct Answer**

Provides adequate natural circulation to minimize temperature stratification during SDC.

**Reference:** [22.000.04 Reactor shutdown procedure, page 37, ST-OP-315-0141](#)

**Author:** CADDEN  
**Date Last Used:** 10/23/2000  
**Time:** 3  
**Points:** 1  
**Difficulty:** 1

**Keywords:** RHR - SDC  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35386  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 295009    | K1.05     | 3.3      | 3.4       |
| 205000    | K5.03     | 2.8      | 3.1       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**

[22.000.04 Reactor shutdown procedure, page 37](#)  
[ST-OP-315-0141](#)

### Question #30 Details

**EQ-OP-315-0139-000-A021-004**

**2004 RO NRC Exam**

#### Question Text

During an AUTOMATIC initiation of HPCI, the HPCI Pump flow is 5200 GPM.

The E4150-F012 Pump Min Flow Valve fails open.

Five minutes later, the HPCI system will have:

#### Response A - Correct Answer

raised HPCI turbine speed.

**Reference:** [ST-OP-315-0039](#)

#### Response B

lowered HPCI turbine speed.

**The HPCI controller is attempting to maintain 5200 gpm going to the RPV, so speed will not be lowered.**

#### Response C

indicated HPCI flow greater than 5200 GPM.

**Indicated flow will stay at 5200 gpm, since the controller senses flow going to the vessel.**

#### Response D

indicated HPCI flow less than 5200 GPM.

**Indicated flow will stay at 5200 gpm, since the controller senses flow going to the vessel.**

**Author:** BOLLINGER

**Keywords:** HPCI

**Not Archived**

**Date Last Used:**

**Time:** 2

**Points:** 1

**Difficulty:** 2

**Question ID:** 30766

**Parent ID:** 29955

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 206000    | K3.01     | 4.0      | 4.0       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

#### References:

[ST-OP-315-0039](#)

**Question #31 Details**  
**EQ-OP-315-0139-000-A021-003**

**2004 RO NRC Exam**

**Question Text**

High Pressure Coolant Injection (HPCI) has automatically initiated with the following indications:

Reactor water level.....+40" on WR level instrument  
HPCI Barometric condenser condensate pump.....running  
HPCI Barometric condenser vacuum pump.....running  
HPCI Auxiliary Oil pump.....not running  
HPCI flow.....5,000 gpm

RPV level subsequently drops to +20 inches on WR level indication. How should HPCI respond?

**Response A**

HPCI auxiliary oil pump will auto start

**Incorrect because the aux oil pump is not required while HPCI is at rated speed**

**Response B**

HPCI flow will increase to 5,200 gpm

**Incorrect because the flow controller has not been changed**

**Response C - Correct Answer**

HPCI Barometric condenser condensate pump will trip

**Reference: [ST-OP-315-0039](#)**

**Response D**

HPCI will continue to operate in it's current configuration

**Incorrect because the barometric condenser condensate and vacuum pumps trip at 31" RPV level**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 2  
**Points:** 1  
**Difficulty:** 2

**Keywords:** HPCI  
LOCA  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35384  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 206000    | K5.02     | 2.8      | 2.9       |
| 206000    | A3.05     | 4.3      | 4.3       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**

[ST-OP-315-0039](#)



**Question #32 Details**  
**EQ-OP-315-0140-000-C005-001**

**2004 RO NRC Exam**

**Question Text**

During operation at 100% power a LOCA occurs and the following conditions exist :

RPV power.....0%, rods full in  
RPV pressure.....100 psig  
RPV water level.....+ 25 inches (slowly rising)  
RHR System.....both divisions injecting to RPV  
Core Spray System.....both divisions injecting to RPV

An electrical fault in Core Spray Pump B motor windings causes the pump breaker to trip on overcurrent relays.

Given the above conditions, identify which one of the following actions are required by the operating crew.

**Response A**

Throttle closed E2150-F005A to avoid pump runout on pump A.

**Incorrect because no Division one pumps tripped**

**Response B - Correct Answer**

Throttle closed E2150-F005B to avoid pump runout on pump D.

**Reference: [23.203, precautions and limitations](#)**

**Response C**

Throttle open E2150-F005A to maintain division one flow  $\geq 3175$  gpm.

**Incorrect because Division one flow should not have changed**

**Response D**

Throttle open E2150-F005B to maintain division two flow  $\geq 3175$  gpm.

**Incorrect because Division two flow can not achieve  $>3175$ gpm with only one pump**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 2  
**Points:** 1  
**Difficulty:** 2

**Keywords:** CSS  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35383  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 209001    | A2.01     | 3.4      | 3.4       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**

[23.203, precautions and limitations](#)  
[ST-OP-3115-0140](#)

### Question #33 Details

**EQ-OP-315-0114-000-A021-001**

**2004 RO NRC Exam**

#### Question Text

SLC injection becomes necessary. The Operator places the initiation switch to PUMP A and the following occurs:

Squib continuity lights go out.  
SLC Ignition Continuity Loss annunciator alarms.  
SLC Pump A fails to start.

The operator places the initiation switch to PUMP B and SLC Pump B starts. Which one of the following actions should be taken NEXT?

#### Response A

Attempt to start SLC Pump A a second time.

**If the B pump is running, there is no need to start the A pump.**

#### Response B

Direct an Operator to isolate SLC Pump A.

**There is no need to isolate the pump if Pump B is running with no indication of a leak.**

#### Response C

Determine if the B explosive valve fired.

**The only indication is the loss of continuity, then other indications such as power, tank level.**

#### Response D - Correct Answer

Check for indications of SLC flow to the RPV.

**Reference** [ST-OP-315-0014 \(1\), \(2\)](#)

**Author:** BOLLINGER

**Keywords:** SLC

**Not Archived**

**Date Last Used:**

**Time:** 2

**Points:** 1

**Difficulty:** 2

**Question ID:** 35465

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 211000    | A1.02     | 3.8      | 3.9       |
| 211000    | A4.08     | 4.2      | 4.2       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

#### References:

[ST-OP-315-0014](#)

**Question #34 Details**  
**EQ-OP-315-0127-000-A002-001**

**2004 RO NRC Exam**

**Question Text**

Which one of the following statements describes the basis for automatic scrams associated with High Containment Pressure?

**Response A**

to limit the fission product release from the fuel into containment

**Incorrect because this is the basis for the Hi Main Steam Line Radiation Scram**

**Response B**

to counteract the pressure increase by rapidly reducing core power

**Incorrect because this is the basis for the Hi RPV Pressure Scram**

**Response C**

to anticipate the rise in containment pressure and prevent exceeding the containment design pressure

**Incorrect because the Hi DW pressure scram is not based on containment pressure limits**

**Response D - Correct Answer**

to minimize the possibility of fuel damage and to reduce the amount of energy being added to the coolant and the containment

**Reference:** [ST-OP-315-0127](#)

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 2  
**Points:** 1  
**Difficulty:** 1

**Keywords:** RPS  
CONTAINMENT  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35382  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 212000    | K1.13     | 3.5      | 3.6       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**  
[ST-OP-315-0127](#)

**Question #35 Details****EQ-OP-315-0127-000-A018-006****2004 RO NRC Exam****Question Text**

The plant was operating at 65% power when RPS Motor Generator Set "A" tripped. Shortly after, a plant transient caused RPV level to drop to 165".

How will the RPS system respond to this event?

**Response A - Correct Answer**

Full Reactor Scram

**Reference:** [ST-OP-315-0027\(1\), \(2\)](#)**Response B**

Half Scram on RPS A

**Incorrect because RPS will get ½ Scram on A due to loss of power, and a full scram when level goes <L3.****Response C**

Half Scram RPS B

**Incorrect because RPS will get ½ Scram on A due to loss of power, and a full scram when level goes <L3.****Response D**

No SCRAM will occur

**Incorrect because RPS will get ½ Scram on A due to loss of power, and a full scram when level goes <L3.**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 0  
**Points:** 1  
**Difficulty:** 2

**Keywords:** RPS  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35374  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 212000    | K4.09     | 3.8      | 3.9       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**[ST-OP-315-0027](#)

Question #36 Details  
EQ-OP-315-0123-000-A011-001

2004 RO NRC Exam

Question Text

The RETRACT PERMIT light for IRM G is NOT lit. Which of the following describes the effect on IRM G?

Response A

IRM will NOT retract.

**Incorrect because the IRM will retract**

Response B - Correct Answer

The IRM can be retracted. Retracting it will cause a Rod Block.

**Reference:** [ST-OP-315-0023](#)

Response C

The IRM can be retracted ONLY if IRM G is on Range 1. Retracting it will cause a Rod Block

**Incorrect because the IRM will retract on all ranges**

Response D

The IRM can be retracted ONLY if IRM G is on Range 1. Retracting it will NOT cause a Rod Block.

**Incorrect because the IRM will retract on all ranges and will cause a rod block**

Author: CADDEN  
Date Last Used:  
Time: 0  
Points: 1  
Difficulty: 1

Keywords: IRM  
2004 NRC RO Question

**Not Archived**

Question ID: 35372  
Parent ID: 0  
Child ID: 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 215003    | K4.05     | 2.9      | 3.0       |
| Generic   | 2.2.2     | 4.0      | 3.5       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

References:

[ST-OP-315-0023](#)

Question #37 Details  
EQ-OP-315-0122-000-A013-002

2004 RO NRC Exam

Question Text

The plant was operating at 60% power when a loss of 24/48 VDC power occurred? How will this loss impact the plant?

Response A

Main Turbine Trip

**Incorrect because MT trip logic powered from BOP battery**

Response B

Loss of HPCI logic

**Incorrect because HPCI logic powered from ESF battery**

Response C - Correct Answer

Loss of SRMs and IRMs

**Reference: ST-OP-315-0022**

Response D

Loss of Feedwater Level Control

**Incorrect because FW Level Control powered from UPS A**

Author: CADDEN

Keywords: DC ELEC

**Not Archived**

Date Last Used:

2004 NRC RO Question

Time: 3

SRM

Points: 1

Question ID: 35369

Parent ID: 0

Difficulty: 1

Child ID: 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 215004    | K6.02     | 3.1      | 3.3       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

References:

[ST-OP-315-0064](#)

[ST-OP-315-0022](#)

## Question #38 Details

**EQ-OP-315-0024-000-A013-001**

**2004 RO NRC Exam**

### Question Text

The power supply for the APRMs is which one of the following?

### Response A

H11-P908A & B, 120 VAC instrument and control power.

### Response B

R3100S009A & B (UPS) Circuit 9.

### Response C

2PA-1 and 2PB-1 via static inverters.

### Response D - Correct Answer

C71-P001A & B via QLVPS.

**Reference:** [ST OP-315-0024-001 \(Table 2, PRNM Power Supplies\)](#)

**This is a power supply question. The distractors are just wrong.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 2  
**Points:** 1  
**Difficulty:** 1

**Keywords:** PRNM  
APRM/OPRM

### Not Archived

**Question ID:** 33478  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 215005    | K2.02     | 2.6      | 2.8       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

### References:

[ST OP-315-0024-001 \(Table 2, PRNM Power Supplies\)](#)

**Question #39 Details****EQ-OP-315-0143-000-A016-001****2004 RO NRC Exam****Question Text**

The plant experienced a LOCA. RCIC is running and discharging to the RPV when 1D60, RCIC INVERTER FAILURE, alarms.

Which one of the following would describe (1) the impact on RCIC and (2) what actions must be taken?

**Response A**

- 1) Loss of indication on E51-R613, RCIC Pump Flow Indicator.
  - 2) Manually control discharge flow using E51-F013, RCIC Pump Inboard Isolation Valve.
- Incorrect because the correct action is to trip RCIC per ARP 1D60**

**Response B**

- 1) Loss of indication on E51-K615, RCIC Discharge Flow Controller.
  - 2) Manually control discharge flow using E51-F045, RCIC Turbine Steam Inlet Valve.
- Incorrect because the correct action is to trip RCIC per ARP 1D60**

**Response C - Correct Answer**

- 1) Loss of indication on E51-K615, RCIC Discharge Flow Controller.
- 2) Manually trip the RCIC turbine and supply the RPV with an alternate source.

**Reference: 1D60**

**Response D**

- 1) Automatic runback to minimum speed
  - 2) Manually trip the RCIC turbine and supply the RPV with an alternate source.
- Incorrect because there is no automatic runback feature to RCIC.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 2  
**Points:** 1  
**Difficulty:** 2

**Keywords:** RCIC  
\_RO retake 2001

**Not Archived**

**Question ID:** 35389  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 217000    | A2.10     | 3.1      | 3.1       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

**References:**

[ST-OP-315-0043](#)  
[1D60](#)



## Question #40 Details

**EQ-OP-315-0142-000-A021-004**

**2004 RO NRC Exam**

### Question Text

A LOCA concurrent with a loss of offsite power has occurred and the following conditions exist :

RPV water level.....42 inches (slowly lowering)  
RPV pressure.....670 psig  
Drywell pressure.....2.5 psig (rising)  
EDGs 11 and 12..... failed to start  
EDGs 13 and 14.....tripped (will not restart)

Given the above conditions and assuming no ADS related operator actions are taken, how will the ADS system respond?

When the RPV water level drops below RPV Level-1, the 105-second timer will:

### Response A

Start, time out, then ADS will initiate.

**Incorrect because the system does not meet the Low Pressure ECCS pump running permissive**

### Response B - Correct Answer

Start and time out but ADS will not initiate.

**Correct because it will start due to the Hi DW and L1 signals, but not initiate because the low-pressure ECCS pump permissive will not be met ([ADS Logic](#))**

### Response C

NOT start and ADS will NOT initiate.

**Incorrect because it will start based on L1 and Hi DW signals**

### Response D

Start after the 7 minute timer times out, then ADS will initiate.

**Incorrect because the system does not meet the Low Pressure ECCS pump running permissive**

**Author:** BOLLINGER

**Keywords:** ADS

**Not Archived**

**Date Last Used:** 2

\_RO retake 2001

**Time:** 3

**Question ID:** 34823

**Points:** 1

**Parent ID:** 0

**Difficulty:** 3

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 218000    | K5.01     | 3.8      | 3.8       |
| 218000    | K3.02     | 4.5      | 4.6       |

|                                        |                                                                         |
|----------------------------------------|-------------------------------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO                                 |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                                            |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                                         |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                                         |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.                                      |
| <input type="checkbox"/> NOC           | <input type="checkbox"/> <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                                         |

### References:

[ST-OP-315-0042](#)

## Question #41 details

**EQ-OP-315-0105-000-B003-002**

**2004 RO NRC Exam**

### Question Text

How are open MSIVs affected when NSSS Isolation logic channels B and D trip, assuming logic channels A and C are NOT tripped?

### Response A

Inboard MSIVs, F022A-D close

### Response B

All MSIVs close

### Response C

Outboard MSIVs, F028A-D close

### Response D - Correct Answer

All MSIVs remain open

**Reference:** [23.601, Enclosure G](#)

The justification for this answer is that MSIV isolation logic requires a “one out two, taken twice” logic to actuate. Since only division 2 logic is tripped, no isolation signal will be sent. The logic is half cocked.

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 2

**Keywords:** NUC BLR

**Not Archived**

**Question ID:** 25517  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 223002    | A1.02     | 3.7      | 3.7       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

### References:

ST-OP-315-0005-001  
[23.601](#)

## Question #42 Details

EQ-OP-315-0005-000-C005-001

2004 RO NRC Exam

### Question Text

When controlling pressure using SRVs, it is expected SRVs for use will be selected based on the:

### Response A

SRV pressure setpoint

**Incorrect because only SRVs A and G have pressure control setpoints, otherwise they have safety pressure limits**

### Response B - Correct Answer

SRV position on the matrix

**Reference:** [23.201, Precautions and Limitations](#)

### Response C

Division of control air supplying drywell pneumatics

**Nitrogen supplies DW pneumatics when DW is inerted, only Division 1 control air can be aligned to DW pneumatics, normally when the DW is de-inerted.**

### Response D

Main Steam Line to which they are attached

**Incorrect because it does not matter where the steam comes from.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 1  
**Points:** 1  
**Difficulty:** 1

**Keywords:** SRVs

**Not Archived**

**Question ID:** 30075  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 239002    | K4.04     | 3.4      | 3.6       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

### References:

[23.201, Precautions and Limitations](#)

**Question #43 Details****EQ-OP-315-0171-000-C005-002****2004 RO NRC Exam****Question Text**

The plant is experiencing a loss of Interruptible Air Supply (IAS). The following conditions exist:

Reactor power is 15%.  
RPV water level is 200 inches and slowly rising.

Which one of the following is the cause of the rising RPV water level?

**Response A**

Reactor Feed Pump Minimum Flow Valves starting to close.  
**These valves fail open on a loss of IAS**

**Response B**

Heater Feed Pump Minimum Flow Valves starting to close.  
**This valve fails open on a loss of IAS**

**Response C**

Reactor Feed Pump Discharge Valves starting to open.  
**Neither valve is operated by IAS, and the valves are normally opened any way.**

**Response D - Correct Answer**

Startup Level Control Valve starting to open.

**Reference:** [ST-OP-315-0071, 20.129.01, Page 2](#)

**Author:** CADDEN  
**Date Last Used:** 8/7/2000  
**Time:** 0  
**Points:** 1  
**Difficulty:** 2

**Keywords:** COMPRESSED AIR  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35363  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 259002    | K1.06     | 3.0      | 3.1       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**

[ST-OP-315-0071](#)  
[20.129.01, Page 2](#)

## Question #44 Details

**EQ-OP-315-0146-000-A015-004**

**2004 RO NRC Exam**

### Question Text

The plant is operating at 100% power with the Feedwater Control System (FWCS) in 3 element control.

Which ONE of the following describes the response of the FWCS to a feed line rupture estimated at 5000 gpm in the A feedwater line?

FWCS will....

### Response A - Correct Answer

shift to single element control and raise the speed of both Reactor Feed Pump Turbines.

**Digital Control System will sense a greater than 0.5 mlbm/hr difference and shift to single element. Because RPV level is going down, FWCS will attempt to raise the speed of the pumps.**

### Response B

stay in three element control and raise the speed of the both Reactor Feed Pump Turbines.

**Digital Control System will sense a greater than 0.5 mlbm/hr difference and shift to single element. Because RPV level is going down, FWCS will attempt to raise the speed of both pumps.**

### Response C

shift to single element control and raise the speed of the A Reactor Feed Pump Turbine only.

**Digital Control System will sense a greater than 0.5 mlbm/hr difference and shift to single element. Because RPV level is going down, FWCS will attempt to raise, not lower, the speed of both of the pumps.**

### Response D

stay in three element control and raise the speed of the A Reactor Feed Pump Turbine only.

**Digital Control System will sense a greater than 0.5 mlbm/hr difference and shift to single element. Because RPV level is going down, FWCS will attempt to raise the speed of both pumps.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 2

**Keywords:** FEEDWATER CTRL  
FEEDWATER

**Not Archived**

**Question ID:** 35441  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 259002    | K6.05     | 3.5      | 3.5       |
| 259002    | A3.04     | 3.2      | 3.2       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

### References:

[ST-OP-315-0064](#)

**Question #45 Details****EQ-OP-315-0120-000-B006-001****2004 RO NRC Exam****Question Text**

Following a Loss of Coolant Accident, the Standby Gas Treatment System has been in service for several hours venting the drywell and torus IAW 29.ESP.07, Primary Containment Venting. Chemistry reports that stack release rates have begun to rise. Which of the following situations could explain the rise in release rates?

**Response A**

SGTS total flow decrease to 2500 scfm

**Incorrect because less flow would not, by itself, cause release rates to rise.****Response B**

After Heater air temperature increase to 200°F

**Incorrect because the After Heater range is from 150-225°F.****Response C - Correct Answer**

Charcoal Adsorber temperature increase to 290°F.

**Reference: [ST-OP-315-0020](#)****Response D**

Moisture Separator differential pressure decrease to 0.4 inches water.

**Incorrect because the Moisture Separator range is from 0-1 inches of water.****Author:** CADDEN**Keywords:** SGTS**Not Archived****Date Last Used:**

2004 NRC RO Question

**Time:** 3**Question ID:** 35362**Points:** 1**Parent ID:** 0**Difficulty:** 1**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 261000    | K1.07     | 3.1      | 3.2       |
| 261000    | K3.02     | 3.6      | 3.9       |

☒ RO  
☒ SRO  
☐ STAC  
☐ STAI  
☐ LOR  
☐ NOC  
☐ INO

☒ ILO  
☐ ESP  
☐ Part A  
☐ Part B  
☐ Open Ref.  
☒ Close Ref.  
☐ Static

**References:**[ST-OP-315-0020](#)

Question #46 Details  
EQ-OP-315-0162-000-A006-001

2004 RO NRC Exam

Question Text

While the reactor was operating in Mode 1, a loss of offsite power occurred and the following conditions now exist:

Reactor power.....0%, all rods fully inserted  
EDGs 11, 12 & 13.....failed to initiate  
EDG 14.....operating and carrying its ESF Bus  
480V AC Bus 72R.....energized

What is the current status of the UPS system?

Response A

Loads on Unit B are supplied from the UPS battery though the Inverter.

**Incorrect because Loads are not being supplied from the battery**

Response B - Correct Answer

Loads on Unit A are supplied from the Unit B Rectifier through the Unit A Inverter.

**Reference:** [ST-OP-315-0062-001\(1\), \(2\), Figure 2](#)

Response C

Loads on Unit A are supplied from its Alternate Source through the Static Transfer Switch.

**Incorrect because Loads are not being supplied from the Alternate source**

Response D

Loads on Unit B are supplied from its Alternate Source through the Static Transfer Switch.

**Incorrect because Unit B Loads are being supplied from the Normal source**

**Author:** CADDEN  
**Date Last Used:** 9/3/1997  
**Time:** 1  
**Points:** 1  
**Difficulty:** 2

**Keywords:** UPS  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35359  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 262002    | K4.02     | 3.1      | 3.4       |
| 262001    | K3.04     | 3.1      | 3.4       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**

[ST-OP-315-0062-001](#), Figure 2

Question #47 Details  
EQ-OP-802-2003-000-S002-001

2004 RO NRC Exam

Question Text

The plant was operating at 25% power when Bus 65G was lost due to an electrical fault. What action(s) is/are the Operating Crew required by AOP to perform immediately:

Response A - Correct Answer

Place the Reactor Mode Switch to SHUTDOWN.

Reference: [20.138.01, Rev. 35 \(Immediate Actions\)](#)

Response B

Verify there are no thermal hydraulic instability oscillations.

Incorrect because the Immediate Action is to place the mode switch in S/D due to loss of both Recirc Pumps

Response C

Insert the Cram control rods and monitor for reactor core thermal hydraulic instabilities.

Incorrect because the Immediate Action is to place the mode switch in S/D due to loss of both Recirc Pumps

Response D

Raise reactor water level to raise natural circulation rate and commence inserting control rods.

Incorrect because the Immediate Action is to place the mode switch in S/D due to loss of both Recirc Pumps

Author: CADDEN  
Date Last Used:  
Time: 1  
Points: 1  
Difficulty: 2

Keywords: AOP  
RRS  
2004 NRC RO Question

Not Archived

Question ID: 35360  
Parent ID: 0  
Child ID: 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| Generic   | 2.4.11    | 3.4      | 3.6       |
| Generic   | 2.4.49    | 4.0      | 4.0       |

|                                         |                                               |
|-----------------------------------------|-----------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO       |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                  |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A               |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B               |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.            |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static               |

References:

[20.138.01, Rev. 35 \(Immediate Actions\)](#)



## Question #48 Details

**EQ-OP-315-0145-000-B007-002**

**2004 RO NRC Exam**

### Question Text

The Turbine Building Rounds reported an acrid odor coming from UPS Distribution Panel A. The CRS decided to de-energize the panel. Which ONE of the following loads were affected?

### Response A - Correct Answer

Turbine Governor Control System

**Reference:** [ST-OP-315-0062](#)

### Response B

345Kv Mat Breaker Control

**Incorrect because it is powered from BOP DC**

### Response C

South RFPT Trip Relay Cabinet

**Incorrect because it is powered from BOP DC**

### Response D

RBHVAC Exhaust Fans

**Incorrect because powered from a Modular Power Unit**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 1  
**Points:** 1  
**Difficulty:** 1

**Keywords:** AOP  
RRS  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35360  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 262002    | K1.05     | 2.7      |           |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

**References:**  
[ST-OP-315-0062](#)

Question #49 Details  
EQ-OP-315-0164-000-C002-001

2004 RO NRC Exam

Question Text

What is the impact of a Loss of Division II ESF 130V/260V Battery on bus 72CF?

Response A

Bus 72 CF will deenergize

72CF is an AC bus. It will not deenergize.

Response B

There will be NO impact on bus 72CF

72CF will lose automatic throwover capability.

Response C - Correct Answer

Automatic throwover capability for 72CF will be lost

Reference: [AOP 20.300.260ESF, Page 6](#)

Response D

Bus 72CF will automatically transfer to its alternate power supply

Automatic throwover capability for 72CF will be lost

Author: CADDEN  
Date Last Used:  
Time: 3  
Points: 1  
Difficulty: 1

Keywords: DC ELEC  
2004 NRC RO Question

Not Archived

Question ID: 35345  
Parent ID: 0  
Child ID: 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
|           | G2.4.11   | 3.4      | 3.6       |
| 263000    | K4.01     | 3.1      | 3.4       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

References:  
[AOP 20.300.260ESF](#)

**Question #50 Details**  
**EQ-OP-315-0165-000-A021-005**

**2004 RO NRC Exam**

**Question Text**

The plant experienced a loss of Bus 64B.

The bus was subsequently restored to the normal lineup EXCEPT the operators neglected to reset the digital load sequencer.

Following the restoration, all power is again lost to Bus 64B.

How will the EDG and electrical distribution system respond to this event?

**Response A**

The EDG will require a manual start. The loads on bus 64B will sequence after the output breaker is closed.

**EDG auto starts on a loss of power**

**Response B**

The EDG will require a manual start. The loads on bus 64B will NOT sequence after the output breaker is closed.

**EDG auto starts on a loss of power**

**Response C - Correct Answer**

The EDG will automatically start. The loads on bus 64B will sequence after the output breaker is closed.

**Reference: ST-OP-315-0065**

**Response D**

The EDG will automatically start. The loads on bus 64B will NOT sequence after the output breaker is closed.

**Anytime the output breaker closes, and the sequencer has not been reset, the loads will sequence on.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 2

**Keywords:**

**Not Archived**

**Question ID:** 35558  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 264000    | A3.05     | 3.4      | 3.5       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

**References:**

ST-OP-315-0065

**Question #51 Details****EQ-OP-315-0171-000-A014-001****2004 RO NRC Exam****Question Text**

The plant is operating at 100% power with the following auxiliary equipment lineup:

West Station Air Compressor running; Center in AUTO

South Reactor Feedwater Pump Turbine East Lube Oil Pump running; West in AUTO

North Reactor Feedwater Pump Turbine West Lube Oil Pump running; East in AUTO

North Main Turbine Lube Oil Pump running; South in AUTO

South and Center TBCCW pumps running

Bus 72 A is lost due to an internal electrical fault. What is your response to this event?

**Response A**

Perform a rapid power reduction

**Incorrect because Loss of 64A says put the mode switch in Shutdown**

**Response B**

Start both SBFW pumps and inject at 1200 gpm

**Incorrect because the RFPT Emergency LO Pumps are sufficient to supply the RFPTs, therefore RFPs will not trip.**

**Response C**

Verify the North TBCCW pump has started automatically

**Incorrect because 64A is the power supply to N. TBCCW pump**

**Response D - Correct Answer**

Verify the Center Station Air Compressor has automatically started

**Reference: ST-OP-315-0171-001, 20.300.64A Page 5**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 5  
**Points:** 1  
**Difficulty:** 2

**Keywords:** 4160/480 ELEC  
COMPRESSED AIR  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35341  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 300000    | K2.01     | 2.8      |           |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**

[20.300.64A](#)  
[ST-OP-315-0171-001](#)  
6SD721-2500-01

**Question #52 with Details**  
**EQ-OP-315-0171-000-A016-001**

**2004 RO NRC Exam**

**Question Text**

The plant is operating at 85% power when maintenance activities resulted in an inadvertent transfer of MPU-3. Which of the following is the expected plant response with no operator action?

**Response A - Correct Answer**

Outboard MSIVs will go shut

**Reference:** [20.129.01 Page 2 and 8](#)

**Response B**

TBCCW TCV will remain in its current position

**Incorrect because the valve will fail OPEN**

**Response C**

Condensate Polishing Demineralizers effluent valves will go full open

**Incorrect because the valve is supplied by Station Air**

**Response D**

LP Hood Spray pressure and temperature control valves will go shut

**Incorrect because the valves will fail OPEN**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 2  
**Points:** 1  
**Difficulty:** 2

**Keywords:** COMPRESSED AIR  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35340  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 300000    | K6.07     | 2.5      | 2.6       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**

[20.129.01 Page 2 and 8](#)

## Question #53 Details

**EQ-OP-315-0167-000-B003-003**

**2004 RO NRC Exam**

### Question Text

Concerning the RBCCW/EECW System, which ONE of the following describes the SEQUENCE of events that will occur when there is a Loss of Off-Site Power (LOP)?

### Response A - Correct Answer

White Emergency Mode Light comes on, EDG Output Breakers close, Supply and Return Header Isolation Valves close, EECW Pumps start.

**Reference:** [ST-OP-315-0067-001, \(2\)](#)

### Response B

RBCCW Pumps trip, EDG Output Breakers close, EECW Make-Up Tank Isolation Valves close, EECW Pumps start.

**Incorrect because the EECW Make-up tank isolation valve OPENS**

### Response C

White Emergency Mode Light comes on, EECW Make-Up Tank Isolation Valves open, EDG Output Breakers close, EECW Pumps start.

**Incorrect because the EDG output breakers close before the make-up tank isolation opens**

### Response D

RBCCW Pumps trip, Supply and Return Header Isolation Valves close, EDG Output Breakers close, EECW Pumps start.

**Incorrect because the EDG output breakers close before the Supply and Return Isolation valves close**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 2

**Keywords:** RBCCW/EECW

**Not Archived**

**Question ID:** 34534  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 400000    | A4.01     | 3.1      | 3.0       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

### References:

[ST-OP-315-0067-001](#)

## Question #54 Details

**EQ-OP-802-2001-000-R003-002**

**2004 RO NRC Exam**

### Question Text

During an ATWS event, the following conditions exist:

FSQ 1 through 8.....Complete  
8 Blue RPS lights.....ON  
3D6, SCRAM VALVE PILOT AIR HDR PRESS HIGH/LOW.....OFF

All rods are full out.

Given these conditions, which of the following describes (1) the plant condition, and (2) the method(s) for control rod insertion.

### Response A - Correct Answer

- (1) Scram pilot air valves are energized.
- (2) Deenergize the scram solenoids.

**Reference:** [ST-OP-315-0010-001](#)

### Response B

- (1) Backup scram pilot air valves are deenergized.
- (2) Perform 29.ESP.09, DEFEAT OF RPS AUTOMATIC LOGIC TRIPS, AND perform Scram Reset Scram.

**Backup scram air valves are deenergized. 29.ESP.09 is not required because RPS did not actuate.**

### Response C

- (1) ARI valves are deenergized.
- (2) Perform 29.ESP.10, DEFEAT OF ARI LOGIC TRIPS, AND perform Scram Reset Scram.

**ARI valves are normally deenergized, and based on 3D6, still are. Therefore 29.ESP.10 would not be necessary.**

### Response D

- (1) ARI valves are energized.
- (2) Open scram switches.

**Based on the conditions, ARI valves are not energized, opening scram switches is normally done when only a few rods are stuck.**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 3

**Keywords:** CRDH  
AOP

**Archived**

**Question ID:** 32645  
**Parent ID:** 30789  
**Child ID:** 0

|                  |                  |                 |                  |
|------------------|------------------|-----------------|------------------|
| <b>KA System</b> | <b>KA Number</b> | <b>RO Value</b> | <b>SRO Value</b> |
| 201001           | A2.01            | 3.2             | 3.3              |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

**References:**  
20.106.01  
[ST-OP-315-0010-001](#)

**Question #55 Details**  
**EQ-OP-315-0109-000-C011-002**

**2004 RO NRC Exam**

**Question Text**

During a plant startup, Control Rod 26-35 was withdrawn to position 48. During the coupling check:

Position indication was lost  
3D76 CONTROL ROD OVERTRAVEL alarmed  
3D80 CONTROL ROD DRIFT alarmed

(1) What is the status of Control Rod 26-35 and (2) what procedure should the Control Room Staff enter and execute?

**Response A**

- (1) stuck  
(2) AOP 20.106.05 STUCK CONTROL ROD  
**Incorrect because these are indications of an uncoupled control rod**

**Response B**

- (1) uncoupled  
(2) AOP 20.106.1 CRD HYDRAULIC SYSTEM FAILURE.  
**Incorrect because the crew should enter 20.106.02**

**Response C - Correct Answer**

- (1) uncoupled  
(2) AOP 20.106.02 UNCOUPLED/DROPPED CONTROL ROD (FROM REACTOR CORE)  
**Reference: 20.106.02, page 7**

**Response D**

- (1) stuck  
(2) SOP 23.106 CONTROL ROD DRIVE HYDRAULIC SYSTEM, difficult rod movement section.  
**Incorrect because these are indications of an uncoupled control rod**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 2  
**Points:** 1  
**Difficulty:** 2

**Keywords:** CRDM  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35339  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 201003    | A2.02     | 3.7      | 3.8       |
| 201003    | A4.02     | 3.5      | 3.5       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**  
[20.106.02, page 7](#)



## Question #56 Details

**EQ-OP-315-0104-000-A013-002**

**2004 RO NRC Exam**

### Question Text

The "A" Reactor Recirc Pump has been given a signal to increase speed. What is occurring in the fluid drive coupling?

The scoop tube positioner is changing position to \_\_\_\_\_ the amount of oil in the working circuit of the coupler thus \_\_\_\_\_ the coupling between the Reactor Recirc Motor and Generator.

### Response A

reduce, reducing

**Incorrect because this will be the case when lower speed is desired**

### Response B

reduce, increasing

**Incorrect because less oil in the working speed will lower the coupling**

### Response C

increase, reducing

**Incorrect because increasing the amount of oil will increase the coupling**

### Response D - Correct Answer

increase, increasing

**Reference:** [ST-OP-315-0004-001](#)

**Author:** PRE-EXISTING  
**Date Last Used:** 3/16/2001  
**Time:** 2  
**Points:** 1  
**Difficulty:** 1

**Keywords:** RRS

**Not Archived**

**Question ID:** 33031  
**Parent ID:** 25453  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 202001    | K1.12     | 3.6      | 3.6       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

### References:

[ST-OP-315-0004-001](#)

**Question #57 Details****EQ-OP-315-0111-000-A013-002****2004 RO NRC Exam****Question Text**

A reactor startup is in progress with the following conditions:

Rod Select Power Switch.....ON  
Select button for rod 26-31.....ON  
3D80, Control Rod Drift.....ON

What is the cause of the Control Rod Drift Alarm?

Rod 26-31 at position.....

**Response A - Correct Answer**

35 with the Rod Control Movement Switch in OFF

**Reference:** [ST-OP-315-011](#)

**Response B**

35 with the Rod Control Movement Switch in OUT NOTCH

**Incorrect because RMCS still thinks the rod is moving**

**Response C**

34 with the Rod Control Movement Switch in OFF

**there will be no rod drift if the rod settles on an even position**

**Response D**

34 with the Rod Control Movement Switch in OUT NOTCH

**Incorrect because RMCS still thinks the rod is moving and there will be no rod drift if the rod settles on an even position**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 0  
**Points:** 1  
**Difficulty:** 2

**Keywords:**

**Not Archived**

**Question ID:** 35393  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 214000    | K4.01     | 3.0      | 3.1       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

**References:**

[ST-OP-315-011](#)

**Question #58 Details****EQ-OP-315-0141-000-A021-009****2004 RO NRC Exam****Question Text**

Division 1 of RHR was operating in torus cooling mode with "A" RHR pump in service to support an upcoming HPCI surveillance. The plant experienced a seismic event, which resulted in a failure to SCRAM and a LOCA. The following conditions exist:

RPV Level.....-10" on Core Level

Reactor Power.....0%

RPV Pressure.....650 psig

Drywell Pressure..... 12 psig

Torus Pressure.....10.2 psig

(1) How would RHR respond to this event, and

(2) What minimum operator action is necessary to realign RHR Pump "A" back to torus cooling?

**Response A**

(1) Division 1 RHR will continue to operate in Torus Cooling.

No action required.

**Incorrect because RHR Torus cooling will isolate on Hi Drywell Pressure and L1**

**Response B**

(1) E11-F024A, Div 1 RHR Torus Clg Iso.and E11-F028A, Div 1 RHR Torus Iso Vlv. will automatically close.

(2) Place Containment Spray Mode Select switch in MANUAL, and reopen the E11-F024A and E11-F028A valves.

**Incorrect because must use 2/3 Core Height Override due to Level <0"**

**Response C - Correct Answer**

(1) E11-F024A, Div 1 RHR Torus Clg Iso. and E11-F028A, Div 1 RHR Torus Iso Vlv. will automatically close.

(2) Place Containment Spray Mode Select switch in MANUAL and Containment Spray 2/3 Core Height Override keylock switch in MANUAL OVERRIDE and reopen the E11-F024A and E11-F028A valves.

**Reference: ST-OP-315-0041(1). (2); 23.205, page 103**

**Response D**

(1) E11-F024A, Div 1 RHR Torus Clg Iso. will automatically close.

(2) Place Containment Spray Mode Select switch in MANUAL and Containment Spray 2/3 Core Height Override keylock switch in MANUAL OVERRIDE and reopen the E11-F024A valve.

**Incorrect because E11-F028A will also close and will need to be reopened.**

**Author:** CADDEN

**Date Last Used:**

**Time:** 5

**Points:** 1

**Difficulty:** 2

**Keywords:** RHR - TOR CLNG

RHR - LPCI

RHR - GENERAL

2004 NRC RO Question

**Not Archived**

**Question ID:** 35338

**Parent ID:** 0

**Child ID:** 0

**KA System**

**KA Number**

**RO Value**

**SRO Value**

219000

A4.06

3.9

3.7

219000

A1.02

3.5

3.5

☒ RO  
☒ SRO  
☐ STAC  
☐ STAI  
☐ LOR  
☐ NOC  
☐ INO

☒ ILO  
☐ ESP  
☐ Part A  
☐ Part B  
☐ Open Ref.  
☒ Close Ref.  
☐ Static

**References:**

[23.205, page 103](#)

[ST-OP-315-0041](#)

**Question #59 Details****EQ-OP-315-0116-000-A021-002****2004 RO NRC Exam****Question Text**

During a Design Bases Loss of Coolant Accident the Drywell Spray Mode of RHR is initiated. How will the Containment System respond?

**Response A - Correct Answer**

Suppression Chamber to Drywell Vacuum Breakers will open to ensure Drywell to Torus d/p is maintained within limits.

**Reference:** [ST-OP-315-0016\(1\), \(2\)](#)

**Response B**

Suppression Chamber to Drywell Vacuum Breakers will open to ensure Drywell pressure is maintained lower than Torus pressure.

**The vacuum breakers prevent damage to the containment from d/p. DW pressure is usually higher than torus pressure.**

**Response C**

Reactor Building to Suppression Chamber Vacuum Breakers will open to ensure Reactor Building to Torus d/p is maintained within limits.

**The RB Vacuum breakers are for inadvertent initiation of Torus Sprays.**

**Response D**

Reactor Building to Suppression Chamber Vacuum Breakers will open to ensure Torus pressure is maintained higher Reactor Building Pressure.

**Right reason, but wrong cause. RB Vacuum breakers not for DW sprays after a DBA LOCA.**

**Author:** CADDEN

**Keywords:** CONTAINMENT

**Not Archived**

**Date Last Used:**

**Time:** 3

**Points:** 1

**Difficulty:** 1

**Question ID:** 35337

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 226001    | A1.01     | 3.6      | 3.8       |
| 226001    | K5.06     | 2.6      | 2.8       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**

[ST-OP-315-0016](#)

**Question #60 Details****EQ-OP-315-0105-000-A021-003****2004 RO NRC Exam****Question Text**

The plant was operating at 85% power when Main Steam was lost to the West Moisture Separator Reheater. Which of the following describes the effect of this loss?

Loss of Main Steam to the Moisture Separator Reheater would cause the:

**Response A**

HP Turbine to experience a significant increase in windage losses and become less efficient

**The HP turbine is upstream of the MSR, therefore there is no effect.**

**Response B - Correct Answer**

LP Turbines to experience more damage to the first stage blading and to become less efficient

**Reference: ST-OP-315-0005**

**Response C**

LP Turbines to lose approximately half their steam flow and scram the Rx on closure of the LP Stop and Intercept valves

**The LP turbines will not lose all of their steam flow and the Rx will not scram.**

**Response D**

HP Turbine to pick up more load and therefore the thrust on the HP Turbine would be above its Maximum Normal Range.

**The HP turbine is upstream of the MSR, therefore there is no effect.**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 0  
**Points:** 1  
**Difficulty:** 1

**Keywords:** NUC BLR  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35336  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 239001    | K1.05     | 2.8      | 2.8       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**  
[ST-OP-315-0005](#)

**Question #61 Details****EQ-OP-315-0107-000-B007-002****2004 RO NRC Exam****Question Text**

The plant was operating steady state at 100% power when the South RFP tripped. Which of the following describes the expected plant response? (Assume no operator action).

**Response A - Correct Answer**

RPV level - Lowers, then stabilizes

Recirc speed - Lowers

Rx Power - Lowers

**Reference:** [ST-OP-315-007](#)**Response B**

RPV level - Lowers

Recirc speed - Lowers

Rx Power - 0% (SCRAM)

**Incorrect because the Reactor will not SCRAM on Level 3****Response C**

RPV level - Lowers

Recirc speed - Raises

Rx Power - Steady

**Incorrect because the Recirc pumps will run back on limiter #2****Response D**

RPV level - Lowers, then stabilizes

Recirc speed - Steady

Rx Power - Lowers

**Incorrect because Recirc pumps will run back on limiter #2****Author:** CADDEN**Keywords:** RX FEEDWATER**Not Archived****Date Last Used:****Time:** 3**Points:** 1**Difficulty:** 2**Question ID:** 35334**Parent ID:** 0**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 259001    | K3.01     | 3.9      | 3.9       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**[ST-OP-315-007](#)

**Question #62 Details****EQ-OP-315-0135-000-A021-001****2004 RO NRC Exam****Question Text**

The plant is operating at 75% power. The Dilution Steam controller for the operating off-gas train fails and admits 100% dilution steam to the 18" manifold.

Select from below the expected off-gas system response:

**Response A**

Total off-gas flow will decrease

**Incorrect because total off gas flow will increase due to increased steam supply**

**Response B**

Hydrogen concentration will increase

**Incorrect because hydrogen concentration will decrease due to increased steam supply (recombining of O<sub>2</sub>/H<sub>2</sub> into water vapor)**

**Response C**

Off-gas after cooler temperature will increase

**Incorrect because after cooler will decrease due to lowered recombiner outlet temperature**

**Response D - Correct Answer**

Thermal recombiner outlet temperature will decrease

**Reference:** [ST-OP-315-0035-001](#)

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 2  
**Points:** 1  
**Difficulty:** 2

**Keywords:** OFF GAS

**Not Archived**

**Question ID:** 35333  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 271000    | K6.04     | 2.8      | 2.8       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**  
[ST-OP-315-0035-001](#)

## Question #63 Details

**EQ-OP-315-0172-000-B003-002**

**2004 RO NRC Exam**

### Question Text

The following conditions exist:

7D6, DIESEL FIRE PUMP AUTO START.....ON  
7D11, ELECTRIC FIRE PUMP AUTO START.....OFF  
CMC Switch for the diesel fire pump.....AUTO  
CMC Switch for the electric fire pump.....AUTO  
Diesel Fire Pump.....running  
Electric Fire Pump.....not running

No operator actions have been taken.

What condition would cause these indications?

### Response A - Correct Answer

Loss of AC control power to the Diesel Fire Pump.

**Reference:** [ST-OP-315-0072](#)

### Response B

Fire header pressure of 130 psig.

**This is the pressure the Electric Fire Pump (EFP) would auto start, the Diesel Fire Pump (DFP) auto starts at 110 psig.**

### Response C

GSW pressure of 80 psig.

**There is a manual cross connection to GSW, and the jockey pumps are supplied by GSW, there is no auto action based on GSW pressure.**

### Response D

Fire header jockey pump tripped.

**If a jockey pump tripped, it's possible that fire header pressure could lower, leading to the eventual start of the EFP and then the DFP.**

**Author:** BOLLINGER

**Keywords:** FIRE PROT/DET

**Not Archived**

**Date Last Used:**

**Time:** 0

**Points:** 1

**Difficulty:** 2

**Question ID:** 35549

**Parent ID:** 0

**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 286000    | A3.01     | 3.4      | 3.4       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[ST-OP-315-0072](#)



**Question #64 Details****EQ-OP-315-0173-000-B001-001****2004 RO NRC Exam****Question Text**

Division I CCHVAC was operating in Purge mode due to a fire in the Relay Room. Annunciator 3D35, DIV I/II FP VENT EXH RADN MONITOR UPSCALE TRIP, alarms due to high radiation in the Fuel Pool exhaust. What will happen to the CCHVAC configuration?

Div I CCHVAC will:

**Response A**

continue to operate in Purge mode.

**Incorrect because recirculation mode overrides all other modes.**

**Response B - Correct Answer**

transfer from Purge mode to Recirculation mode.

**Reference:** ST-OP-315-0073-001 (1), (2), ARP 3D35

**Response C**

trip and will have to be started manually in Recirculation mode.

**Incorrect because CCHVAC will automatically shift to recirculation mode**

**Response D**

trip and Div II CCHVAC will start and operate in Recirculation mode.

**Incorrect because CCHVAC will automatically shift to recirculation mode**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 0  
**Points:** 1  
**Difficulty:** 2

**Keywords:** CCHVAC  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35326  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 290003    | K4.01     | 3.1      | 3.2       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**

[ST-OP-315-0073-001](#)  
[ARP 3D35](#)

**Question #65 Details****EQ-OP-315-0103-000-A007-002****2004 RO NRC Exam****Question Text**

Which of the following are two advantages of loading burnable poisons into the fuel?

**Response A**

Radial power shaping and allow lower power fuel bundles to be used.

**Incorrect because water rods help with radial power shaping. [Reference](#)**

**Response B**

Longer control rod life and smoother reactivity control.

**Incorrect. This is a description of using a control cell core [Reference](#)**

**Response C - Correct Answer**

Longer fuel cycles and axial power shaping.

**Reference: [ST-OP-315-0003-001](#)**

**Response D**

Wider margin to thermal limits and allow lower power fuel bundles to be used.

**Incorrect. This is a description of using a ring of fire. [Reference](#)**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 0  
**Points:** 1  
**Difficulty:** 1

**Keywords:** CORE & FUEL  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35324  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 234000    | G2.1.28   | 3.2      | 3.3       |
| 290002    | K5.03     | 2.7      | 3.0       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**

[ST-OP-315-0003](#)

## Question #66 Details

**EQ-OP-213-0041-000-B001-006**

**2004 RO NRC Exam**

### Question Text

In accordance with MOP09, "Locked Valve", a \_\_\_\_\_ padlock should be used on a locked closed position valve.

### Response A

Red

**Incorrect because red is open**

### Response B

Green

**Incorrect because green is not used for padlock locked valves**

### Response C

red with black dot

**Incorrect because red with black dot is throttled**

### Response D - Correct Answer

no color identification

**Reference:** [MOP09, section 3.8](#)

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 2  
**Points:** 1  
**Difficulty:** 1

**Keywords:** ADMIN

**Archived**

**Question ID:** 32576  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| Generic   | 2.1.1     | 3.7      | 3.8       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

### References:

[MOP09](#)

## Question #67 Details

**EQ-OP-315-0104-000-C011-001**

**2004 RO NRC Exam**

### Question Text

The plant was operating at 95% power when the following indications were observed:

Generator megawatt output - 1095MWe, lowering slowly

Reactor power - 88%, lowering slowly

RPV level - 197 inches, steady

RPV pressure - 1015 psig, lowering slowly

Total core flow lowered and stabilized at 83 Mlbm/hr

A Recirc System:

B Recirc System:

recirc loop flow - 55000 gpm

recirc loop flow - 40000 gpm

jet pump loop flow - 22 Mlbm/hr

jet pump loop flow - 61 Mlbm/hr

Based on the given conditions what action should be taken?

The Shift will enter...

### Response A

20.000.21, Reactor Scram

**Incorrect because indications are of a jet pump failure. You would commence a plant shutdown, not scram.**

### Response B

20.138.01, Recirculation Pump Trip

**Incorrect because these are the actions for uncontrolled recirc flow change.**

### Response C

20.138.03, Uncontrolled Recirc Flow Change

**Incorrect because there is no indication that RRS MG speed has changed.**

### Response D - Correct Answer

20.138.02, Jet Pump Failure

**Reference:** [20.138.02, page 5](#)

**Author:** DOUCET  
**Date Last Used:** 8/27/2002  
**Time:** 2  
**Points:** 1  
**Difficulty:** 2

**Keywords:** RRS  
\_RO retake 2001

**Not Archived**

**Question ID:** 34691  
**Parent ID:** 33560  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| generic   | 2.1.7     | 3.7      | 4.4       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

### References:

ST-OP-315-0004  
[20.138.02](#)

**Question #68 Details****EQ-OP-315-0110-000-A008-001****2004 RO NRC Exam****Question Text**

The plant is in Mode 4 with Control Rod Drive Pump A operating in conjunction with Reactor Water Cleanup to maintain water level at 255 inches. The last running Condensate Pump is shutdown. How will the CRD Hydraulic system respond?

**Response A**

CRD Pump A trips on Low suction Pressure.

**Plausible that a loss of suction would cause a pump trip, although the suction is not actually lost.**

**Response B**

Demin Water Pumps auto start to supply CRD Pump A.

**Plausible because backup supply comes from the Condensate Storage Tank, which is tied to Demin water.**

**Response C**

Torus Water Management Pumps auto start to supply CRD Pump A.

**Plausible because normal supply to the CRD pump also is the normal supply to the TWMS makeup**

**Response D - Correct Answer**

CRD Pump A suction supply transfers to the Condensate Storage Tank.

**Reference: [ST-OP-315-0010](#)**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 1

**Keywords:** CIRC WATER

**Not Archived**

**Question ID:** 35395  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| Generic   | 2.1.27    | 2.8      | 2.9       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**

## Question #69 Details

**EQ-OP-802-4101-000-0022-008**

**2004 RO NRC Exam**

### Question Text

Which one of the following is required when a non-visible break must be used to disconnect a piece of equipment from its power supply?

### Response A

Independent verification of the caution tag.

**Incorrect because you would not use a caution tag for personal protection.**

### Response B

An approved grounding device installed on the load side.

**Incorrect because you may or may not use a grounding device, depending on the load.**

### Response C - Correct Answer

An approved blocking device and a method for determining that power is removed.

**Reference:** [MOP12, section 3.2.11](#)

### Response D

A safety observer is stationed for all work performed on the equipment.

**Incorrect because the work will be considered deenergized, therefor no safety observer required. Also, safety observers may be used at the Operating Authorities discretion.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 1

**Keywords:** ADMIN

**Not Archived**

**Question ID:** 34573  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| Generic   | 2.2.13    | 3.6      | 3.8       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

### References:

[MOP12](#)

## Question #70 Details

**EQ-OP-315-0190-000-C005-004**

**2004 RO NRC Exam**

### Question Text

Refueling is in progress. As a once burned fuel bundle is being placed in the core SRM counts on one of the 2 operable SRM detectors begin increasing with a steady positive period. In accordance with procedure MOP13, Refueling Operations, as the Reactor Operator, you IMMEDIATELY:

### Response A

direct the refuel floor to evacuate.

**Incorrect because you would evacuate based on hi monitored radiation levels**

### Response B - Correct Answer

direct the refuel floor to stop fuel movement.

**Reference:** [MOP13, section 3.3](#)

### Response C

inform the refuel floor to remove the fuel bundle and try again.

**Incorrect because the RO would not direct the refuel floor to do anything. SRO job.**

### Response D

declare the improperly responding SRM INOP and insert all insertable control rods within 1 hour

**Incorrect because MOP13 states you should believe all instrument indications (section 3.3.1)**

**Author:** BARRETT  
**Date Last Used:** 2/7/2000  
**Time:** 0  
**Points:** 1  
**Difficulty:** 1

**Keywords:**

**Not Archived**

**Question ID:** 34502  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| Generic   | 2.2.30    | 3.5      | 3.3       |
| 295023    | K1.03     | 3.7      | 4.0       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

### References:

[MOP13, Conduct of Refueling and Core Alterations](#)

## Question #71 Details

**EQ-OP-802-4101-000-0022-007**

**2004 RO NRC Exam**

### Question Text

An operator is conducting a normal day to day rounds inspection of equipment which is located in a high radiation area. In accordance with MOP04, Shift Operations, and MRP05 , ALARA/RWPs, the operator must:

### Response A

preplan the inspection during turnover.

**Not in accordance with the references**

### Response B - Correct Answer

conduct the inspection from the barrier to the area.

**Reference :** [MRP05](#), [MOP4](#)

### Response C

obtain Radiation Protection supervisor approval.

**Not in accordance with the references**

### Response D

enter the area with a hand held monitoring device.

**Not in accordance with the references**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 3  
**Points:** 1  
**Difficulty:** 1

**Keywords:** ADMIN

**Not Archived**

**Question ID:** 35422  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| Generic   | 2.3.2     | 2.5      | 2.9       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

### References:

[MOP4](#)

[MRP05](#)



**Question #72 Details****EQ-OP-508-0001-000-A013-004****2004 RO NRC Exam****Question Text**

A fully qualified Radiation Worker was escorting a male visitor with no previous exposure through the Reactor Building when they inadvertently walked through a high radiation area. Assuming no previous exposure, RP personnel read the dosimeters for the individuals and calculated that they received the following radiation exposure:

|          |           |
|----------|-----------|
| Chest    | 800 mrem  |
| Hands    | 1060 mrem |
| Eye Lens | 510 mrem  |
| Internal | 550 mrem  |

Which, if any, exposure limit has been exceeded?

**Response A**

Both exceeded Federal TEDE limits.

**Incorrect because the fully qualified Radiation Worker did not exceed Federal TEDE limits**

**Response B**

Both exceeded Fermi administrative TEDE limits.

**Incorrect because the fully qualified Radiation Worker did not exceed Fermi TEDE limits**

**Response C - Correct Answer**

Only the male visitor exceeded the federal TEDE limit

**Reference:** [ST-GN-508](#)

**Response D**

Only the fully qualified Radiation Worker exceeded the federal TEDE limit

**Incorrect because the fully qualified Radiation Worker did not exceed Federal TEDE limits**

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 2  
**Points:** 1  
**Difficulty:** 1

**Keywords:** 2004 NRC SRO Question  
ADMIN

**Not Archived**

**Question ID:** 35322  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| generic   | 2.3.4     | 2.5      | 3.1       |

|                                         |                                                |
|-----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO        |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC            | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static                |

**References:**

10 CFR 20

[ST-GN-508](#)

Question #73 Details  
EQ-OP-802-2001-000-R009-001

2004 RO NRC Exam

Question Text

When does ODE-03, Communications, allow relaxing of the 3-way communications requirement?

Response A

When communicating face-to-face during peer checks

**Incorrect because 3-way communications are expected to be used during peer checks.**

Response B

When transferring information important to plant safety to the CRS.

**Incorrect because 3-way communications are expected to be used when transferring plant information.**

Response C - Correct Answer

During transients when the CRS requests frequent updates of a certain parameter.

**Reference:** [ODE-03, Communications, page 2](#)

Response D

During testing evolutions between the Control Room Operator and the technician in the field.

**Incorrect because 3-way communications are expected to be used during testing and maintenance activities.**

Author: CADDEN  
Date Last Used:  
Time: 2  
Points: 1  
Difficulty: 1

Keywords: 2004 NRC SRO Question  
ADMIN  
Human Performance

**Not Archived**

Question ID: 35319  
Parent ID: 0  
Child ID: 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| Generic   | 2.4.15    | 3.0      | 3.5       |

|                                         |                                         |
|-----------------------------------------|-----------------------------------------|
| <input checked="" type="checkbox"/> RO  | <input checked="" type="checkbox"/> ILO |
| <input checked="" type="checkbox"/> SRO | <input type="checkbox"/> ESP            |
| <input type="checkbox"/> STAC           | <input type="checkbox"/> Part A         |
| <input type="checkbox"/> STAI           | <input type="checkbox"/> Part B         |
| <input type="checkbox"/> LOR            | <input type="checkbox"/> Open Ref.      |
| <input checked="" type="checkbox"/> NOC | <input type="checkbox"/> Close Ref.     |
| <input type="checkbox"/> INO            | <input type="checkbox"/> Static         |

References:

[ODE-03, Communications](#)  
[MOP03](#)

**Question #74 Details****EQ-OP-802-4101-000-0028-006****2004 RO NRC Exam****Question Text**

In accordance with MOP10, "Fire Brigade", which one of the following individuals could be assigned to the fire brigade with the plant operating in mode one?  
Assume each individual has met the physical and training requirements.

**Response A**

Reactor Operator - assigned as Safe Shutdown

**Incorrect because required to be available for Safe Shutdown****Response B**

Radwaste Operator -assigned as shift communicator

**Incorrect because required to be available to act as shift communicator****Response C**

Senior Reactor Operator - assigned as the shift manager

**Incorrect because required to be available to act as Shift Manager****Response D - Correct Answer**

Nuclear Operator - assigned as Turbine Building Rounds

**Reference:** [MOP 10, section 3.1](#)

**Author:** CADDEN  
**Date Last Used:**  
**Time:** 2  
**Points:** 1  
**Difficulty:** 1

**Keywords:** FIRE PROT/DET  
2004 NRC RO Question

**Not Archived**

**Question ID:** 35318  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| 286000    | 2.4.26    | 2.9      | 3.3       |
| Generic   | 2.4.25    | 2.9      | 3.4       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

**References:**[MOP10](#)

## Question #75 Details

**EQ-OP-802-2004-000-0001-008**

**2004 RO NRC Exam**

### Question Text

During a reactor startup the following conditions exist :

RPV Pressure.....680 psig

RPV water level.....193 inches

RWCU System.....in Blowdown Mode

If the operating CRD Pump trips followed by Annunciator 3D10,CRD ACCUMULATOR TROUBLE (in alarm for one withdrawn rod), the Operating Crew is required by AOP to immediately:

### Response A

Start the standby CRD pump.

**Incorrect because pressure is <900 psig and 3D10 in alarm for a withdrawn control rod**

### Response B - Correct Answer

Place the Reactor Mode Switch to SHUTDOWN.

**Reference:** [20.106.01, \(Immediate Actions\)](#)

### Response C

Have a Nuclear Operator check the local alarm panel.

**Incorrect because the reactor must be scrammed and then a lot of alarms will come in on the local control panel.**

### Response D

Monitor for the second control rod DRIFT alarm to activate, then manually scram the reactor.

**Incorrect because this is the immediate actions for Control Rod drift. There are no drifting control rods given in the stem.**

**Author:** BOLLINGER  
**Date Last Used:**  
**Time:** 1  
**Points:** 1  
**Difficulty:** 1

**Keywords:** AOP  
CRDH  
LOR 00-04

**Archived**

**Question ID:** 30908  
**Parent ID:** 0  
**Child ID:** 0

| KA System | KA Number | RO Value | SRO Value |
|-----------|-----------|----------|-----------|
| Generic   | 2.4.11    | 3.4      | 3.6       |
| Generic   | 2.4.49    | 4.0      | 4.0       |

|                                        |                                                |
|----------------------------------------|------------------------------------------------|
| <input checked="" type="checkbox"/> RO | <input checked="" type="checkbox"/> ILO        |
| <input type="checkbox"/> SRO           | <input type="checkbox"/> ESP                   |
| <input type="checkbox"/> STAC          | <input type="checkbox"/> Part A                |
| <input type="checkbox"/> STAI          | <input type="checkbox"/> Part B                |
| <input type="checkbox"/> LOR           | <input type="checkbox"/> Open Ref.             |
| <input type="checkbox"/> NOC           | <input checked="" type="checkbox"/> Close Ref. |
| <input type="checkbox"/> INO           | <input type="checkbox"/> Static                |

### References:

[20.106.01, \(Immediate Actions\)](#)