ILT42 ONS SRO NRC Examination QUESTION 76

76

A

APE008 AA2.10 - Pressurizer (PZR) Vapor Space Accident (Relief Valve Stuck Open)
Ability to determine and interpret the following as they apply to the Pressurizer Vapor Space Accident: (CFR: 43.5 / 45.13)
High-pressure injection valves and controllers .....

Given the following Unit 1 conditions:

Time = 0400
- Reactor power = 100%
- 1HP-410 closed with breaker tagged open for maintenance

Time = 0405
- Transient occurs
- 1RC-67 opens
- 1SA-18/A-1 (Pressurizer Relief Valve Flow) actuated

Time = 0425
- SCM = 0°F
- 1HP-26 failed closed
- LOSCM tab in progress
- 300 gpm EFDW flow established to each SG

1) BOTH SGs will be __(1)__.

2) The next action directed by the LOSCM tab will be to __(2)__.

Which ONE of the following completes the statements above?

A. 1. fully depressurized
   2. increase EFDW flow to 1000 gpm per SG

B. 1. fully depressurized
   2. throttle EFDW flow to maintain RCS cooldown rates within limits

C. 1. depressurized to not less than 250 psig
   2. increase EFDW flow to 1000 gpm per SG

D. 1. depressurized to not less than 250 psig
   2. throttle EFDW flow to maintain RCS cooldown rates within limits

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ILT42 ONS SRO NRC Examination QUESTION 76

76

A

General Discussion

Answer A Discussion

Correct. Due to HPI flow in one header only, BOTH SGs will be fully depressurized and EFDW floww will be increase to 1000 gpm per header.

Answer B Discussion

Incorrect. First part is correct. Second part is plausible because it would be correct without degraded HPI flow.

Answer C Discussion

Incorrect. First part is plasuible because with only the TDEFDW pump operating it would be correct. Second part is correct.

Answer D Discussion

Incorrect. First part is plasuible because with only the TDEFDW pump operating it would be correct. Second part is plausible because it would be correct without degraded HPI flow.

Basis for meeting the KA

Question requires knowledge of the effeect of a loww of HPI injection valves have during a vapor space accident and action taken as a result.

Basis for Hi Cog

Basis for SRO only

Per Clarification Guidance for SRO-only Questions Rev 1

Question requires: "Assessing plant conditions (normal, abnormal, or emergency) and then selecting a procedure or section of a procedure to mitigate, recover, or with which to proceed"

Have to asses plant conditions and determine how the SG will be used to mitigate the event.

Can the question be answered solely by knowing "systems knowledge", i.e., how the system works, flow path, logic, component location? NO

Can the question be answered solely by knowing immediate operator actions? NO

Can the question be answered solely by knowing entry conditions for AOPs or plant parameters that require direct entry to major EOPs? NO

Can the question be answered solely by knowing the purpose, overall sequence of events, or overall mitigative strategy of a procedure? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References	Student References Provided
LOSCM tab Rule 7	

APE008 AA2.10 - Pressurizer (PZR) Vapor Space Accident (Relief Valve Stuck Open)
Ability to determine and interpret the following as they apply to the Pressurizer Vapor Space Accident: (CFR: 43.5 / 45.13)
High-pressure injection valves and controllers .....

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 77

77

A

APE015/017 AA2.10 - Reactor Coolant Pump (RCP) Malfunctions

Ability to determine and interpret the following as they apply to the Reactor Coolant Pump Malfunctions (Loss of RC Flow): (CFR 43.5 / 45.13)

When to secure RCPs on loss of cooling or seal injection . . . . . .

Given the following Unit 1 conditions:

Initial conditions:

- Reactor power = 75%
- AP/20 (Loss of Component Cooling) in progress

Current conditions:

- 1A1 RCP Radial Bearing Temperature = 248°F stable

In accordance with AP/20:

1) The 1A1 RCP __(1)__ required to be secured.

2) If the RCP is required to be secured the reactor __(2)__ be tripped first.

Which ONE of the following completes the statements above?

A. 1. is
   2. will

B. 1. is
   2. will NOT

C. 1. is NOT
   2. will

D. 1. is NOT
   2. will NOT

ILT42 ONS SRO NRC Examination QUESTION 77

77

A

General Discussion

Answer A Discussion

Correct. Per AP/20 IAAT RCP radial bearing temp exceeds 225 then the RCP must be secured. Because Reactor power is above 70%, AP/20 directs tripping the reactor and then the RCP.

Answer B Discussion

Incorrect. First part is correct. Second part is plausible because if reactor power were below 70% then it would be correct.

Answer C Discussion

Incorrect. First part is plausible because AP/16 list other immediate RCP trips above 248 degrees. Ie MTR STATOR if 295 degrees. Second part is correct.

Answer D Discussion

Incorrect. First part is plausible because AP/16 list other immediate RCP trips above 248 degrees. Ie MTR STATOR if 295 degrees. Second part is plausible because if reactor power were below 70% then it would be correct.

Basis for meeting the KA

Question requires knowledge of when a RCP must be secured with a loss Component Cooling.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions Rev 1:

This question requires the following:
Assessing plant conditions (normal, abnormal, or emergency) and then selecting a procedure or section of a procedure to mitigate, recover, or with which to proceed

Requuires asses the plant conditions and determining if the reactor will be tripped or not prior to securing the RCP.

Knowledge of diagnostic steps and decision points in the EOPs that involve transitions to event specific sub procedures or emergency contingency procedures.

Can the question be answered solely by knowing systems knowledge", i.e., how the system works, flow path, logic, component location? NO

Can the question be answered solely by knowing immediate operator actions? NO

Can the question be answered solely by knowing entry conditions for AOPs or plant parameters that require direct entry to major EOPs? NO

Can the question be answered solely by knowing the purpose, overall sequence of events, or overall mitigative strategy of a procedure? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References	Student References Provided
AP/20 AP/16	

APE015/017 AA2.10 - Reactor Coolant Pump (RCP) Malfunctions
Ability to determine and interpret the following as they apply to the Reactor Coolant Pump Malfunctions (Loss of RC Flow): (CFR 43.5 / 45.13)
When to secure RCPs on loss of cooling or seal injection . . . . . .

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 77 77 **A**

ILT42 ONS SRO NRC Examination QUESTION 78 78

A

N/A - N/A
Never Assigned to a K/A

Given the following Unit 2 conditions:

- Refueling in progress
- FTC level = 22 feet stable
- No water additions are being made to the system
- 2A LPI train is operable and in service

Current conditions:

- Refueling SRO desires stopping the 2A LPI Pump to aid in inserting a fuel assembly
- 2A LPI pump has been in continuous operation for the previous 24 hours

Which ONE of the following describes whether the 2A LPI pump may be stopped in accordance with OP/2/A/1502/007 (Operations Defueling /Refueling Responsibilities) and the bases for this action?

A. 2A LPI Pump may be stopped
FTC provides adequate backup decay heat removal

B. 2A LPI Pump may be stopped
Spent Fuel Cooling system provides adequate backup decay heat removal

C. 2A LPI Pump may NOT be stopped
FTC does NOT provide adequate backup decay heat removal.

D. 2A LPI Pump may NOT be stopped
Spent Fuel Cooling does NOT provide adequate backup decay heat removal

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ILT42 ONS SRO NRC Examination QUESTION 78

78

A

General Discussion

Answer A Discussion

Correct. TS 3.9.4 (Refueling Ops- DHR and Coolant Circulation (High Water Level) is in effect as water level is ≥ 21.34 ft. This condition requires only 1 DHR loop to be operable and in service since the water can provide adequate backup decay heat removal. TS and Refueling procedures limits & precautions allow SRO to grant permission for the operating loop to be secured for up to 1 hour every 8 hours with adequate level.

Answer B Discussion

Incorrect: First part is correct. 2nd part is incorrect but plausible since Spent Fuel Cooling (SFC) helps to provide decay heat removal but is not the basis for allowing the pump to be secured for up to an hour.

Answer C Discussion

Incorrect: First part is incorrect but plausible if TS 3.9.5 criteria are misapplied to this situation. TS3.9.5 (DHR and Coolant Circulation – Low Water Level) requires 2 operable DHR loops with one loop in service (no time is allowed for a pump to be secured). 2nd part is wrong but plausible in that it would be true if level was below the refueling level of 21.34 ft.

Answer D Discussion

Incorrect: First part is incorrect but plausible if TS 3.9.5 criteria are misapplied to this situation. TS3.9.5 (DHR and Coolant Circulation – Low Water Level) requires 2 operable DHR loops with one loop in service (no time is allowed for a pump to be secured). 2nd part is incorrect but plausible since Spent Fuel Cooling (SFC) helps to provide decay heat removal but is not the basis for allowing the pump to be secured for up to an hour.

Basis for meeting the KA

Requires knowledge of SRO duties during fuel handling. Including the provision to cause a temporary loss of DHR under certain conditions.

Basis for Hi Cog

Basis for SRO only

Requires knowledge of procedures and limitations involved in core alterations (43.6), TS and Bases (43.2). Requires knowledge of the bases of TS 3.9.4.

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Memory	BANK	ONS 2009A Q95

Development References
OP/0/A/1506/001 OP/2/A/1502/007 TS 3.9.4 TS B3.9.4 TS 3.9.5 ONS 2009A Q95

Student References Provided

N/A - N/A
Never Assigned to a K/A

401-9 Comments:

Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 79

79

B

APE054 AA2.06 - Loss of Main Feedwater (MFW)

Ability to determine and interpret the following as they apply to the Loss of Main Feedwater (MFW): (CFR: 43.5 / 45.13)

AFW adjustments needed to maintain proper T-ave. and S/G level .....

Given the following Unit 1 conditions:

Time = 0400
- Reactor power = 100%
- 2SA-18/A-11 (Turbine BSMT Water Emergency High Level) actuates

Time = 0402
- BOTH Main FDW Pumps trip

Time = 0407
- Both SGs level = 30 inches XSUR stable

In accordance with the TBF tab:

1) EFDW flow will be __(1)__.

2) Subsequently if, ALL EFDW is lost __(2)__.

Which ONE of the following completes the statements above?

A. 1. adjusted to increase BOTH SGs to 95% O.R.
   2. HPI Forced Cooling will be initiated

B. 1. adjusted to increase BOTH SGs to 95% O.R.
   2. SSF-ASW flow will be established to BOTH SGs

C. 1. controlled in accordance with the guidance in Rule 7 (SG Feed Control), Table 4 (SG Level Control Points)
   2. HPI Forced Cooling will be initiated

D. 1. controlled in accordance with the guidance in Rule 7 (SG Feed Control), Table 4 (SG Level Control Points)
   2. SSF-ASW flow will be established to BOTH SGs

ILT42 ONS SRO NRC Examination QUESTION 79

79

B

General Discussion

Answer A Discussion

Incorrect. First part is correct. Second part is plausible because HPI F/C would normally be the next choice for decay heat removal.

Answer B Discussion

Correct. Per notes in the TBF tab:

"Feeding to 95% O.R. in Step 1 supersedes guidance in Rule 7 (SG Feed Control), Table 4 (SG Level Control Points)"

For long term cooling, maintenance of stable shutdown conditions from the SSF is preferred over the initiation of HPI forced cooling.

Answer C Discussion

Incorrect. First part is plausible because Rule 7 normally provides guidance on how to feed the SGs. Second part is plausible because HPI F/C would normally be the next choice for decay heat removal.

Answer D Discussion

Incorrect. First part is plausible because Rule 7 normally provides guidance on how to feed the SGs. Second part is correct.

Basis for meeting the KA

Question requires knowledge how EFDW will be controlled during a loss of Main FDW during a turbine building flood.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions Rev 1:

Question requires detailed knowledge of EOP during a loss of MFDW along with a turbine building flood.

This question requires the following:
Assessing plant conditions (normal, abnormal, or emergency) and then selecting a procedure or section of a procedure to mitigate, recover, or with which to proceed

Can the question be answered solely by knowing systems knowledge", i.e., how the system works, flow path, logic, component location? NO

Can the question be answered solely by knowing immediate operator actions? NO

Can the question be answered solely by knowing entry conditions for AOPs or plant parameters that require direct entry to major EOPs? NO

Can the question be answered solely by knowing the purpose, overall sequence of events, or overall mitigative strategy of a procedure? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References	Student References Provided
TBF tab	

APE054 AA2.06 - Loss of Main Feedwater (MFW)
Ability to determine and interpret the following as they apply to the Loss of Main Feedwater (MFW): (CFR: 43.5 / 45.13)
AFW adjustments needed to maintain proper T-ave. and S/G level .....

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 79 79 **B**

ILT42 ONS SRO NRC Examination QUESTION 80

80

A

EPE055 2.2.37 - Loss of Offsite and Onsite Power (Station Blackout)
EPE055 GENERIC
Ability to determine operability and/or availability of safety related equipment. (CFR: 41.7 / 43.5 / 45.12)

Given the following Unit 1 conditions:

Time = 0400
- Reactor power = 100%
- TDEFDW pump OOS

Time = 0445
- Station blackout
- Reactor trip
- Control Rod Group 2 Rod 3 position = 90% withdrawn
- AP/25 (SSF EOP) initiated

Time = 0550
- 1TC, 1TD, and 1TE de-energized
- Standby Buses energized from CT-5

1) At 0550, the Blackout tab will direct using ___(1)___ to feed the SGs.

2) When feed to the SGs is established the Blackout tab will direct ___(2)___.

Which ONE of the following completes the statements above?

A. 1. SSF ASW
   2. stabilizing CETCs $\leq$ 550°F

B. 1. SSF ASW
   2. initiating a cool down to 450°F

C. 1. Station ASW
   2. stabilizing CETCs $\leq$ 550°F

D. 1. Station ASW
   2. initiating a cool down to 450°F

ILT42 ONS SRO NRC Examination QUESTION 80

80

A

General Discussion

Answer A Discussion

Correct. Although power is available to the station ASW pump, the SSF ASW pump will be used to feed the SG. The RCS will be stabilized at 550 degrees. A cooldown will not be performed.

Answer B Discussion

Incorrect. First part is correct. Second part is plausible because it a cooldown plateau used in the SGTR tab.

Answer C Discussion

Incorrect. First part is plausible because it does have power and would be used if the SSF-ASW pump were not available. Second part is correct.

Answer D Discussion

Incorrect. First part is plausible because it does have power and would be used if the SSF-ASW pump were not available. Second part is plausible because it a cooldown plateau used in the SGTR tab.

Basis for meeting the KA

Question requires knowledge of available equipment during a blackout and what will be used to stabilize the unit.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions Rev 1:

Detailed knowledge of the Blackout tab is required to answer this question. Must asses plant conditions and determine which source of feed will be used and decide whether to stabilize or cooldown the RCS.

This question requires the following:
Assessing plant conditions (normal, abnormal, or emergency) and then selecting a procedure or section of a procedure to mitigate, recover, or with which to proceed

Knowledge of diagnostic steps and decision points in the EOPs that involve transitions to event specific sub procedures or emergency contingency procedures.

Can the question be answered solely by knowing systems knowledge", i.e., how the system works, flow path, logic, component location? NO

Can the question be answered solely by knowing immediate operator actions? NO

Can the question be answered solely by knowing entry conditions for AOPs or plant parameters that require direct entry to major EOPs? NO

Can the question be answered solely by knowing the purpose, overall sequence of events, or overall mitigative strategy of a procedure? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References
EAP-BO R3 BO tab SGTR tab

Student References Provided

EPE055 2.2.37 - Loss of Offsite and Onsite Power (Station Blackout)
EPE055 GENERIC
Ability to determine operability and/or availability of safety related equipment. (CFR: 41.7 / 43.5 / 45.12)

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 80 80 **A**

ILT42 ONS SRO NRC Examination QUESTION 81 81

D

BWE04 2.4.30 - Inadequate Heat Transfer

BWE04 GENERIC

Knowledge of events related to system operation/status that must be reported to internal organizations or external agencies, such as the State, the NRC, or the transmission system operator. (CFR: 41.10 / 43.5 / 45.11)

In accordance with the Site Emergency Plan, which ONE of the following would require notifying the State and Counties of plant status?

A. An RCS leak of 4 gpm

B. SG tube leakage of 19 gpm

C. An instrument failure results in ES Channels 1 – 2 actuation

D. A loss of heat transfer requires feeding the SG with the SSF ASW pump

---

ILT42 ONS SRO NRC Examination QUESTION 81

81

D

General Discussion

Answer A Discussion

Incorrect. Plausible because this would require a 4 hour notification of the NRC per OMP 1-14 (Notifications) due to a TS required SD.

Answer B Discussion

Incorrect. Plausible because this would require a 4 hour notification of the NRC per OMP 1-14 (Notifications) due to a TS required SD.

Answer C Discussion

Incorrect. Plausible because this would require a 4 hour notification of the NRC per OMP 1-14 (Notifications) due to ECCS discharge into the RCS.

Answer D Discussion

Correct. Feeding the SGs with SSF ASW pump results in a Site Area Emergency Eplan classification. This will require notification of the State and Counties.

Basis for meeting the KA

Question requires knowledge of when the Sate and Counties must be notified in accordance with plant procedures.

Basis for Hi Cog

Basis for SRO only

Question requires knowledge of implementing the Site Emergency Plan and Notification procedures (OMP 1-14). RP/0/B/1000/002 (Control Room emergency Coordinator Procedure) requires notifying the State and Counties within 15 minutes of an Eplan declaration. Both are SRO tasks.

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Memory	NEW	

Development References
OMP 1-14 RP 1000/001 RP 1000/002

Student References Provided

BWE04 2.4.30 - Inadequate Heat Transfer

BWE04 GENERIC

Knowledge of events related to system operation/status that must be reported to internal organizations or external agencies, such as the State, the NRC, or the transmission system operator. (CFR: 41.10 / 43.5 / 45.11)

401-9 Comments:

Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 82 82

B

APE003 AA2.03 - Dropped Control Rod

Ability to determine and interpret the following as they apply to the Dropped Control Rod: (CFR: 43.5 / 45.13)

Dropped rod, using in-core/ex-core instrumentation, in-core or loop temperature measurements .....

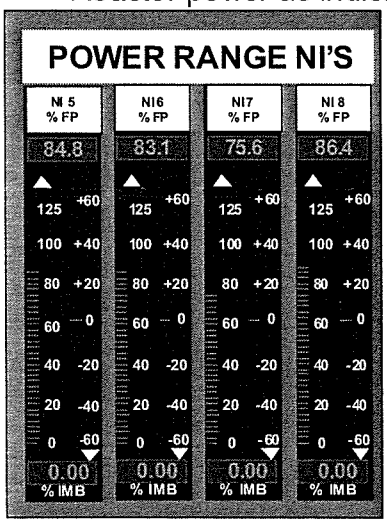
Given the following Unit 1 conditions:

Initial Conditions:

- Reactor power = 85% slowly increasing
- Delta Tc in HAND

Current conditions:

- ICS runback in progress
- Reactor power as indicated below



Which ONE of the following describes:

1) the reason for the ICS runback?

2) a concern that would result from extended operation with skewed Power Range NI indications as described above?

A. 1. Dropped Control Rod
   2. Brittle fracture of the reactor vessel wall could occur

B. 1. Dropped Control Rod
   2. Peak fuel cladding temperatures could be exceeded

C. 1. RCP trip
   2. Brittle fracture of the reactor vessel wall could occur

D. 1. RCP trip
   2. Peak fuel cladding temperatures could be exceeded

ILT42 ONS SRO NRC Examination QUESTION 82

82

B

General Discussion

Answer A Discussion

Incorrect. First part is correct. Second part is plausible since the reactor vessel wall is affected by exposure to neutron flux. Since neutron embrittlement of the vessel wall is a concern and increased QPT results in increased exposure of the RV wall to neutron flux it is plausible to associate elevated QPT levels with concerns over neutron embrittlement of the RV wall and therefore concerns over Brittle Fracture of the RV.

Answer B Discussion

Correct. A dropped control rod will result in depressed power production in the quadrant in which the rod has dropped and depending on the proximity of the rod to other quadrant, it can cause slightly misaligned power production in other quadrants as well. QPT is a common issue that will arise in a dropped rod situation. The COLR provides 3 levels of QPT limits. Although the lowest limit is named "steady state" limit, it applies at all times the spec is applicable (even if the unit is not at "steady state").

Answer C Discussion

Incorrect. First part is plausible for two reasons: 1. There is an RC Flow Runback in ICS that would attempt to perform an ICS runback on loss of a RCP at power. Reactor power is low enough in this question so that there would not be a Rx trip on flux/flow when the RCP was lost. With Delta TC in hand there would be no automatic re-ration of feedwater which adds to plausiblility of unbalanced Excore NI indications 2. Since there are 4 pumps (one in each cold leg) it is plausible to associate a RCP with a quadrant of the core and therefore believe that a RCP trip could result in skewed power production in each core due to the flow and temperatures being believed to be different in each quadrant. With Delta TC in hand there would be no automatic re-ration of feedwater which adds to plausiblility of unbalanced Excore NI indications. Second part is plausible since the reactor vessel wall is affected by exposure to neutron flux. Since neutron embrittlement of the vessel wall is a concern and increased QPT results in increased exposure of the RV wall to neutron flux it is plausible to associate elevated QPT levels with concerns over neutron embrittlement of the RV wall and therefore concerns over Brittle Fracture of the RV.

Answer D Discussion

Incorrect. First part is plausible for two reasons: 1. There is an RC Flow Runback in ICS that would attempt to perform an ICS runback on loss of a RCP at power. Reactor power is low enough in this question so that there would not be a Rx trip on flux/flow when the RCP was lost. With Delta TC in hand there would be no automatic re-ration of feedwater which adds to plausiblility of unbalanced Excore NI indications 2. Since there are 4 pumps (one in each cold leg) it is plausible to associate a RCP with a quadrant of the core and therefore believe that a RCP trip could result in skewed power production in each core due to the flow and temperatures being believed to be different in each quadrant. With Delta TC in hand there would be no automatic re-ration of feedwater which adds to plausiblility of unbalanced Excore NI indications. Second part is correct.

Basis for meeting the KA

Requires the ability to determine that a Control Rod has been dropped into the core based on excore power range NI's and requires an understanding of the implications of operting with a dropped rod that skews neutron flux and results in Quadrant Power Tilt issues.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions:
This question requires knowledge from the basis of TS 3.2.3 that is not systems knowledge.
It cannot be answered by knowing 1 hr or less TS/TRM Action
It cannot be answered solely with "above the line" information.
It cannot be answered solely by knowing Safety Limits

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	BANK	ONS NRC ILT40 #83

Development References	Student References Provided
ADM-TSS R5 ONS NRC ILT40 #83	

APE003 AA2.03 - Dropped Control Rod

Ability to determine and interpret the following as they apply to the Dropped Control Rod: (CFR: 43.5 / 45.13)

Dropped rod, using in-core/ex-core instrumentation, in-core or loop temperature measurements .....

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 82 82

B

ILT42 ONS SRO NRC Examination QUESTION 83

83

B

APE069 2.4.41 - Loss of Containment Integrity
APE069 GENERIC
Knowledge of the emergency action level thresholds and classifications. (CFR: 41.10 / 43.5 / 45.11)

Given the following Unit 1 conditions:
Time = 0400

- Reactor power = 70% decreasing
- Unit shut down in progress due to a 140 gpm RCS leak

Time = 0420

- Core SCM = 0°F
- RCS temperature = 550°F decreasing
- Reactor building pressure = 6 psig increasing
- 1RIA-58 = 15R/hr increasing

Time = 0445

- Reactor building pressure = 18 psig increasing
- Tremor felt in the control room
- Seismic trigger actuates

Time = 0450

- Reactor building pressure = 4 psig decreasing
- 1RIA-58 = 55R/hr decreasing
- Little River Dam has failed

1) The Emergency Classification at 0420 is __(1)__.

2) The Emergency Classification at 0450 is __(2)__.

Which ONE of the following completes the statements above?

REFERENCE PROVIDED

A. 1. Alert
   2. Site Area Emergency

B. 1. Alert
   2. General Emergency

C. 1. Site Area Emergency
   2. Site Area Emergency

D. 1. Site Area Emergency
   2. General Emergency

ILT42 ONS SRO NRC Examination QUESTION 83

83

B

General Discussion

Answer A Discussion

Incorrect. First part is correct. Second part is plausible because it would be correct if the unexplained decrease in RB pressure were not accounted for in the Fission Product Barrier Matrix.

Answer B Discussion

Correct. Loss of SCM gives 5 points on the matrix. This is an Alert. At 0450 LOSCM 5 points, RIA-58 reading at 50 minutes is 5 points, and unexplained RB pressure decrease 3 points. 13 total points which is a General Emergency.

Answer C Discussion

Incorrect. First part is plausible because if the candidate had the misconception that they should add the 4 points for the RCS leak rate . 160 gpm (4 points) and LOSCM (5 points) this would be 9 points and a SAE. Second part is plausible because the failure of the Little River Dam is a SAE.

Answer D Discussion

Incorrect. First part is plausible because if the candidate had the misconception that they should add the 4 points for the RCS leak rate . 160 gpm (4 points) and LOSCM (5 points) this would be 9 points and a SAE. Second part is correct.

Basis for meeting the KA

Question requires knowledge of how a loss on containment will affect an emergency classification.

Basis for Hi Cog

Basis for SRO only

Emergency Clssification is an SRO only task.

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References	Student References Provided
RP/1000/001	RP/1000/001 Encl. 4.1 - 4.9

APE069 2.4.41 - Loss of Containment Integrity
APE069 GENERIC
Knowledge of the emergency action level thresholds and classifications. (CFR: 41.10 / 43.5 / 45.11)

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 84

84

A

BWE03 2.1.32 - Inadequate Subcooling Margin
BWE03 GENERIC
Ability to explain and apply system limits and precautions. (CFR: 41.10 / 43.2 / 45.12)

Given the following Unit 1 conditions:

Initial conditions:
- Time = 0400
- Reactor power = 100%
- 1B HPI OOS

Current conditions:
- Time = 0410
- ES Channels 1 – 8 actuated
- Core SCM = 0°F
- EOP Enclosure 5.1 (ES Actuation) in progress
- Seal Inlet HDR Flow = 25 gpm
- HPI Flow Train A flow = 456 gpm
- HPI Flow Train B flow = 482 gpm
- LPI Flow Train A flow = 1820 gpm
- LPI Flow Train B flow = 1730 gpm

1) __(1)__ exceeding the HPI pumps flow limits in accordance with Rule 6 (HPI Pump Throttling Limits).

2) If the HPI pump(s) exceeding the flow limit is/are secured, the ECCS equipment required to mitigate this event in accordance with the Safety Analysis __(2)__ be operating.

Which ONE of the following completes the statements above?

A. 1. BOTH HPI headers are
   2. will

B. 1. BOTH HPI headers are
   2. will NOT

C. 1. ONLY the 1B HPI header is
   2. will

D. 1. ONLY the 1B HPI header is
   2. will NOT

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ILT42 ONS SRO NRC Examination QUESTION 84

84

A

General Discussion

Answer A Discussion

Correct. Both headers have only one HPI pump operating and both are exceeding 475 gpm. The "A" header must include Seal Inlet Flow. Both HPI pumps will be secured. However no HPI pumps are credited for a Large Break LOCA.. Since both LPI header flow together exceeds 3400 gpm, this would be a LBLOCA.

Answer B Discussion

Incorrect. First part is correct. Second part is plausible because if not a LBLOCA this would be correct.

Answer C Discussion

Incorrect. First part is plausible because if Seal Inlet Flow not added in to the "A" header this would be correct. Second part is correct.

Answer D Discussion

Incorrect. First part is plausible because if Seal Inlet Flow not added in to the "A" header this would be correct. Second part is plausible because if not a LBLOCA this would be correct.

Basis for meeting the KA

This question requires knowledge about HPI system limits and how to apply them during a LOSCM.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions Rev 1:

This question requires knowledge of TS 3.5.2 bases.

Can question be answered solely by knowing . 1 hour TS/TRM Action? NO

Can question be answered solely by knowing the LCO/TRM information listed "above-the-line? NO

Can question be answered solely by knowing the TS Safety Limits? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References
ADM-TSS EOP Rule 2 and 6 TS B3.5.2

Student References Provided

BWE03 2.1.32 - Inadequate Subcooling Margin

BWE03 GENERIC

Ability to explain and apply system limits and precautions. (CFR: 41.10 / 43.2 / 45.12)

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 85 85

D

BWE14 EA2.1 - EOP Enclosures
Ability to determine and interpret the following as they apply to the (EOP Enclosures)
(CFR: 43.5 / 45.13)
Facility conditions and selection of appropriate procedures during abnormal and emergency operations.

Given the following Unit 1 conditions:

Time = 0400
- Reactor has been tripped due to SGTR in the 1A SG

Time = 0500
- 1A SG level = 293 inches XSUR increasing

Time = 0530
- 1A SG reaches the Water in Steam Line Level

In accordance with the SGTR tab:

1) At 0500, EOP Enclosure 5.22 (SG Blowdown) __(1)__ be used to reduce 1A SG level.

2) At 0530, stop steaming __(2)__.

Which ONE of the following completes the statements above?

A. 1. will NOT
   2. BOTH SGs and initiate HPI Forced Cooling

B. 1. will NOT
   2. the affected SG and continue to steam the unaffected SG

C. 1. will
   2. BOTH SGs and initiate HPI Forced Cooling

D. 1. will
   2. the affected SG and continue to steam the unaffected SG

ILT42 ONS SRO NRC Examination QUESTION 85

85

D

General Discussion

Answer A Discussion

Incorrect. First part is plausible because the candidate may have the misconception that blow down does not occur until "Water in the Steam Line level" is reached. Second part is plausible because it would be correct if both SG were at the "Water in Steam Line Level".

Answer B Discussion

Incorrect. First part is plausible because the candidate may have the misconception that blow down does not occur until "Water in the Steam Line level" is reached. Second part is correct.

Answer C Discussion

Incorrect. First part is correct. Second part is plausible because it would be correct if both SG were at the "Water in Steam Line Level".

Answer D Discussion

Correct. Per the SGTR tab when level exceeds 285 inches then level will be reduced by using SG Blowdown. The SG with "Water In Steam Line Level" will not be steamed and the other SG will be.

Basis for meeting the KA

Question requires knowledge of the EOP and when a specific enclosure would be performed.

Basis for Hi Cog

Basis for SRO only

In Accordance with Clarification Guidance for SRO-only Questions Rev 1

Question requires "Assessing plant conditions (normal, abnormal, or emergency) and then selecting a procedure or section of a procedure to mitigate, recover, or with which to proceed." In this must determine when an EOP enclosure (Encl. 5.22) must be performed and what action to take when water reaches a certain level. This is detailed procedure knowledge.

Can the question be answered solely by knowing "systems knowledge", i.e., how the system works, flowpath, logic, component location? NO

Can the question be answered solely by knowing immediate operator actions? NO

Can the question be answered solely by knowing entry conditions for AOPs or plant parameters that require direct entry to major EOPs? NO

Can the question be answered solely by knowing the purpose, overall sequence of events, or overall mitigative strategy of a procedure? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References	Student References Provided
EAP=SGTR SGTR tab	

BWE14 EA2.1 - EOP Enclosures

Ability to determine and interpret the following as they apply to the (EOP Enclosures)

(CFR: 43.5 / 45.13)

Facility conditions and selection of appropriate procedures during abnormal and emergency operations.

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 85 85

D

ILT42 ONS SRO NRC Examination QUESTION 86 86 **D**

SYS004 A2.10 - Chemical and Volume Control System

Ability to (a) predict the impacts of the following malfunctions or operations on the CVCS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: (CFR: 41.5/ 43/5 / 45/3 / 45/5)

Inadvertent boration/dilution .....

Given the following Unit 1 conditions:

Initial conditions:
- Reactor power = 85%
- Control rod group 7 = 93% withdrawn
- Makeup to LDST in progress

Current conditions:
- Reactor power = 85%
- Control rod group 7 = 30% withdrawn

1) In accordance with the bases of TS 3.2.1 (Regulating Rod Position Limits) continued operation in the current plant configuration is NOT allowed because __(1)__.

2) Restoring rods to within the acceptable region by __(2)__ will satisfy the requirements of TS 3.2.1.

Which ONE of the following completes the statements above?

REFERENCE PROVIDED

A. 1. SDM is not adequate and ejected rod worth is too high
   2. boration ONLY

B. 1. SDM is not adequate and ejected rod worth is too high
   2. boration OR reducing reactor power

C. 1. this configuration is in violation of the assumptions made in the safety analysis
   2. boration ONLY

D. 1. this configuration is in violation of the assumptions made in the safety analysis
   2. boration OR reducing reactor power

ILT42 ONS SRO NRC Examination QUESTION 86

86

D

General Discussion

Answer A Discussion

Incorrect. First part is plausible because it would be correct if it were in the unacceptable region of the curve. Second part is plausible and if in the unacceptable region boration would be required within 15 minutes to restore SDM.

Answer B Discussion

Incorrect. First part is plausible because it would be correct if it were in the unacceptable region of the curve. Second part is correct.

Answer C Discussion

Incorrect. First part is correct. Second part is plausible and if in the unacceptable region boration would be required within 15 minutes to restore SDM.

Answer D Discussion

Correct. In accordance with the basis of TS 3.2.1 operation in the restricted region is a violation of the assumptions made in the safety analysis. Borating or reducing power will satisfy TS3.2.1.

Basis for meeting the KA

Question requires knowledge of the results of a deboration and the TS required actions to correct.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions Rev 1:

Question requires "Knowledge of TS bases that are required to analyze TS required actions and terminology." TS Basis 3.2.1.

Can question be answered solely by knowing ≤ 1 hour TS/TRM Action? NO

Can question be answered solely by knowing the LCO/TRM information listed above-the-line? NO

Can question be answered solely by knowing the TS Safety Limits? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References
ADM-TSS TS 3.2.1 TS B3.2.1 Unit 1 COLR

Student References Provided
TS 3.2.1 Unit 1 COLR

SYS004 A2.10 - Chemical and Volume Control System

Ability to (a) predict the impacts of the following malfunctions or operations on the CVCS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: (CFR: 41.5/ 43/5 / 45/3 / 45/5)

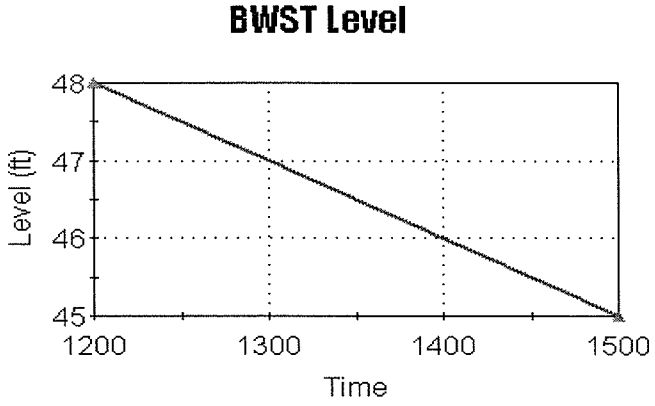
Inadvertent boration/dilution .....

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 87 87 **A**

SYS006 2.4.47 - Emergency Core Cooling System (ECCS)
SYS006 GENERIC
Ability to diagnose and recognize trends in an accurate and timely manner utilizing the appropriate control room reference material. (CFR: 41.10 / 43.5 / 45.12)

Given the following Unit 1 conditions:



1) In accordance with PT/1/A/0600/001 (Periodic Instrument Surveillance) and referring to the chart of control room indicated BWST level above, the latest time that the BWST surveillance is satisfied is ___(1)___.

2) A bases for the minimum BWST level in accordance with the basis of TS 3.5.4 is to ___(2)___.

Which ONE of the following completes the statements above?

A. 1. 1300
   2. ensure adequate NPSH for the LPI and RBS pumps after suction is swapped to the RBES

B. 1. 1300
   2. reduce post fuel handling accident dose released by providing proper refueling canal level

C. 1. 1400
   2. ensure adequate NPSH for the LPI and RBS pumps after suction is swapped to the RBES

D. 1. 1400
   2. reduce post fuel handling accident dose released by providing proper refueling canal level

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ILT42 ONS SRO NRC Examination QUESTION 87

87

A

General Discussion

Answer A Discussion

Correct. Per PT/600/001 the BWST level limit is 47 feet. This is the error corrected value. The TS value is 46 feet.

Per the basis of TS 3.5.4: "A second factor that affects the minimum required BWST volume is the ability to support continued LPI pump operation after the manual transfer to recirculation occurs. When LPI pump suction is transferred to the sump, there must be sufficient water in the sump to ensure adequate net positive suction head (NPSH) for the LPI and reactor building spray pumps. "

Answer B Discussion

Incorrect. First part is correct. Second part is plausible because the TS bases discuss the maximum BWST level ensures adequate volume for refueling and the bases for the refueling canal level is to reduce post fuel handling accident dose.

Answer C Discussion

Incorrect. First part is plasuible because it is the TS non instument corrected value. Second part is correct.

Answer D Discussion

Incorrect. First part is plasuible because it is the TS non instument corrected value. Second part is plausible because the TS bases discuss the maximum BWST level ensures adequate volume for refueling and the bases for the refueling canal level is to reduce post fuel handling accident dose.

Basis for meeting the KA

Question requires ability to monitor a control room trend and determine that TS requirements are not met.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions Rev 1:

Question requires "Knowledge of TS bases that are required to analyze TS required actions and terminology." TS Basis 3.5.2.

Can question be answered solely by knowing ≤ 1 hour TS/TRM Action? NO

Can question be answered solely by knowing the LCO/TRM information listed above-the-line? NO

Can question be answered solely by knowing the TS Safety Limits? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References	Student References Provided
PT/600/001 TS B3.5.4	

SYS006 2.4.47 - Emergency Core Cooling System (ECCS)

SYS006 GENERIC

Ability to diagnose and recognize trends in an accurate and timely manner utilizing the appropriate control room reference material. (CFR: 41.10 / 43.5 / 45.12)

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 88

88

A

SYS061 A2.07 - Auxiliary / Emergency Feedwater (AFW) System

Ability to (a) predict the impacts of the following malfunctions or operations on the AFW; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: (CFR: 41.5 / 43.5 / 45.3 / 45.13)

Air or MOV failure .....

Given the following Unit 1 conditions:

- Reactor power = 100%
- 1FDW-368 is discovered closed and will NOT open

1) In accordance with TS 3.7.5 (Emergency Feedwater) basis the __(1)__ is inoperable.

2) If NOT repaired, the MAXIMUM time allowed to be in MODE 3 is __(2)__ hours

Which ONE of the following completes the statements above?

REFERENCE PROVIDED

A. 1. TDEFDW pump
   2. 84

B. 1. TDEFDW pump
   2. 252

C. 1. associated EFW flow path
   2. 84

D. 1. associated EFW flow path
   2. 252

ILT42 ONS SRO NRC Examination QUESTION 88

88

A

General Discussion

Answer A Discussion

Correct:. Per the DBD if FDW-368 or 369 is closed the TDEFDW pump is inoperable. Condition B completeion time is 72 hours. Conditions D give an additional 12 hours to be in MODE 3. Total time is 84 houirs.

Answer B Discussion

Incorrect:. First part correct. Second part plausible if you misapply the "10 days from failure to met the LCO" in Condition B. 10 days plus 12 hours would be a total of 252 hours.

Answer C Discussion

Incorrect. First part is plausible because the candidate could have the misconception that a valve in the flow path would make the flow path inoperable. Second part is correct.

Answer D Discussion

Incorrect. First part is plausible because the candidate could have the misconception that a valve in the flow path would make the flow path inoperable. Second part plausible if you misapply the "10 days from failure to met the LCO" in Condition B. 10 days plus 12 hours would be a total of 252 hours.

Basis for meeting the KA

This question requires knowledge of how a valve failure would affect the EFW system and the TS consequences.

Basis for Hi Cog

Basis for SRO only

Question requires knowledge of the DBD to determine EFDW pump operability and application of TS. Both of which is SRO knowledge.

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References
ADM-TSS R5 TS 3.7.5 TS 3.7.5 Bases

Student References Provided
TS 3.7.5

SYS061 A2.07 - Auxiliary / Emergency Feedwater (AFW) System

Ability to (a) predict the impacts of the following malfunctions or operations on the AFW; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: (CFR: 41.5 / 43.5 / 45.3 / 45.13)

Air or MOV failure .....

401-9 Comments:

Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 89 89

C

SYS063 2.2.25 - DC Electrical Distribution System
SYS063 GENERIC
Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits. (CFR: 41.5 / 41.7 / 43.2)

Which ONE of the following sets of 125 VDC Vital I&C power panelboards are required for Unit 2 in accordance with TS 3.8.8 (Distribution Systems – Operating) and why?

A. 1DIA and 1DIB
They provide power to SK and SL breakers

B. 1DIA and 1DIB
They provide power to the Switchyard Isolation circuitry

C. 1DIC and 1DID
They provide power to SK and SL breakers

D. 1DIC and 1DID
They provide power to the Switchyard Isolation circuitry

ILT42 ONS SRO NRC Examination QUESTION 89

89

C

General Discussion

Answer A Discussion

Incorrect: First part is plausible since Condition F is entered if either KVIC or KVID is inoperable and has a 24 hour completion time for either panelboard therefore it would be plausible to determine that 24 hours to restore one of the panelboards would be allowed. Additional plausibility is from having to determine that the loss of the 3DIC panelboard would cause 3KVIC to de-energize. If this is not recognized then this is the correct choice. Second part is correct.

Answer B Discussion

Incorrect: : First part is plausible as described in A. Second part is plausible since SK and SL breakers protective relaying is signaled out in the electrical specs as unique. It is unique because unit 1's DIC and DID panelboards provide power to these breakers that all 3 units rely on. The fact that the power for SK and SL breakers comes from a units power panelboards and is signaled out as unique in the electrical specs combine to make this a plausible distractor since Condition F is itself unique for other reasons. Additionally, the breakers are getting power from the "c" and "d" strings of panelboards however it is from the DC panelboards instead of the AC panelboards.

Answer C Discussion

CORRECT: When 3DIC is de-energized then 3KVIC would also de-energize. With both 3KVIC and 3KVID de-energized there is no TS Condition in TS 3.8.8 that allows for multiple Vital Instrumentation power panelboards to be inoperable therefore immediate entry into LCO 3.0.3 would be required. TS 3.8.8 Condition F allows 4 hours to restore KVIA and KVIB and then allows 24 hours to restore KVIC and KVID. The difference is due to the fact that KVIA and KVIB provide power to the odd and even ES digital channels respectively therefore a loss of either panelboard would render all of the Odd or Even digital channels unable to trip since they fail in the untripped state when de-energized.

Answer D Discussion

Incorrect: First part is correct. Second part is plausible as described in B.

Basis for meeting the KA

K/A MATCH ANALYSIS
Requires tracking previously entered TS LCO's and then correctly applying that to a subsequent inoperability to determine the correct actions required by Tech Specs.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions Rev 1:

Question requires "Knowledge of TS bases that are required to analyze TS required actions and terminology." TS Basis 3.8.8

Can question be answered solely by knowing ≤ 1 hour TS/TRM Action? NO

Can question be answered solely by knowing the LCO/TRM information listed above-the-line? NO

Can question be answered solely by knowing the TS Safety Limits? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Memory	NEW	

Development References	Student References Provided
EL-DCD TS 3.8.8 and bases	

SYS063 2.2.25 - DC Electrical Distribution System
SYS063 GENERIC
Knowledge of the bases in Technical Specifications for limiting conditions for operations and safety limits. (CFR: 41.5 / 41.7 / 43.2)

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 89 89

C

ILT42 ONS SRO NRC Examination QUESTION 90 90

D

SYS078 2.4.18 - Instrument Air System (IAS)
SYS078 GENERIC
Knowledge of the specific bases for EOPs. (CFR: 41.10 / 43.1 / 45.13)

Given the following Unit 2 conditions:

- Reactor power = 100%

1) The IA pressure setpoint which will cause the Diesel Air Compressors to automatically start is __(1)__ psig.

2) The bases for 2AP/22 (Loss of IA) ensuring that the Diesel Air Compressors are operating if IA header pressure decreases below the setpoint is to __(2)__.

Which ONE of the following completes the statements above?

A. 1. 88
   2. ensure operability of 2FDW-315/316 during a subsequent blackout

B. 1. 88
   2. prevent exceeding RB design pressure during a subsequent MSLB/LOOP

C. 1. 90
   2. ensure operability of 2FDW-315/316 during a subsequent blackout

D. 1. 90
   2. prevent exceeding RB design pressure during a subsequent MSLB/LOOP

ILT42 ONS SRO NRC Examination QUESTION 90

90

D

General Discussion

Answer A Discussion

Incorrect. First part plausible because 88 psig is the setpoint for the AIA compressor. Second part is plausible because the Diesel Air Compressors could provide air to FDW-315/316. However this is not the reason that they are started on low IA header pressure.

Answer B Discussion

Incorrect. First part plausible because 88 psig is the setpoint for the AIA compressor. Second part is correct..

Answer C Discussion

Incorrect. First part is correct. Second part is plausible because the Diesel Air Compressors could provide air to FDW-315/316. However this is not the reason that they are started on low IA header pressure.

Answer D Discussion

Correct. The Diesel Air Compressors will start at 90 psig IA header pressure. The reason they are started is to prevent exceeding RB design pressure during a subsequent MSLB/LOOP. This is done by ensuring the the FDW valves have enough air pressure to close because they fail as-is on loss of IA.

Basis for meeting the KA

We have no quidance to IA in our EOP. It is in the AP. This question requires knowledge of bases for actions contained in the Loss of IA AP.

Basis for Hi Cog

Basis for SRO only

This question requires knowledge of the bases for steps in an AP. This is SRO knowledge. The question cannot be answered using system knowledge alone.

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Memory	NEW	

Development References	Student References Provided
SSS-IA R27 2AP/22	

SYS078 2.4.18 - Instrument Air System (IAS)
SYS078 GENERIC
Knowledge of the specific bases for EOPs. (CFR: 41.10 / 43.1 / 45.13)

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 91 91 **B**

SYS016 2.2.36 - Non-Nuclear Instrumentation System (NNIS)
SYS016 GENERIC
Ability to analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions for operations. (CFR: 41.10 / 43.2 / 45.13)

Given the following Unit 1 conditions:

Initial conditions:
- Unit is returning to power after a short maintenance outage
- Main Turbine has just been placed on-line
- Reactor power = 25% increasing
- 1A LPI Train piping insulation removal for weld inspection in progress

Current conditions:
- Power to the 1A LPI Train Flow gage disconnected

Which ONE of the following states:

1) the equipment that must be declared inoperable in accordance with the basis of Tech Specs 3.5.3 (LPI) and 3.6.5 (RB Spray and Cooling Systems)?

2) if Unit 1 can continue with the power escalation to 100% in accordance with Tech Specs?

A. 1. 1A LPI Train ONLY
   2. can continue

B. 1. 1A LPI Train AND 1A RBS Train
   2. can continue

C. 1. 1A LPI Train ONLY
   2. can NOT continue

D. 1. 1A LPI Train AND 1A RBS Train
   2. can NOT continue

ILT42 ONS SRO NRC Examination QUESTION 91

91

B

General Discussion

Answer A Discussion

Incorrect. First part is plausible because the instrument is on the LPI train. Second part is correct.

Answer B Discussion

Correct. In accordance with the basis of TS 3.5.3 the LPI header flow instrument is required for both the LPI and the RBS trains. Power increase can continue because there is not a MODE change.

Answer C Discussion

Incorrect. First part is plausible because the instrument is on the LPI train. Second part is plausible because the candidate may have the misconception that LCO 3.0.4 applies. Because a MODE change would not be allowed.

Answer D Discussion

Incorrect. First part is correct. Second part is plausible because the candidate may have the misconception that LCO 3.0.4 applies. Because a MODE change would not be allowed.

Basis for meeting the KA

Question requires knowledge of how loss of power to an NNI (LPI Train Flow Gauge) would affect limiting conditions for operations.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions Rev 1:

Question requires "Knowledge of TS bases that are required to analyze TS required actions and terminology." TS Basis 3.5.3 and 3.6.5.

Can question be answered solely by knowing ≤ 1 hour TS/TRM Action? NO

Can question be answered solely by knowing the LCO/TRM information listed above-the-line? NO

Can question be answered solely by knowing the TS Safety Limits? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References
ADM-TSS TS 3.5.3 TS B3.5.3 TS 3.6.5 TS B3.6.5

Student References Provided

SYS016 2.2.36 - Non-Nuclear Instrumentation System (NNIS)

SYS016 GENERIC

Ability to analyze the effect of maintenance activities, such as degraded power sources, on the status of limiting conditions for operations. (CFR: 41.10 / 43.2 / 45.13)

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 92 92

C

SYS017 A2.02 - In-Core Temperature Monitor (ITM) System

Ability to (a) predict the impacts of the following malfunctions or operations on the ITM system; and (b) based on those predictions, use procedures to correct, control or mitigate the consequences of those malfunctions or operations: (CFR: 41.5 / 43.5 / 45.3 / 45.5)

Core damage .....

Given the following Unit 1 conditions:

Initial conditions:

- Time = 0400
- ICC tab in progress
- CETCs = 650°F increasing

Current conditions:

- Time = 1100
- CETCs = 1250°F stable

1) At 0400, with TSC approval, the ICC tab __(1)__ direct starting RCPs.

2) At 1100, the __(2)__ will provide mitigation guidance.

Which ONE of the following completes the statements above?

A. 1. will
   2. OSAG ONLY

B. 1. will
   2. OSAG and the ICC tab

C. 1. will NOT
   2. OSAG ONLY

D. 1. will NOT
   2. OSAG and the ICC tab

ILT42 ONS SRO NRC Examination QUESTION 92

92

C

General Discussion

Answer A Discussion

Incorrect. First part is plausible because it would be correct if CETCs were between 700 and 1200 degrees. Second part is correct.

Answer B Discussion

Incorrect. First part is plausible because it would be correct if CETCs were between 700 and 1200 degrees. Second part is plausible because the candidate could have the misconception that the EOP and the OSAG were performed at the same time.

Answer C Discussion

Correct. The ICC tab will not direct starting a RCP until CETCs read > 700 degrees. The ICC tab directs going to the OSAG when CETCs reach 1200 degrees.

Answer D Discussion

Incorrect. First part is correct. Second part is plausible because the candidate could have the misconception that the EOP and the OSAG were performed at the same time.

Basis for meeting the KA

Question requires how CETC indication affect the mitigation strategy.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions Rev 1:

Question requires evaluating plant data and determining which procedure will be used to mitigate this event. OSAG and/or ICC tab. Also detailed information of the ICC tab on when a RCP will be started.

This question requires the following:
Assessing plant conditions (normal, abnormal, or emergency) and then selecting a procedure or section of a procedure to mitigate, recover, or with which to proceed.

Knowledge of diagnostic steps and decision points in the EOPs that involve transitions to event specific sub procedures or emergency contingency procedures.

Can the question be answered solely by knowing systems knowledge", i.e., how the system works, flow path, logic, component location? NO

Can the question be answered solely by knowing immediate operator actions? NO

Can the question be answered solely by knowing entry conditions for AOPs or plant parameters that require direct entry to major EOPs? NO

Can the question be answered solely by knowing the purpose, overall sequence of events, or overall mitigative strategy of a procedure? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References	Student References Provided
EAP-ICC R7 ICC tab	

SYS017 A2.02 - In-Core Temperature Monitor (ITM) System

Ability to (a) predict the impacts of the following malfunctions or operations on the ITM system; and (b) based on those predictions, use procedures to correct, control or mitigate the consequences of those malfunctions or operations: (CFR: 41.5 / 43.5 / 45.3 / 45.5)

Core damage .....

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 92 92

C

ILT42 ONS SRO NRC Examination QUESTION 93 93

D

SYS033 2.4.46 - Spent Fuel Pool Cooling System (SFPCS)
SYS033 GENERIC
Ability to verify that the alarms are consistent with the plant conditions. (CFR: 41.10 / 43.5 / 45.3 / 45.12)

Given the following Unit 1 conditions:

- SFP level = (-) 0.7 feet stable
- 1SA-9/A-5 (Spent Fuel Pool Level High/Low) actuated
- ALL SF Cooling Pumps have tripped OFF
- ALL SF Cooling Pump switches green lights are illuminated

1) The LOW SFP Level interlock __(1)__ functioned as designed.

2) AP/35 (Loss of SFP Cooling and/or Level) will require __(2)__.

Which ONE of the following completes the statements above?

A. 1. has
   2. making up to the SFP using DW

B. 1. has
   2. making up to the SFP using 1A BHUT

C. 1. has NOT
   2. aligning SFP ventilation

D. 1. has NOT
   2. bypassing the SFP Low Level Interlock

ILT42 ONS SRO NRC Examination QUESTION 93

93

D

General Discussion

Answer A Discussion

Incorrect. First part plausible because the SFP high level setpoint is +0.7 feet. Also level is low but theywill not trip until -2.5 feet. Second part is plausible because DW can be used to makeup to the SFP.

Answer B Discussion

Incorrect. First part plausible because the SFP high level setpoint is +0.7 feet. Also level is low but theywill not trip until -2.5 feet. Second part is plausible because 1A BHUT can be used to makeup to the SFP.

Answer C Discussion

Incorrect. First part is correct. Second part is plausible because per AP/35 if SFP temp is expected to reach 180 degrees then SFP ventilation is aligned by the TSC.

Answer D Discussion

Correct. 1SA-9/A-5 should not be in alarm on low level and the SF pumps should not have tripped off. The SF pumps will trip at -2.5 feet in the SFP. AP/35 will direct bypassing the interlock and restarting a SF Cooling Pump.

Basis for meeting the KA

Question requires knowledge of the SFP level alarm and the low level interlock with the SFP cooling pumps.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions Rev 1:

Question requires detailed knowledge of AP/35 that is not entry conditions or major mitigation strategy.

This question requires the following:
Assessing plant conditions (normal, abnormal, or emergency) and then selecting a procedure or section of a procedure to mitigate, recover, or with which to proceed

Knowledge of diagnostic steps and decision points in the EOPs that involve transitions to event specific sub procedures or emergency contingency procedures.

Can the question be answered solely by knowing systems knowledge", i.e., how the system works, flow path, logic, component location? NO

Can the question be answered solely by knowing immediate operator actions? NO

Can the question be answered solely by knowing entry conditions for AOPs or plant parameters that require direct entry to major EOPs? NO

Can the question be answered solely by knowing the purpose, overall sequence of events, or overall mitigative strategy of a procedure? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References	Student References Provided
1SA-9/A-5 AP/35	

SYS033 2.4.46 - Spent Fuel Pool Cooling System (SFPCS)
SYS033 GENERIC
Ability to verify that the alarms are consistent with the plant conditions. (CFR: 41.10 / 43.5 / 45.3 / 45.12)

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 93 93

D

ILT42 ONS SRO NRC Examination QUESTION 94 94 **A**

GEN2.1 2.1.20 - GENERIC - Conduct of Operations
Conduct of Operations
Ability to interpret and execute procedure steps. (CFR: 41.10 / 43.5 / 45.12)

Given the following Unit 1 conditions:

Initial conditions:
- Time = 0400
- LOCA CD tab in progress
- ALL SCM = 5°F stable
- RCS pressure = 870 slowly decreasing
- RB pressure peaked at 2.4 psig and is now decreasing
- HPI aligned for piggyback operation
- LPI suction source is the RBES
- 1LP-15 failed CLOSED

Current conditions:
- Time = 0405
- RCS pressure = 855 psig stable
- 1SA-07/E-6 (ES LPI BYP PERMIT) actuates

1) At 0405, the LPI ES channels__(1)__ allowed to be manually bypassed in accordance with the LOCA CD tab.

2) The MAXIMUM allowed HPI flow is __(2)__ gpm.

Which ONE of the following completes the statements above?

A. 1. are
   2. 750

B. 1. are NOT
   2. 750

C. 1. are
   2. 500

D. 1. are NOT
   2. 500

ILT42 ONS SRO NRC Examination QUESTION 94

94

A

General Discussion

Answer A Discussion

Correct: LPI will be bypassed under these conditions. Ie SCM > zero. RCS pressure controllable. Permissive statalarm received. While aligning LPI in the piggyback mode per Encl 5.12 (also addressed in LOCA CD tab), if either LP-15 or LP-16 do not open then total LPI flow is limited to 750 gpm.

Answer B Discussion

Incorrect. First part is plausible because the candidate may have the misconception that with SCM so low ES would not be bypassed. Second part is correct.

Answer C Discussion

Incorrect: First part is correct. Second part is plausible since total HPI flow is required to be maintained > 500 gpm if 2 LPIP's operating to ensure min flow requirements for the LPIP's are met. Additionally, the LOCA CD tab limits LPI flow to 500 gpm during certain conditions.

Answer D Discussion

Incorrect: First part is plausible because the candidate may have the misconception that with SCM so low ES would not be bypassed. Second part is plausible since total HPI flow is required to be maintained > 500 gpm if 2 LPIP's operating to ensure min flow requirements for the LPIP's are met. Additionally, the LOCA CD tab limits LPI flow to 500 gpm during certain conditions.

Basis for meeting the KA

This question requires knowledge of procedure steps in the LOCA CD tab and how to execute them. This includes the ability to interpret information provided in steps related to bypassing LPI ES channels.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions Rev 1:

This question requires the following:
Assessing plant conditions (normal, abnormal, or emergency) and then selecting a procedure or section of a procedure to mitigate, recover, or with which to proceed.

Can the question be answered solely by knowing systems knowledge", i.e., how the system works, flow path, logic, component location? NO

Can the question be answered solely by knowing immediate operator actions? NO

Can the question be answered solely by knowing entry conditions for AOPs or plant parameters that require direct entry to major EOPs? NO

Can the question be answered solely by knowing the purpose, overall sequence of events, or overall mitigative strategy of a procedure? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	MODIFIED	ONS 2009A Q83

Development References	Student References Provided
EOP LOCA CD tab, Encl 5.12 ONS NRC 2009A Q83	

GEN2.1 2.1.20 - GENERIC - Conduct of Operations
Conduct of Operations
Ability to interpret and execute procedure steps. (CFR: 41.10 / 43.5 / 45.12)

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 94 94 **A**

ILT42 ONS SRO NRC Examination QUESTION 95 95

C

GEN2.2 2.2.11 - GENERIC - Equipment Control
Equipment Control
Knowledge of the process for controlling temporary design changes. (CFR: 41.10 / 43.3 / 45.13)

In accordance with NSD 301 (Engineering Change Program):

1) A temporary design change is required to have a plan for removal no longer than __(1)__ from installation.

2) The Operational Control Group (Operations) is responsible for __(2)__.

Which ONE of the following completes the statements above?

A. 1. thirty days
   2. maintaining a log of installed changes

B. 1. thirty days
   2. insuring "blue" tags are hung on the affected equipment

C. 1. one year
   2. maintaining a log of installed changes

D. 1. one year
   2. insuring "blue" tags are hung on the affected equipment

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ILT42 ONS SRO NRC Examination QUESTION 95

95

C

General Discussion

Answer A Discussion

Incorrect. First part is plausible because 30 days is an often used surveillance time. Second part is correct.

Answer B Discussion

Incorrect. First part is plausible because 30 days is an often used surveillance time. Second part is plausible because "blue tags" are hung on OPS Test Group electrical items that are out of their normal positions. Such as leads, links, etc.

Answer C Discussion

Correct. Per NSD-301 a plan for removal within one year must be in place before temporary design change will be installed. The operational control group (OPS in this case) is required to maintain a log of installed changes.

Answer D Discussion

Incorrect. First part is correct. Second part is plausible because "blue tags" are hung on OPS Test Group electrical items that are out of their normal positions. Such as leads, links, etc.

Basis for meeting the KA

The question requirs knowledge of the process for controlling Temporary Design Changes.

Basis for Hi Cog

Basis for SRO only

Per the "Clarification Guidance for SRO-only Questions" Rev. 1:
Facility licensee procedures required to obtain authority for design and operating changes in the facility. [10 CFR 55.43(b)(3)]

Some examples of SRO exam items for this topic include:

Administrative processes for temporary modifications.

Also Oconee has SRO only objectives for this knowledge.

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Memory	NEW	

Development References	Student References Provided
ADM-SD R20, R21 NSD-301	

GEN2.2 2.2.11 - GENERIC - Equipment Control
Equipment Control
Knowledge of the process for controlling temporary design changes. (CFR: 41.10 / 43.3 / 45.13)

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 96 96

D

GEN2.2 2.2.23 - GENERIC - Equipment Control
Equipment Control
Ability to track Technical Specification limiting conditions for operations. (CFR: 41.10 / 43.2 / 45.13)

Given the following conditions on Unit 1:

- Reactor Power = 100%
- 1A MDEFWP was declared inoperable at 13:00 on 05/01
- 1B MDEFWP was declared inoperable at 14:00 on 05/06
- 1A MDEFWP was returned to service at 01:00 on 05/07

Which ONE of the following describes when the 1B MDEFWP is required to be returned to service?

REFERENCE PROVIDED

A. 13:00 on 05/08

B. 13:00 on 05/11

C. 14:00 on 05/13

D. 13:00 on 05/09

ILT42 ONS SRO NRC Examination QUESTION 96

96

D

General Discussion

Answer A Discussion

Incorrect. Plausible because this is 7 days from entering Condition A which has a completion time of 7 days.

Answer B Discussion

Incorrect. Plausible because this is the "10 days from failure to meet LCO" rule.

Answer C Discussion

Incorrect. Plausible because this is 7 days for one pump in Condition A.

Answer D Discussion

Correct. 24 hour extension rule (TS 1.3) applies to original 7 days.

Basis for meeting the KA

Question requires the ability to track TS LCOs to ensure equipment returned to service as required by the TS rules.

Basis for Hi Cog

Basis for SRO only

In accordacne with "Clarification Guidance for SRO-only Questions" Rev 1:

The question requires application of Required Actions (Section 3) in accordance with rules of application requirements (Section 1). (TS 1.3 in this case)

Can question be answered solely by knowing ≤ 1 hour TS/TRM Action? NO

Can question be answered solely by knowing the LCO/TRM information listed "above-the-line"? NO

Can question be answered solely by knowing the TS Safety Limits? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	BANK	ONS Bank CF022901

Development References
ADM-ITS TS 3.7.5 TS 1.3 ONS Bank CF022901

Student References Provided
TS 3.7.5

GEN2.2 2.2.23 - GENERIC - Equipment Control

Equipment Control

Ability to track Technical Specification limiting conditions for operations. (CFR: 41.10 / 43.2 / 45.13)

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 97 97

C

GEN2.3 2.3.11 - GENERIC - Radiation Control
Radiation Control
Ability to control radiation releases. (CFR: 41.11 / 43.4 / 45.10)

Given the following plant conditions:

Time = 0400
- Reactor power = 100%
- 1A GWD tank release in progress at 1/3 Station Limit

Time = 0415
- 3B GWD tank release initiated at 1/3 Station Limit

Time = 0430
- Loss of power to RM-80 skid of 1RIA-45 (Norm Vent Gas)
- 1SA8/B-9 RM PROCESS MONITOR RADIATION HIGH in alarm
- 1SA8/B-10 RM PROCESS MONITOR FAULT in alarm

1) In accordance with OP/1-2/A/1104/018 (GWD System) the release at 0415 is required to be approved by __(1)__.

2) At 0430 and in accordance with the ARGs, an RO will __(2)__.

Which ONE of the following completes the statements above?

A. 1. any SRO
   2. manually close GWD-4

B. 1. any SRO
   2. verify GWD-4 has automatically closed

C. 1. only the OSM
   2. manually close GWD-4

D. 1. only the OSM
   2. verify GWD-4 has automatically closed

ILT42 ONS SRO NRC Examination QUESTION 97

97

C

General Discussion

Answer A Discussion

Incorrect. First part is plausible because it would be correct if the release was at 1/3 limit and only one release was in progress. Second part is correct.

Answer B Discussion

Incorrect. First part is plausible because it would be correct if the release was at 1/3 limit and only one release was in progress. Second part is plausible because 1GWD-4 would close on a loss of power to 1RIA-37/38.

Answer C Discussion

Correct:. A release greater than 1/3 the station limit requires OSM approval. 1RIA-45 does not automatically terminate GWD releases. It does monitor the release via the station vent stack the required action in the ARG and AP/18 is to stop releases in progress. This done by closing GWD-4.

Answer D Discussion

Incorrect: First part is correct. Second part is plasuible because 1GWD-4 would close on a loss of power to 1RIA-37/38.

Basis for meeting the KA

Question requires knowledge of the process for releasing a GWD gas tank and who has to approve the release.

Basis for Hi Cog

Basis for SRO only

Per Clarification Guidance for SRO-only Questions:

Radiation hazards that may arise during normal and abnormal situations, including maintenance activities and various contamination conditions. Process for gaseous/liquid release approvals, i.e., release permits.

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	MODIFIED	ONS 2009 Q93

Development References
OP/1104/018 1SA8/B-9, 1SA8/B-10 AP/18 ONS 2009 Q93

Student References Provided

GEN2.3 2.3.11 - GENERIC - Radiation Control

Radiation Control

Ability to control radiation releases. (CFR: 41.11 / 43.4 / 45.10)

401-9 Comments:

Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 98 98 **D**

GEN2.3 2.3.5 - GENERIC - Radiation Control

Radiation Control

Ability to use radiation monitoring systems, such as fixed radiation monitors and alarms, portable survey instruments, personnel monitoring equipment, etc. (CFR: 41.11 / 41.12 / 43.4 / 45.9)

Given the following Unit 1 conditions:

Initial conditions:

- Time = 0400
- Reactor power = 100%
- 1RIA-59 = 0.1 gpm
- 1RIA-60 = 35 gpm

Current conditions:

- Time = 0430
- Reactor power = 38%
- 1A MSLB

1) At 0400, in accordance with the bases of TS 3.4.13, RCS Pressure Boundary LEAKAGE __(1)__ occurring.

2) Without Station Management approval the __(2)__ SG will be used to cooldown to LPI.

Which ONE of the following completes the statements above?

A. 1. is
   2. 1A

B. 1. is
   2. 1B

C. 1. is NOT
   2. 1A

D. 1. is NOT
   2. 1B

ILT42 ONS SRO NRC Examination QUESTION 98

98

D

General Discussion

Answer A Discussion

Incorrect. First part is plausible because a SG tube is part of the RCS pressure boundary but is not considered as such in this TS. Second part is plausible because with Station management approval using the SG with the MSLB would be correct.

Answer B Discussion

Incorrect. First part is plausible because a SG tube is part of the RCS pressure boundary but is not considered as such in this TS. Second part is correct.

Answer C Discussion

Incorrect. First part is correct. Second part is plausible because with Station management approval using the SG with the MSLB would be correct.

Answer D Discussion

Correct. In accordance with the bases of TS 3.4.13, SG tube leakage is not considered pressure boundary leakage. In accordance wit the SGTR the SG with the tube rupture will be used for the cooldown unless management Approval is given.

Basis for meeting the KA

Question requires the use of radiation monitors to be used to determine how the plant will be cooled down during a SGTR and a MSLB.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions Rev 1:
Must asses plant conditions including RIA readings to determine with SG will be used for the CD.

TS Basis knowledge is also required to answer the question.

This question requires the following:
Assessing plant conditions (normal, abnormal, or emergency) and then selecting a procedure or section of a procedure to mitigate, recover, or with which to proceed.

Knowledge of diagnostic steps and decision points in the EOPs that involve transitions to event specific sub procedures or emergency contingency procedures.

Can the question be answered solely by knowing systems knowledge", i.e., how the system works, flow path, logic, component location? NO

Can the question be answered solely by knowing immediate operator actions? NO

Can the question be answered solely by knowing entry conditions for AOPs or plant parameters that require direct entry to major EOPs? NO

Can the question be answered solely by knowing the purpose, overall sequence of events, or overall mitigative strategy of a procedure? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References
EAO-SGTR R27 SGTR tab TS B3.4.13

Student References Provided

GEN2.3 2.3.5 - GENERIC - Radiation Control
Radiation Control
Ability to use radiation monitoring systems, such as fixed radiation monitors and alarms, portable survey instruments, personnel monitoring equipment, etc. (CFR: 41.11 / 41.12 / 43.4 / 45.9)

ILT42 ONS SRO NRC Examination **QUESTION 98** 98 **D**

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 99 99

B

GEN2.4 2.4.26 - GENERIC - Emergency Procedures / Plan
Emergency Procedures / Plan
Knowledge of facility protection requirements, including fire brigade andportable fire fighting equipment usage. (CFR: 41.10 / 43.5 / 45.12)

Given the following Unit 1 conditions:

Initial conditions:

- All 3 Units reactor power = 100%
- 1SA-3/B6 (FIRE ALARM) actuated
- NEO's dispatched to the Turbine Building 3rd Floor (1TA and 1TB area)

Current conditions:

- NEO reports the fire on 1TB with heavy smoke and rolling flames
- Fire Brigade is dispatched

1) In accordance with the "Fire Plan" a water fog ___(1)___ be used on the switchgear to fight the fire.

2) An ___(2)___ is allowed to serve as a leader in accordance with the bases of SLC 16.13.1 (Minimum Station Staffing Requirements).

Which ONE of the following completes the statements above?

A. 1. can
   2. SRO ONLY

B. 1. can
   2. SRO OR an NEO with appropriate qualifications

C. 1. can NOT
   2. SRO ONLY

D. 1. can NOT
   2. SRO OR an NEO with appropriate qualifications

ILT42 ONS SRO NRC Examination QUESTION 99

99

B

General Discussion

Answer A Discussion

Incorrect: First part is correct. Second part is plausible since under normal conditions the SRO is the Fire Brigade leader.

Answer B Discussion

Correct. In accordance with the "Fire Plan" a water fog can be used to fight this fire. In accordance with SLC 16.13.1 an SRO or a quilified NEO can be the Fire Brigade Leader.

Answer C Discussion

Incorrect. First part is plasuible because a water stream cannot be used on this fire. Second part is plausible since under normal conditions the SRO is the Fire Brigade leader.

Answer D Discussion

Incorrect. First part is plasuible because a water stream cannot be used on this fire. Second part is correct.

Basis for meeting the KA

Requires knowledge of fire brigade staffing and using water to fight an electrical fire.

Basis for Hi Cog

Basis for SRO only

Requires knowledge of the fire plan and the bases of SLC 16.13.1 regarding who can serve as fire brigade leader.

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Memory	MODIFIED	ONS NRC 2009A Q99

Development References
Fire plan SLC 16.13.1 bases ONS NRC 2009A Q99

Student References Provided

GEN2.4 2.4.26 - GENERIC - Emergency Procedures / Plan

Emergency Procedures / Plan

Knowledge of facility protection requirements, including fire brigade andportable fire fighting equipment usage. (CFR: 41.10 / 43.5 / 45.12)

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 100 100 **A**

GEN2.4 2.4.6 - GENERIC - Emergency Procedures / Plan
Emergency Procedures / Plan
Knowledge of EOP mitigation strategies. (CFR: 41.10 / 43.5 / 45.13)

Given the following Unit 1 conditions:

Initial conditions:
- Reactor power = 68% decreasing
- RCS leak rate = 50 gpm
- AP/2 (Excessive Leakage) in progress

Current conditions:
- 1TA and 1TB lockout
- Subsequent Actions tab in progress
- RCS leak rate = 125 gpm
- Station has determined that a natural circulation cooldown is desired

1) The __(1)__ tab will be used to cool down the RCS.

2) In accordance with the above EOP tab, the MAXIMUM allowable cooldown rate is __(2)__.

Which ONE of the following completes the statements above?

A. 1. Forced Cooldown
   2. ≤ 25°F / ½ hr

B. 1. Forced Cooldown
   2. ≤ 50°F / ½ hr

C. 1. LOCA Cooldown
   2. ≤ 25°F / ½ hr

D. 1. LOCA Cooldown
   2. ≤ 50°F / ½ hr

ILT42 ONS SRO NRC Examination QUESTION 100

100

A

General Discussion

Answer A Discussion

Correct. Leak rate is less than "normal makeup capacity" so no transfer is made to the LOCA CD tab. FCD will be used because no RCP are operating.. FCD tab will limit the cooldown rate to less than or equal to 25 degrees per half hour.

Answer B Discussion

Incorrect. First part is correct. Second part is plausible because it would be correct if it were not a NC cooldown.

Answer C Discussion

Incorrect. First part is plasuible because it would be correct if the RCS leak was greater than "Normal Makeup Capacity" (160 gpm with letdown isolated). Second part is correct.

Answer D Discussion

Incorrect. First part is plasuible because it would be correct if the RCS leak was greater than "Normal Makeup Capacity" (160 gpm with letdown isolated). Second part is plausible because it would be correct if it were not a NC cooldown.

Basis for meeting the KA

Question requires knowledge of EOP mitigation strategies for an RCS leak and a NC cooldown.

Basis for Hi Cog

Basis for SRO only

In accordance with Clarification Guidance for SRO-only Questions Rev 1:

This question requires the following:
Assessing plant conditions (normal, abnormal, or emergency) and then selecting a procedure or section of a procedure to mitigate, recover, or with which to proceed

Must evaluate plant data and determine which EOP tab will be used to perform the CD.

Knowledge of diagnostic steps and decision points in the EOPs that involve transitions to event specific sub procedures or emergency contingency procedures.

Can the question be answered solely by knowing systems knowledge", i.e., how the system works, flow path, logic, component location? NO

Can the question be answered solely by knowing immediate operator actions? NO

Can the question be answered solely by knowing entry conditions for AOPs or plant parameters that require direct entry to major EOPs? NO

Can the question be answered solely by knowing the purpose, overall sequence of events, or overall mitigative strategy of a procedure? NO

Job Level	Cognitive Level	QuestionType	Question Source
SRO	Comprehension	NEW	

Development References	Student References Provided
SA Tab LOCA CD tab	

GEN2.4 2.4.6 - GENERIC - Emergency Procedures / Plan
Emergency Procedures / Plan
Knowledge of EOP mitigation strategies. (CFR: 41.10 / 43.5 / 45.13)

401-9 Comments:	Remarks/Status

ILT42 ONS SRO NRC Examination QUESTION 100 100 **A**