

Draft Submittal

(Pink Paper)

HARRIS 2008-301

Written EXAM ADMINISTERED 3/21/2008

Senior Reactor Operator Written Exam

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

1. 002 G2.2.22 003/MODIFIED//HIGHER//SRO/HARRIS/3/2008/NO

With the plant in Mode 2, ONE (1) PZR code safety valve is identified as having a lift setting of 2430 psig.

Which ONE of the following is the basis for the action required and the MAXIMUM time allowed to restore the safety valve to OPERABLE status prior to initiating a plant shutdown?

Basis is that there is less than the required relief capability assuming...

A. a complete loss of load with no reactor trip and steam dumps operate at design setpoints;

5 minutes

B. a complete loss of load with no reactor trip and steam dumps operate at design setpoints;

15 minutes

C. a complete loss of load with no reactor trip and no operation of PZR PORVs;

5 minutes

D✓ a complete loss of load with no reactor trip and no operation of PZR PORVs;

15 minutes

D is correct. In Modes 1, 2, 3, all code safeties must have lift settings of 2485 +/- 1% or restore within 15 minutes. Also correct basis.

B is correct time but incorrect basis due to no credit being given for operation of Condenser Steam Dumps.

A is Wrong time and incorrect basis. Time is plausible because it is the time allowed to restore RCS pressure when a safety limit is exceeded.

C is incorrect time, correct basis.

QUESTIONS REPORT
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Equipment Control Knowledge of limiting conditions for operations and safety limits.

Question Number: 91

Tier: 2

Group: 2

Importance Rating: 4.1

Technical Reference: TS 3.4.2.2 and basis

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History: Mod from Harris Bank

10 CFR Part 55 Content: 55.43.2

Comments:

Source: MODIFIED

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

2. 005 G2.4.50 005/NEW//HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- Following a turbine runback, the crew has stabilized the plant.
- Control Bank "D" Group Counters are at 180 steps.
- The following alarms are in:
 - ALB-13-8-5, COMPUTER ALARM ROD DEV/SEQ NIS PWR RANGE TILTS
- On DRPI, one Control Bank "D" rod indicates 198 steps; all others indicate 180 steps.
- The crew has entered AOP-001 and determined the rod to be immovable and untrippable.

Which ONE of the following describes the technical specification implications of this event?

- A✓ Verify Shutdown Margin within 1 hour and be in Hot Standby within 6 hours.
- B. Verify Shutdown Margin within 1 hour. Power operation may continue provided that accident analyses are reevaluated to be satisfactory.
- C. Determine the cause and realign the rod within 1 hour or be in Hot Standby within the following 6 hours.
- D. Determine the cause and realign the rod within 1 hour. Power operation may continue provided that accident analyses are reevaluated to be satisfactory

A correct. These are the actions required by T.S. 3.1.4 Condition A since the rod has been determined to be immovable and untrippable.

B Incorrect. Verifying SDM is correct but power operation is only allowed to continue if the rod is trippable.

C Incorrect. Plausible since these are the actions required by T.S. 3.1.4 Condition B but not applicable here.

D Incorrect. Plausible since this would be the correct action if misalignment was the only problem, but incorrect since the rod is untrippable.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Emergency Procedures / Plan Ability to verify system alarm setpoints and operate controls identified in the alarm response manual.

Question Number: 82

Tier: 1

Group: 2

Importance Rating: 3.3

Technical Reference: TS 3.1.3.1

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History:

10 CFR Part 55 Content: 55.41

Comments:

Source: NEW
Cognitive Level: HIGHER
Job Position: SRO
Date: 3/2008

Source if Bank:
Difficulty:
Plant: HARRIS
Previous NRC?: NO

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

3. 006 G2.1.33 005/MODIFIED//HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- The plant is in Mode 1.
- Makeup to 'A' SI Accumulator was just completed.
- 'A' SI Accumulator parameters are as follows:

• Boron Concentration	2407 ppm
• Pressure	570 psig
• Level	68%

Which ONE of the following describes the action required in accordance with Technical Specifications and the basis for this action?

A. Increase boron concentration to within limits within 1 hour.

To minimize the potential for reaching unacceptable peak cladding temperatures during a LOCA with postulated failure of 1 other SI Accumulator.

B. Increase boron concentration to within limits within 1 hour.

To maintain the calculated Linear Heat Rate in the core at or above the design limit during short-term transients until core is reflooded.

☒ C. Increase pressure to within limits within 1 hour.

To minimize the potential for reaching unacceptable peak cladding temperatures during a LOCA with postulated failure of 1 other SI Accumulator.

D. Increase pressure to within limits within 1 hour.

To maintain the calculated Linear Heat Rate in the core at or above the design limit during short-term transients until core is reflooded.

A incorrect. Boron Concentration low but within band. Pressure is lower than permitted. Level is within the normal band. Level is given as a parameter due to the conditions stating that makeup was initiated. Action is required within 1 hour for accumulator LCOs not involving the Isolation valve.

B Incorrect. Wrong time and reason

C Correct. Pressure is below limits and basis is correct.

D Incorrect. Pressure is below limits but incorrect basis

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Conduct of Operations: Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications.

Question Number: 86

Tier: 2

Group: 1

Importance Rating: 4.0

Technical Reference: TS 3.5.1 and basis

Proposed references to be provided to applicants during examination: None

Learning Objective:

10 CFR Part 55 Content: 43.2

Comments:

Source: MODIFIED

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

4. 012 A2.04 002/BANK/WCNOC 2007 NRC/HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- The plant is operating at 100% power
- All equipment is operating in normal lineups.

Current conditions:

- A loss of DC Bus DP-1A-SA occurs.

Which ONE of the following describes the impact on the Reactor Protection System and the procedure use required?

- A. NO Reactor Trip, but loss of power to RTB "A" shunt trip coil and Main Steam Isolation Valve indication;

Perform actions of AOP-025, Loss of One Emergency AC Bus (6.9kV) Or One Emergency DC Bus (125V). TS LCO 3.3.1, RPS Instrumentation, and TS LCO 3.8.2.1, DC Distribution, will apply.

- B. NO Reactor Trip, but loss of power to RTB "A" shunt trip coil and Main Steam Isolation Valve indication;

Perform actions of AOP-025, Loss of One Emergency AC Bus (6.9kV) Or One Emergency DC Bus (125V). TS LCO 3.3.1, RPS Instrumentation, and TS LCO 3.8.2.1, DC Distribution, will apply.

- C. Reactor Trip due to low SG level because of loss of power to Main Steam Isolation Valves;

Perform actions of AOP-025 in parallel with Path-1. When the reactor is tripped, ONLY TS 3.3.1, RPS instrumentation, will apply.

- D✓ Reactor Trip due to low SG level because of loss of power to Main Steam Isolation Valves;

Perform actions of AOP-025 in parallel with Path-1. When the reactor is tripped, ONLY TS 3.8.2.1, DC Distribution, will apply.

QUESTIONS REPORT

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D is correct. MSIVs lose power, closing, and causing SG Shrink. SG Lo level will automatically trip the reactor. TS 3.3.1 will no longer apply once the RTB is open

A is incorrect but plausible because MSIV indication is lost, and the shunt trip coil will lose power. TS 3.3.1 and 3.8.2.1 are the applicable LCOs

B is incorrect because the reactor will trip, but plausible because the Feedwater Isolation valves also lose power. TS 3.3.1 and 3.8.2.1 are the applicable LCOs

C is incorrect because 3.3.1 will not apply once the RTB is open, but plausible because the failure and reactor trip are correct.

Ability to (a) predict the impacts of the following malfunctions or operations on the RPS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Erratic power supply operation

Question Number: 87

Tier: 2

Group: 1

Importance Rating: 3.2

Technical Reference: Path-1, RPS text, AOP-025

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History:

10 CFR Part 55 Content: 55.41

Comments:

Source: BANK

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank: WCNOG 2007 NRC

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

80

5. 015 A2.02 001/MODIFIED//HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- A reactor startup is in progress.
- The following alarm is received:
 - ALB-013-3-2, INTERMEDIATE RANGE LOSS OF COMP VOLTAGE
- SR Channel N-31 indicates 7×10^3 cps.
- SR Channel N-32 indicates 7×10^3 cps.
- IR Channel N-35 indicates 8.7×10^{-11} % amps.
- IR Channel N-36 indicates 7.0×10^{-10} % amps.

Which ONE of the following describes the existing plant condition, and the action required in accordance with plant procedures and technical specifications?

A. N-35 is undercompensated;

Place the unit in Mode 3 until N-35 is repaired.

B. N-35 is undercompensated;

Maintain power stable until N-35 is repaired.

C. N-36 is undercompensated;

Place the unit in Mode 3 until N-36 is repaired.

D✓ N-36 is undercompensated;

Maintain power stable until N-36 is repaired.

D is correct. N-36 is undercompensated and the correct action

A is incorrect, but plausible if candidate believes the lower value is the undercompensated. Going to mode 3 would only required by T.S if both IRNI's are operating incorrectly.

B is incorrect since N-35 is not faulty channel, but action is correct if that were the undercompensated.

C is incorrect. N-36 is the undercompensated channel, but action is incorrect for only one IRNI inoperable.

QUESTIONS REPORT
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Ability to (a) predict the impacts of the following malfunctions or operations on the NIS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Faulty or erratic operation of detectors or compensating components

Question Number: 92

Tier: 2

Group: 2

Importance Rating: 3.5

Technical Reference: ALB-013-3-2, TS 3.3.1

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History:

10 CFR Part 55 Content: 55.43.2, 5

Comments:

Maybe add TS basis for SRO

Source: MODIFIED

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

6. 016 A2.03 003/MODIFIED//LOWER//SRO/HARRIS/3/2008/NO

Given the following:

- Pressurizer level transmitter LI-459A output has failed.
- The crew is removing the transmitter from service in accordance with the OWP.

Which ONE of the following describes whether a technical specification action statement must be entered, and the applicability and Technical Specification Basis for the High Pressurizer Water Level reactor trip?

A✓ T.S. 3.3.1, RPS Instrumentation, must be entered;

Mode 1 above P-7; Provides a backup trip to PZR High Pressure reactor trip and ensures that water relief through the PZR safety valves will not occur.

B. T.S. 3.3.1, RPS Instrumentation, must be entered

Modes 1 and 2; Provides primary protection for loss of load events and ensures that on a PZR level channel failure, the PZR safety valves will not lift prior to the PZR High Pressure reactor trip.

C. T.S. 3.3.1, RPS Instrumentation, does not apply since 2 channels are still available;

Modes 1 and 2; Provides a backup trip to PZR High Pressure reactor trip and ensures that water relief through the PZR safety valves will not occur.

D. T.S. 3.3.1, RPS Instrumentation, does not apply since 2 channels are still available;

Mode 1 above P-7; Provides primary protection for loss of load events and ensures that on a PZR level channel failure, the PZR safety valves will not lift prior to the PZR High Pressure reactor trip.

A: Correct. PZR High Level Reactor trip is interlocked with P-7 permissive. TS Basis 3.3.1, provides for backup to PZR High Pressure. If a level channel failed, pressure overshoot from the low rate of charging flow would not cause the safety valves to lift prior to reactor trip.

B: Incorrect. PZR High level trip is applicable in Mode 1 above P-7. The trip does not provide primary protection. It is a backup.

C: Incorrect. PZR High level trip is applicable in Mode 1 above P-7, not for Modes 1 and 2. Correct for reason of backup protection.

D: Incorrect. PZR High level trip is applicable in Mode 1 above P-7. Incorrect for reason, it is the backup to the primary protection.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Ability to (a) predict the impacts of the following malfunctions or operations on the NNIS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Interruption of transmitted signal

Question Number: 93

Tier: 2

Group: 2

Importance Rating: 3.3

Technical Reference: TS 3.3.1 basis

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History:

10 CFR Part 55 Content: 55.41

Comments:

Source: MODIFIED

Cognitive Level: LOWER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

7. 025 AA2.02 001/NEW//HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- The plant is in Mode 4.
- RHR Train "B" has been placed in service.
- RCS temperature is stable at 325 °F.
- RCS pressure is 320 psig and lowering slowly.
- Containment sump level is 20 inches and rising slowly.
- REM-01LT-3502A-SA, Cnmt RCS Leak Detection Monitor, is in HIGH alarm.

Which ONE of the following describes the procedure that will provide the actions to mitigate the event?

- A. Path-1
- B. AOP-005, Radiation Monitoring
- C. AOP-016, Excessive RCS Leakage
- D✓ AOP-020, Loss of RCS Inventory or Residual Heat Removal While Shutdown

D is correct because the plant is in Mode 4 on RHR cooling

A is incorrect. This would be correct if the plant was initially in Mode 1 but Path-1 is not intended for use when the plant is in shutdown.

B is incorrect. Entry conditions are met for AOP-005 since a rad monitor alarm has occurred, however this AOP does not contain the actions required address the event.

C is incorrect. Entry conditions are met for AOP-016 but this procedure is not intended for use when RHR is in service.

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

Ability to determine and interpret the following as they apply to the Loss of Residual Heat Removal System: Leakage of reactor coolant from RHR into closed cooling water system or into reactor building atmosphere

Question Number: 76

Tier: 1

Group: 1

Importance Rating: 3.8

Technical Reference: AOP-020

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History:

10 CFR Part 55 Content: 55.43.5

Comments:

Source: NEW

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

8. 026 G2.1.27 002/MODIFIED//HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- The plant is at 100% power.
- A loss of Component Cooling Water has occurred.
- The crew is performing actions of AOP-014, Loss of Component Cooling Water.
- The CCW Non-Essential Loop is isolated.
- 3 minutes into the event, the leak is determined to be on CCW loop "A".
- "A" Surge Tank level indicates 2%.
- "B" Surge Tank level indicates 38% and stable.

Which ONE of the following describes the effect of this condition, and the action required?

- A. Component Cooling Water System operability meets the minimum operability assumed in the safety analysis.

Trip the reactor, trip RCPs, and enter Path-1.

- B✓ Component Cooling Water System operability meets the minimum operability assumed in the safety analysis.

Trip affected CCW pumps and continue attempts to isolate the leak in accordance with AOP-014. Mode 1 operations may continue if RCP cooling is maintained.

- C. Component Cooling Water operability no longer meets the minimum operability assumed in the safety analysis.

Trip the reactor, trip RCPs, and enter Path-1.

- D. Component Cooling Water operability no longer meets the minimum operability assumed in the safety analysis.

Trip affected CCW pumps and continue attempts to isolate the leak in accordance with AOP-014. Mode 1 operations may continue if RCP cooling is maintained.

B is correct. Single failure loss of 1 train, still have B train available. Trip affected CCW Pumps due to loss of surge tank level

A is incorrect because reactor trip is not required

C is incorrect because reactor trip is not required and the safety function is still satisfied.

D is incorrect because safety function is still met for these conditions.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Conduct of Operations: Knowledge of system purpose and or function.

Question Number: 77

Tier: 1

Group: 1

Importance Rating: 2.9

Technical Reference: TS 3.7.3 Basis, AOP-014

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History:

10 CFR Part 55 Content: 55.43.2, 5

Comments:

Source: MODIFIED

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

9. 026 G2.4.31 001/NEW//HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- A LOCA occurred 45 minutes ago.
- The crew is performing actions in accordance with EPP-010, Transfer to Cold Leg Recirculation.
- Swapover to Cold Leg Recirculation is complete.
- The following alarms are received:
 - ALB-001-2-2, SPRAY PUMP A DISCHARGE LOW PRESS
 - ALB-001-2-5, SPRAY PUMP A SUCTION LOW PRESS
- Both alarms are received and clear intermittently over the course of about 1 minute.
- The USCO determines that recirculation sump performance is degraded.

Which ONE of the following describes the actions performed based on the determination that recirculation sump performance is degraded?

A✓ Remain in EPP-010;

Stop "A" Containment Spray Pump.

B. Remain in EPP-010;

Throttle CSIP flow to a minimum flow that still meets the flow requirements provided in EPP-012.

C. Go to EPP-012, Loss of Emergency Coolant Recirculation;

Stop "A" Containment Spray Pump.

D. Go to EPP-012, Loss of Emergency Coolant Recirculation;

Throttle CSIP flow to a minimum flow that still meets the flow requirements provided in EPP-012.

A is correct. Action is correct per APP-ALB-001. (Stop spray)

B is incorrect but plausible since procedure use is correct. Attachment 1 does address throttle SI flow, but not to the limits listed in EPP-012.

C is incorrect but plausible if candidate believes degraded sump performance is an entry condition to EPP-012. The action listed is correct per the APP.

D is incorrect but plausible if candidate believes degraded sump performance is an entry condition to EPP-012 and the action listed is in EPP-012.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Emergency Procedures / Plan Knowledge of annunciators alarms and indications, and use of the response instructions.

Question Number: 88

Tier: 2

Group: 1

Importance Rating: 3.4

Technical Reference:

Proposed references to be provided to applicants during examination:

Learning Objective:

Question History:

10 CFR Part 55 Content: 55.41

Comments:

Source: NEW
Cognitive Level: HIGHER
Job Position: SRO
Date: 3/2008

Source if Bank:
Difficulty:
Plant: HARRIS
Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

10. 038 G2.1.14 002/MODIFIED//HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- The plant is at 100 % power.
- The following conditions have been observed:
 - Condenser Vacuum Pump Rad monitor (REM-01TV-3534) went into alert 3 minutes ago.
 - Primary to Secondary leakage into "B" SG has been identified as follows:
 - 21 gallons per day 4 hours ago.
 - 22 gallons per day 3 hours ago.
 - 32 gallons per day 2 hours ago.
 - 37 gallons per day for the last 60 minutes.

Which ONE of the following describes the required actions?

- A. ✓ Notify Chemistry to perform CRC-804 to provide a conversion factor for REM-01TV-3534 to determine leak rate.

Initiate escalated monitoring actions in accordance with AOP-016, Excessive Primary Plant Leakage.

- B. Notify Chemistry to perform CRC-804 to provide a conversion factor for REM-01TV-3534 to determine leak rate.

Perform AOP-016, Attachment 11, and shutdown the plant in accordance with GP-006. Be in Mode 3 within 24 hours

- C. Notify HP to perform surveys to determine leak rate.

Initiate escalated monitoring actions in accordance with AOP-016, Excessive Primary Plant Leakage.

- D. Notify HP to perform surveys to determine leak rate.

Perform AOP-016, Attachment 11, and shutdown the plant in accordance with GP-006. Be in Mode 3 within 24 hours

A is correct in accordance with the procedure.

B is incorrect. The notification is correct, but the action would only be required for a leak rate greater 75 gpd sustained for 1 hour.

C is incorrect. Action is correct but notification is incorrect. Plausible since notification of HP is required for CVP Rad monitor alarm, but basis is personnel safety, not leak rate determination.

D is incorrect notification and incorrect action.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Conduct of Operations: Knowledge of system status criteria which require the notification of plant personnel.

Question Number: 78

Tier: 1

Group: 1

Importance Rating: 3.3

Reference(s) - AOP-016

Proposed References to be provided to applicants during examination - AOP-016, Attachment 1

Learning Objective - LPAOP3-16, Obj 4

Question Source - Modified

Question History - AOP-3.16-3 001

Question Cognitive Level - Higher

10 CFR Part 55 Content - 43(b).2, 5

Comments -

Source: MODIFIED

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

11. 040 AA2.05 002/MODIFIED//HIGHER//SRO/HARRIS/3/2008/NO

Initial conditions:

- Reactor power was at 100%.
- Main Steam flow indications were rising on all 3 SGs.
- Reactor power rose to 103%.
- The reactor was manually tripped.
- Safety Injection was manually actuated.
- Main Steam Isolation was manually actuated.

Current conditions:

- The crew is performing Path-1.
- RCS pressure is 1700 psig and lowering.
- "A" and "B" SG pressures are 800 psig and stable.
- "C" SG pressure is 50 psig and slowly lowering.
- Core Exit temperature is 440 degrees F and rising.
- Pressurizer level is 6% and rising.
- SG "A" and "B" NR levels are 35%.

Which ONE of the following describes the procedure that will be entered upon transition from Path-1, and whether current conditions allow Safety Injection to be terminated?

A. EPP-014, Faulted Steam Generator Isolation;

Conditions are met to terminate SI.

B. EPP-008, SI Termination;

Conditions are met to terminate SI.

C✓ EPP-014, Faulted Steam Generator Isolation;

Conditions are NOT met to terminate SI.

D. EPP-008, SI Termination.

Conditions are NOT met to terminate SI.

C is correct. "C" SG completely depressurized would require transition to EPP-014

A is incorrect. PZR level is not high enough

B is incorrect. Wrong procedure transition

D is incorrect. Wrong procedure transition and conditions do not allow stopping SI

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Ability to determine and interpret the following as they apply to the Steam Line Rupture: When ESFAS systems may be secured

Question Number: 79

Tier: 1

Group: 1

Importance Rating: 4.5

Technical Reference: Path-1, EPP-8

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History:

10 CFR Part 55 Content: 55.43.5

Comments:

Source: MODIFIED

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

12. 068 AA2.10 001/NEW//LOWER//SRO/HARRIS/3/2008/NO

Given the following:

- The plant is at 100% power.
- The following alarm is received:
 - ALB-30-6-5, CONT ROOM HVAC NORMAL SUPPLY FANS AH-15 IN AIR HI TEMP
- Smoke is filling the control room.
- The S-SO determines that AOP-004, Remote Shutdown, must be entered.

Which ONE of the following describes how power will be monitored after leaving the MCR, and what is the MINIMUM Emergency Classification for this event?

- A. Source Range flux will be determined when Intermediate Range flux indication is off-scale low; Alert.
- B. Source Range flux will be determined when Intermediate Range flux indication is off-scale low; Notification of Unusual Event.
- C. Source Range flux will be determined when Wide Range flux indication is off-scale low; Notification of Unusual Event.
- D✓ Source Range flux will be determined when Wide Range flux indication is off-scale low; Alert.

D is correct.

A is incorrect. Plausible if candidate believes IR flux indication is available at the ACP.

It is not. Classification is correct, any MCR evacuation is at a minimum an Alert.

B is incorrect. Plausible if candidate believes IR flux indication is available at the ACP.

It is not. Classification is incorrect.

C is incorrect. Monitoring requirements are correct, but classification should be an Alert.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Ability to determine and interpret the following as they apply to the Control Room Evacuation: Source range count rate

Question Number: 83

Tier: 1

Group: 2

Importance Rating: 4.4

Technical Reference: AOP-004

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History:

10 CFR Part 55 Content: 55.41

Comments:

Source: NEW

Cognitive Level: LOWER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

13. 073 G2.1.32 002/MODIFIED//HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- The following alarms have been received:
 - ALB-10-4-5, RAD MONITOR SYSTEM TROUBLE
 - ALB-30-1-1, CONTROL ROOM ISOLATION TRAIN A
- One Control Room Emergency Outside Air Intake (OAI) Radiation Monitor is in HIGH ALARM.
- The SSO has directed opening an Emergency OAI to pressurize the MCR
- In accordance with AOP-005 the USCO directs the HPs to increase the alarm setpoint above present radiation level.

Which ONE of the following describes the technical specification implications of the HPs actions, and the reason for that action?

A✓ TS LCO 3.3.3.1 must be entered;

Regains auto-closure capability of the Emergency OAI on a subsequent high radiation alarm.

B. TS LCO 3.0.3 must be entered;

Regains auto-closure capability of the Emergency OAI on a subsequent high radiation alarm.

C. TS LCO 3.3.3.1 must be entered;

Ensures no auto-closure of the Emergency OAI on a subsequent high radiation alarm.

D. TS LCO 3.0.3 must be entered;

Ensures no auto-closure of the Emergency OAI on a subsequent high radiation alarm.

A is correct. Auto closure capability can only be regained by raising the alarm setpoint.

B is incorrect. Reason for the action is correct, but 3.0.3 is not applicable since this situation is addressed by 3.3.3.1.

C is incorrect. T.S. is correct, but the reason for the action is incorrect. Plausible if candidate believes that it is desired to maintain the Emergency OAI open.

D is incorrect. T.S. and reason for action are incorrect but plausible if candidate believes situation is not addressed by other LCOs and that it is desired to maintain the Emergency OAI open.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Conduct of Operations: Ability to explain and apply all system limits and precautions.

Question Number: 89

Tier: 2

Group: 1

Importance Rating: 3.8

Technical Reference: ALB-10-4-5, AOP-005

Proposed references to be provided to applicants during examination: None

Learning Objective: LPAOP3-5 Obj 5

10 CFR Part 55 Content: 43.5, 43.4

Comments:

10CFR55.43(b).4 and 5 because the SRO must assess plant conditions and determine appropriate action in accordance with plant procedures; in this case, a radioactive release may be in progress

Will probably need to modify this to include TS interpretation or basis. We need to modify 2 items on the SRO exam (The other one being the Classification). Otherwise we will have too much overlap from previous exams

Source: MODIFIED

Source if Bank:

Cognitive Level: HIGHER

Difficulty:

Job Position: SRO

Plant: HARRIS

Date: 3/2008

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

14. 078 A2.01 002/BANK/HARRIS 2005 NRC/HIGHER//SRO/HARRIS/3/2008/YES

Given the following:

- The plant is at 100% power.
- The Compressed Air System (CAS) Control Panel is set for 1C Air Compressor in LEAD (Sequence 3).
- A Valve Shift Error occurs on Air Dryer 1C-NNS.

Which ONE of the following describes the impact of this failure, and the action required?

A. High Air Dryer DP may cause a Loss of Instrument Air;

Bypass Air Dryer 1C-NNS in accordance with AOP-017, Loss of Instrument Air.

B✓ Instrument Air may have a higher than desired moisture content;

Shift the CAS Control Panel to 1A Air Compressor in LEAD (Sequence 1) and isolate Air Dryer 1C-NNS in accordance with OP-151.01, Compressed Air.

C. Instrument Air may have a higher than desired moisture content;

Isolate Air Dryer 1C-NNS and place Air Dryer 1A-NNS in service on Air Compressor 1C in accordance with OP-151.01, Compressed Air.

D. High Air Dryer DP may cause a Loss of Instrument Air;

Manually perform the valve shift on Air Dryer 1C-NNS in accordance with AOP-017, Loss of Instrument Air.

B is correct. Per procedure P&L, when a valve shift error occurs, place the other compressors and dryers in service. AOP-017 entry is not necessary. Would not perform a manual valve shift either

A is incorrect. High Air Dryer DP will not cause a loss of instrument air. Action would be correct if a loss of instrument air was imminent.

C is incorrect. The potential impact is correct, plausible if candidate believes all the air dryers are interchangeable, but operation of Air Dryer 1A with 1C Air Compressor is not permitted.

D is incorrect. The potential impact is wrong and a manual valve shift would not be the correct action, but plausible if candidate believes that will resolve the valve shift error.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Ability to (a) predict the impacts of the following malfunctions or operations on the IAS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Air dryer and filter malfunctions

Question Number: 90

Tier: 2

Group: 1

Importance Rating: 2.9

Technical Reference: OP-151.01, AOP-017

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History:

10 CFR Part 55 Content: 55.43.5

Comments:

Source: BANK

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank: HARRIS 2005 NRC

Difficulty:

Plant: HARRIS

Previous NRC?: YES

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

15. E04 G2.1.33 001/NEW//HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- The plant was at 100% power.
- "B" RHR Pump is out of service for bearing repair.
- A LOCA has occurred.
- Aux. Building radiation monitors are in alarm.
- The crew is performing EPP-013, LOCA Outside Containment.

Current conditions:

- The crew closed 1SI-340, Low Head SI Train A to Cold Leg Valve.
- The crew determines the leak is isolated.

Which ONE of the following describes the actions that will be taken?

A✓ Leave 1SI-340 closed; Return to Path-1;

Actions of TS 3.0.3 will apply due to the position of 1SI-340.

B. Leave 1SI-340 closed; Return to Path-1;

Actions of TS 3.0.3 will NOT apply due to the position of 1SI-340, since Path-1 is in use.

C. Stop RHR Pump "A", close 1SI-322, RWST to RHR pump "A" Suction valve, and transition to EPP-012;

Actions of TS 3.0.3 will apply due to the position of 1SI-322.

D. Stop RHR Pump "A", close RWST to RHR pump "A" suction valve 1SI-322; and transition to EPP-012;

Actions of TS 3.0.3 will NOT apply due to the position of 1SI-322, since the EPP-012 is in use.

A is correct. EPP-013 will have 1SI-340 remain shut. TS 3.0.3 applies due to 2 ECCS trains inoperable.

B is incorrect. 1SI-340 will remain shut, but implementation of Path-1 does not preclude implementation of TS 3.0.3.

C is incorrect. RHR pump "A" will be secured and 1SI-322 will be shut, but transition to EPP-012 would only be directed if the leak were not isolated. TS 3.0.3 would apply due to 1SI-322, but shutting 1SI-340 occurred first.

D is incorrect. Actions would occur but transition to EPP-012 would only be directed at this point if the leak were not isolated. Also while EPP-012 does supersede other higher order procedures (for instance directions in FRP-J.1), but it does not supersede T.S. 3.0.3.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Conduct of Operations: Ability to recognize indications for system operating parameters which are entry-level conditions for technical specifications.

Question Number: 80

Tier: 1

Group: 1

Importance Rating: 4.0

Technical Reference: EPP-013, TS 3.0.3

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History:

10 CFR Part 55 Content: 55.43.2

Comments:

Source: NEW

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

16. E06 G2.1.2 002/BANK/BVPS-1 2007 NRC/HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- A LOCA has occurred on "B" Cold Leg.
- ECCS has NOT functioned as required.
- All RCP's are TRIPPED.
- All PZR PORVs are CLOSED and in AUTO.
- CET's indicate 626°F.
- RVLIS Full Range is 35%.
- Containment pressure is 6 psig and rising slowly.
- All SG pressures are approximately 1070 psig and stable.
- Total AFW flow is 250 KPPH.
- SG NR levels are 13%, 11%, and 17%, respectively.

Which ONE of the following procedures will the crew implement for these conditions, and how will the PZR PORVs be operated?

A. Enter FRP-C.1, Response To Inadequate Core Cooling;

Isolate PORVs to prevent RCS inventory loss.

B. Enter FRP-C.2, Response To Degraded Core Cooling;

Isolate PORVs to prevent RCS inventory loss.

C. Enter FRP-C.1, Response To Inadequate Core Cooling;

Allow PORVs to operate in AUTO for RCS pressure control.

☒ D. FRP-C.2, Response To Degraded Core Cooling;

Allow PORVs to operate in AUTO for RCS pressure control.

A. Incorrect. Wrong procedure entry and also wrong action for PORV operation.

B. Correct. This option was intended as incorrect but credit was given as a correct action because it is possible for the action to be taken.

C. Incorrect. Incorrect entry but correct action with respect to PORVs

D. Correct.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Conduct of Operations: Knowledge of operator responsibilities during all modes of plant operation.

Question Number: 84

Tier: 1

Group: 2

Importance Rating: 4.0

Technical Reference: FRP-C.2, CSFST Flowchart

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History: BVPS-1 2002 selected, also on BVPS-1 2007. Parameters modified for plant differences

10 CFR Part 55 Content: 55.43.5

Comments:

Source: BANK

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank: BVPS-1 2007 NRC

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

17. E10 EA2.1 002/BANK//HIGHER//SRO/HARRIS/3/2008/YES

Given the following:

- A reactor trip has occurred due to a loss of offsite power.
- The operating crew is performing actions of EPP-005, Natural Circulation Cooldown.
- Train "A" of RVLIS is out of service.
- The crew has commenced RCS cooldown and depressurization.
- RCS pressure is 1780 psig and trending DOWN.
- RCS Tave is 448 °F and trending DOWN.
- RCS cooldown rate MUST be performed at approximately 60 °F/hr due to secondary inventory concerns.
- Pressurizer level is 35% and trending UP slowly.

Which ONE of the following actions will be required in accordance with EPP-005?

- A. Repressurize the RCS to minimize void growth.
- B. Actuate safety injection and return to Path-1 prior to transition to EPP-014, Faulted Steam Generator Isolation.
- C✓ Transition to EPP-006, Natural Circulation Cooldown With Steam Void In Vessel (With RVLIS).
- D. Transition to EPP-007, Natural Circulation Cooldown With Steam Void In Vessel (Without RVLIS).

C is correct. Since RCS cooldown must be performed at a rate greater than 50 °F/hr, transition to EPP-006 is required.

A Incorrect. Do not raise pressure when cooldown is uncontrolled at this rate.

B Incorrect. No SI requirements met. Subcooling is high and PZR level is high. Potential PTS event if SI is initiated.

D Incorrect. Would be correct if RVLIS were unavailable, but RVLIS is available (Train "B").

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Ability to determine and interpret the following as they apply to the (Natural Circulation with Steam Void in Vessel with/without RVLIS) Facility conditions and selection of appropriate procedures during abnormal and emergency operations.

Question Number: 85

Tier: 1

Group: 2

Importance Rating: 3.9

Technical Reference: EPP-005

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History: 2005 Harris NRC Exam

10 CFR Part 55 Content: 55.43.5

Comments:

Source: BANK
Cognitive Level: HIGHER
Job Position: SRO
Date: 3/2008

Source if Bank:
Difficulty:
Plant: HARRIS
Previous NRC?: YES

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

18. E11 EA2.2 005/BANK/WCNO 2007 NRC/HIGHER//SRO/HARRIS/3/2008/NO

Initial Conditions:

- A LOCA has occurred.
- The crew is performing actions of EPP-012, Loss of Emergency Coolant Recirculation, based on plant conditions upon transition from Path-1.
- RWST level is 3% and lowering.

Current Conditions:

- Integrity CSF Status Tree indicates Orange.

Which ONE of the following describes the action and procedure usage required?

A. Stop all pumps taking suction from the RWST;

Remain in EPP-012 because actions in EPP-012 are expected to cause an Orange condition on Integrity.

B. Reduce ECCS flow from the RWST to ONE (1) train running;

Remain in EPP-012 because actions in EPP-012 are expected to cause an Orange condition on Integrity.

C✓ Stop all pumps taking suction from the RWST;

Go to FRP-P.1, Response to Imminent Pressurized Thermal Shock.

D. Reduce ECCS flow from the RWST to ONE (1) train running;

Go to FRP-P.1, Response to Imminent Pressurized Thermal Shock.

C is correct. With RWST level at 3% and lowering the foldout would require stopping all pumps taking suction from RWST. Transition to FRP-P.1 would be correct implementation of CSFST.

A is incorrect. Action is correct based on RWST level, but procedure usage is incorrect. Plausible since EOP Network does often direct user not implement an FRP if their actions are expected to cause a Red or an Orange (for instance caution in FRP-H.1) but no such caution exists for this condition.

B is incorrect. Incorrect procedure usage and incorrect action. Action is plausible since this is Safety Injection reduction and a LOCA is in progress, but at 3% in the RWST the required action is to stop ECCS pumps.

D is incorrect. Action is incorrect, but procedure usage is correct.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Ability to determine and interpret the following as they apply to the (Loss of Emergency Coolant Recirculation): Adherence to appropriate procedures and operation within the limitations in the facility's license and amendments.

Question Number: 81

Tier: 1

Group: 1

Importance Rating: 4.2

Technical Reference: EPP-012, CSFSTs

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History: WCNOC 2007, modified parameters for plant differences

10 CFR Part 55 Content: 55.43.5

Comments:

Source: BANK

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank: WCNOC 2007 NRC

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

19. G2.1.20 003/BANK//HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- The Unit experienced a Steam Generator Tube Rupture (SGTR) on the "B" Steam Generator (SG).
- The crew is currently performing Path-2, isolating flow from each RUPTURED SG.
- When the crew transitioned from Path-1 to Path-2, FOUR (4) minutes ago, plant parameters were as listed below:

	<u>Loop A</u>	<u>Loop B</u>	<u>Loop C</u>
SG Pressure	800 psig	1200 psig	800 psig
SG NR Level	40%	80%	45%
SG PORV	SHUT	OPEN	SHUT
RCS Temperature	557 °F	556 °F	557 °F

RCS Pressure: 1350 psig

NOTE: ALL plant parameters were stable, with the exception of B SG NR Level, which was going UP.

CURRENT plant parameters are as follows:

	<u>Loop A</u>	<u>Loop B</u>	<u>Loop C</u>
SG Pressure	500 psig	1050 psig	750 psig
SG NR Level	20%	85%	45%
SG PORV	SHUT	SHUT	SHUT
RCS Temperature	520 °F	550 °F	550 °F

RCS Pressure: 1000 psig

ALL above parameters are decreasing (going DOWN), with Loop A parameters decreasing faster than Loops B and C.

Which ONE of the following correctly describes the NEXT action the crew should take in accordance with Emergency Operating Procedures?

- A. Immediately return to Path-1.
- B✓ Immediately transition go to EPP-014, Faulted Steam Generator Isolation.
- C. Return to Path-2, Step 1.
- D. Complete the isolation activities in Path-2, and then go to EPP-014, Faulted Steam Generator Isolation.

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

- A *Incorrect. Plausible if applicant believes a LOCA is now in progress. A LOCA would be indicated by decreasing RCS pressure and Loop B SG pressure ONLY, NOT a large decrease in Loop A SG pressure, level, and RCS temperature.*
- B *Correct per Foldout, Secondary Integrity Transition Criteria*
- C *Incorrect. Plausible because this is an item on the foldout.*
- D *Incorrect. EOP rules of usage require immediate transition after performing applicable immediate actions. Path-2 does not contain any immediate actions. Plausible if applicant believes that completely isolating the ruptured SG is a higher priority than isolating the faulted SG.*

Ability to execute procedure steps.

Question Number: 95

Tier: 3

Group: 1

Importance Rating: 4.2

Technical Reference: Path-2 and foldout

Proposed references to be provided to applicants during examination: NONE

Learning Objective:

10 CFR Part 55 Content: 43.5

Comments:

Developed by FJE (WBN?)

Source: BANK

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

20. G2.1.34 001/NEW//HIGHER//SRO/HARRIS/3/2008/NO

Initial Plant Conditions:

- The plant is at 100% power.
- Chemistry reports the following:
 - Primary specific activity is 0.86 microcuries per gram dose equivalent I-131.
 - Secondary specific activity is 0.03 microcuries per gram dose equivalent I-131.

Current Plant Conditions are:

- Chemistry reports the following:
 - Primary specific activity is 0.85 microcuries per gram dose equivalent I-131.
 - Secondary specific activity is 0.62 microcuries per gram dose equivalent I-131.
- The crew enters AOP-033, Chemistry Out of Tolerance.

Which ONE of the following actions is required in accordance with AOP-033?

- A. Remain in AOP-033 and check for Condenser tube leakage. Initiate Turbine load reduction to less than 30%.
- B. Go to AOP-032, High RCS Activity based upon direction of AOP-033.
- C. Remain in AOP-033 and isolate Auto-Chlorination of Service Water and Circ Water, initiate Turbine load reduction to less than 30%.
- D✓ Go to AOP-016, Excessive RCS Leakage, as directed by AOP-033.

D is correct. With high activity in secondary, and no indication of high activity in primary, go to AOP-016.

A is incorrect but plausible if candidate believes there are indications of a condenser tube leak vice the SG tube leak that is actually indicated.

B is incorrect but plausible since AOP-032 would direct entry into AOP-032 but only if activity was higher. T.S. activity limit for primary activity is

C is incorrect but plausible since these actions are directed by AOP-032, but not for a SG tube leak which is indicated here.

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

Ability to maintain primary and secondary plant chemistry within allowable limits.

Question Number: 94

Tier: 3

Group: 1

Importance Rating: 2.9

Technical Reference: AOP-033

Proposed references to be provided to applicants during examination: None

Learning Objective:

Question History:

10 CFR Part 55 Content: 55.43.5

Comments:

Source: NEW

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

21. G2.2.22 002/BANK//LOWER//SRO/HARRIS/3/2008/NO

Which ONE of the following correctly states the basis for the Technical Specification Reactor Core Safety Limit (Applicable in Modes 1 and 2) and parameters that are used with the Technical Specifications to ensure that the Safety Limit is not violated?

- A✓ Overheating of the fuel cladding is prevented by restricting fuel operation to within the nucleate boiling regime.

Parameters used with the Technical Specifications to ensure that the limit is not violated include: Reactor Thermal Power, Highest Operating Loop RCS Average Temperature, and Pressurizer Pressure.

- B. Overheating of the fuel cladding is prevented by restricting fuel operation to within the nucleate boiling regime.

Parameters used with the Technical Specifications to ensure that the limit is not violated include: Reactor Thermal Power, Highest Operating Loop RCS Hot Leg Temperature, and Pressurizer Pressure.

- C. Overheating of the fuel cladding is prevented by restricting fuel operation to within the film boiling regime.

Parameters used with the Technical Specifications to ensure that the limit is not violated include: Reactor Thermal Power, Highest Operating Loop RCS Average Temperature, and Pressurizer Pressure.

- D. Overheating of the fuel cladding is prevented by restricting fuel operation to within the film boiling regime.

Parameters used with the Technical Specifications to ensure that the limit is not violated include: Reactor Thermal Power, Highest Operating Loop RCS Hot Leg Temperature, and Pressurizer Pressure.

- A. *Correct. See TS 2.1 Safety Limits and its associated Basis.*
B. *Incorrect. Plausible because hot leg temps are higher than ave temps, thus applicant could reason that core limits would be ensured by using this parameter to compare against TSs.*
C. *Incorrect. Plausible because applicant may confuse film and nucleate boiling.*
D. *Incorrect. Plausible because of same reasons in B and C above.*

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Knowledge of limiting conditions for operations and safety limits.

Question Number: 97

Tier: 3

Group: 2

Importance Rating: 4.1

Technical Reference: TS 2.1

Proposed references to be provided to applicants during examination: None

Learning Objective:

10 CFR Part 55 Content: 43.2

Comments:

Source: BANK

Cognitive Level: LOWER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

22. G2.2.7 004/BANK/BVPS-1 2007 NRC/HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- The unit is in Mode 3.
- Engineering has requested that the "A" RHR pump be started with the discharge valve throttled to 85% open to determine starting current.
- The Operations Manager has determined that a Procedure change is required to support the outage critical path schedule.
- The test is NOT described in the current test procedure or the Updated Final Safety Analysis Report.

The S-SO may authorize the performance of the test _____.

- A. without any restrictions.
- B. with concurrence from another SRO.
- C. after licensing concurrence is obtained.
- D✓ after a 10CFR 50.59 screening, and if required, a safety evaluation has been approved.

A. *Incorrect; Not described in FSAR, then the S-SO cannot approve by him(her)self.*

B. *Incorrect; 2 SROs can approve normal procedure changes.*

C. *Incorrect; Licensing concurrence is not required, results of a review would be sent through Licensing.*

D. *Correct; The screening review will result in a 50.59 review.*

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Knowledge of the process for conducting tests or experiments not described in the safety analysis report.

Question Number: 96

Tier: 3

Group: 2

Importance Rating: 3.2

Technical Reference: Need specific ref. Could not locate

Proposed references to be provided to applicants during examination:

Learning Objective:

Question History:

10 CFR Part 55 Content: 55.43.4

Comments:

Source: BANK

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank: BVPS-1 2007 NRC

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

23. G2.3.6 004/MODIFIED//LOWER//SRO/HARRIS/3/2008/NO

A Waste Monitor Tank release is being prepared.

Which ONE of the following correctly identifies what type of release may be performed, and the supervisor responsible for final approval of the release?

A. Batch release only;

Chemistry Supervisor

B. Batch or Continuous release;

Chemistry Supervisor

C✓ Batch release only;

Superintendent - Shift Operations

D. Batch or Continuous release;

Superintendent - Shift Operations

A is incorrect. Batch release is correct, but Chemistry Supervisor is not the final approval for a release from the Waste Monitor tank.

B is incorrect. Continuous releases can be performed but not on this tank. Also, permission is incorrect.

C is correct. Batch release only from Waste Monitor Tank, SSO is final approval.

D is incorrect. Continuous release is not allowed from Waste Monitor Tank, but approval is correct.

Knowledge of the requirements for reviewing and approving release permits.

Question Number: 98

Tier: 3

Group: 3

Importance Rating: 3.1

Technical Reference: OP-120.01.02, OP-120.09.03

Proposed references to be provided to applicants during examination: None

Learning Objective: None

10 CFR Part 55 Content: 43.4

Comments:

10CFR55.43(b).4 because the SRO must know requirements related to radioactive release, including approval requirements.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Source: MODIFIED

Source if Bank:

Cognitive Level: LOWER

Difficulty:

Job Position: SRO

Plant: HARRIS

Date: 3/2008

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

24. G2.4.41 002/MODIFIED//HIGHER//SRO/HARRIS/3/2008/NO

Initial Conditions:

- A controlled shutdown was being performed due to a 200 GPD primary-to-secondary leak on "B" steam generator.
- During the shutdown, SG tube leakage increased to approximately 150 GPM.
- The reactor did NOT automatically trip when required.
- Manual reactor trip from the MCB was NOT successful.
- The BOP operator then reported all steam generator pressures at 850 psig and lowering rapidly.
- The crew manually initiated Safety Injection and Main Steam Isolation signals.
- All ESF systems functioned properly.
- Reactor Trip Breakers were opened locally.

Current Conditions:

- Containment pressure is 0.6 psig and stable.
- All steam generator pressures have stabilized at approximately 650 psig.

Which ONE of the following describes the HIGHEST emergency classification for this event?

- A. Alert (8-1-2)
- B. Alert (2-1-2)
- C✓ Site Area Emergency (8-1-3)
- D. Site Area Emergency (2-1-3)

C is correct.

A is incorrect because although conditions are met for this classification, it is not the HIGHEST classification.

B is incorrect because although conditions are met for this classification, it is not the HIGHEST classification.

D is incorrect because the conditions are not met for this classification.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Knowledge of the emergency action level thresholds and classifications.

Question Number: 100

Tier: 3

Group: 4

Importance Rating: 4.0

Technical Reference: EALs

Proposed references to be provided to applicants during examination: EAL flowpath 06-1 side 1 and side 2

Learning Objective: None

10 CFR Part 55 Content: 43.5

Comments:

10CFR55.43(b).5 because the SRO must assess conditions and determine appropriate emergency classification based upon plant conditions

Source: MODIFIED

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO

QUESTIONS REPORT

for HARRIS 2008 - WORKSHEET 1 REV F

25. G2.4.49 004/BANK//HIGHER//SRO/HARRIS/3/2008/NO

Given the following:

- The plant is in Mode 6, Core Alterations in progress.
- Battery 1B-SB is out of service.
- Maintenance reports that Battery 1A-SA electrolyte is overflowing in several cells.

Which ONE of the following is the maximum time allowed before TS action is required, and why?

A. 1 Hour;

A subsequent loss of off-site power would result in loss of all DC subsystems with attendant loss of ESF functions.

B. Immediate action required;

A subsequent loss of off-site power would result in loss of all DC subsystems with attendant loss of ESF functions.

C. 1 Hour;

Sufficient control and instrumentation capability is no longer available to monitor and maintain the unit status

D✓ Immediate action required;

Sufficient control and instrumentation capability is no longer available to monitor and maintain the unit status

A. Incorrect. Time requirement is a standard T.S. time requirement, but immediate is required in this instance. Reason is incorrect, though plausible if candidate believes a coincident loss of offsite power is the limiting condition for this as it is with several other T.S. actions (for example 3.7.1.3 & 3.4.8.1)

B. Incorrect. Time requirement is correct but action is incorrect.

C. Incorrect. Time requirement is incorrect, but basis is correct.

D. Correct. Immediate action is required by T.S. 3.8.2.1. Basis is correct for this mode.

QUESTIONS REPORT
for HARRIS 2008 - WORKSHEET 1 REV F

Ability to perform without reference to procedures those actions that require immediate operation of system components and controls.

Question Number: 99

Tier: 3

Group: 4

Importance Rating: 4.0

Technical Reference: TS 3.8.2.1

Proposed references to be provided to applicants during examination: None

Learning Objective:

10 CFR Part 55 Content: 43.2

Comments:

Source: BANK

Cognitive Level: HIGHER

Job Position: SRO

Date: 3/2008

Source if Bank:

Difficulty:

Plant: HARRIS

Previous NRC?: NO