76. 002A2.04 001/2/2/RCS/C/A (4.3/4.6)/N/SM05301/S/RFA/SDR

A large LOCA has occurred. Which ONE of the following actions are corrrect given the following conditions:

- RWST level is 17% and continues to decrease.
- RHR sump level is 410 feet and increasing.
- All RCPs were tripped (by procedure) when RCS pressure dropped below 1400 psig
- The crew is currently performing the actions of EOP-2.0, LOSS OF REACTOR OR SECONDARY COOLANT

The following EOPs are being considered:

- EOP-2.2, TRANSFER TO COLD LEG RECIRCULATION
- EOP-2.4, LOSS OF EMERGENCY COOLANT RECIRCULATION

Transition to:

A. EOP-2.4 from EOP-2.0. When RHR sump level reaches the required level, transition to EOP-2.2.

B. EOP-2.4 from EOP-2.0. When RHR sump level reaches the required level, return to EOP-2.0 and transition to EOP-2.2.

C. EOP-2.2 from EOP-2.0 then transition to EOP-2.4. When RHR sump level reaches the required level, return to EOP-2.0 and transition to EOP-2.2.

D. ✓ EOP-2.2 from EOP-2.0 then transition to EOP-2.4. When RHR sump level reaches the required level, transition back to EOP-2.2.

Feedback

Distractor analysis:

A and B. Incorrect: The transition is not made directly to EOP-2.4 from EOP-2.0 unless coolant recirculation was established and subsequently lost, this is not the case.

C. Incorrect: The transition from EOP-2.4 is made back to the procedure step in affect which would have been in EOP-2.2 not EOP-2.0.

D. Correct.

Reference: EOP 2, page 4 of 32
EOP 2.2, page 3 of 13
EOP 2.4, page 4 of 29

K/A CATALOGUE QUESTION DESCRIPTION:
- Reactor Coolant System (RCS); Ability to (a) predict the impacts of the following malfunctions or operations on the RCS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Loss of heat sinks.

Categories

Tier:	2	Group:	2
Key Word:	RCS	Cog Level:	C/A (4.3/4.6)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	RFA/SDR

77. 003A2.03 002/2/1/RCPS/C/A(2.7/3.1)/N/SM05301/S/RFA/SDR

This Question DELETED

The following conditions exist:

- Reactor Power is 9%.
- A Total Loss of All Service Water has occurred.
- AOP-117.1, "Total Loss of Service Water," has been entered.
- RCP temperatures are beginning to rise.
- Service Water can not be restored.

Which ONE of the following describes the action(s) the operators must take **and** the sequence of those actions (in accordance with AOP-117.1)?

A. ✔ Initiate a reactor plant shutdown per GOP-4B, POWER OPERATION (MODE 1 - DESCENDING). Stop up to TWO RCPs. Isolate unnecessary CCW loads, and ensure FS is aligned to the D/Gs. When an RCP motor bearing temperatures or lower seal water bearing temperature exceeds the specified limit, stop the affected RCP.

B. Initiate a reactor plant shutdown per GOP-4B, POWER OPERATION (MODE 1 - DESCENDING). Isolate unnecessary CCW loads, and ensure FS is aligned to the D/Gs. Secure an RCP only if motor bearing temperatures or lower seal water bearing temperature exceeds the specified limit.

C. Initiate a reactor plant shutdown per GOP-4B, POWER OPERATION (MODE 1 - DESCENDING). Stop at least TWO RCPs. Isolate unnecessary CCW loads, and ensure FS is aligned to the D/Gs. When the running RCP motor bearing temperatures or lower seal water bearing temperature exceeds the specified limit, increase monitoring and continue pump operation until the unit is shutdown then stop the affected pump.

D. Stop ONE RCP. Initiate a reactor plant shutdown per GOP-4B, POWER OPERATION (MODE 1 - DESCENDING). When an RCP motor bearing temperatures or lower seal water bearing temperature exceeds the specified limit, trip the reactor and stop the affected RCP.

Feedback

Distractor Analysis:

A. Correct: IAW AOP-117.1, the reactor should be shutdown (not tripped). Secure up to TWO RCPs (Step 12). The affected RCP should be shutdown if RCP motor bearing temperatures exceeds **195 ^{O}F** or lower seal water bearing temperature exceeds **225^{O}F** (Step 13).

B. Incorrect: Do not wait until temperature are exceeded to secure RCPs

C. Incorrect: Step 12 allows two RCPs to be stopped if plant conditions permit. Prudent action is to shutdown with 2 RCPs running and secure one if necessary for temperature.

D. Incorrect: Shutdown is initiated in step 3 and Step 12 secures the RCP. Reactor is not tripped unless above P-7.

References: GOP-4B
AOP-117.1, page 8
AOP-118.1, page 5

K/A CATALOGUE QUESTION DESCRIPTION:
- Reactor Coolant Pump System (RCPS); Ability to (a) predict the impacts of the following malfunctions or operations on the RCPS; and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Problems associated with RCP motors, including faulty motors and current, and winding and bearing temperature problems.

Facility POST EXAM comment resulted in this question being DELETED from the exam. The correct sequence is not contained in any of the distractors, so there is no correct answer.

The question was originally constructed and proposed by the NRC to contain only a list of the actions taken in the AOP without regard to sequence. The NRC agreed to the addition of the "sequence" requirement and the inclusion of more of the sequence at the request of V. C. Summer.

Categories

Tier:	2	Group:	1
Key Word:	RCPS	Cog Level:	C/A(2.7/3.1)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	RFA/SDR

78. 005G2.1.27 001/2/1/RHR/M (2.8/2.9)/N/SM05301/S/RFA/SDR

Which ONE of the following correctly describes the purpose and or function (not all inclusive) of the RHR system and one of its Mode 4 Technical Specification requirements?

A. Hot Leg Recirculation, Refueling Cavity Cooling, Alternate Water supply to Reactor Building Coolers, Pressurizer Relief Tank Cooling. RHR can be deenergized for up to **2** hour provided that core outlet temperature is maintained at least **50°F** below saturation temperature.

B. Cold Leg Recirculation, Hot Leg Recirculation, Simultaneous Cold Leg - Hot Leg Recirculation, Alternate Water supply to Reactor Building Coolers. RHR can be deenergized for up to **1** hour provided that core outlet temperature is maintained at least **10°F** below saturation temperature.

C. Refueling Cavity Draining, Cold Overpressure Protection, Simultaneous Cold Leg - Hot Leg Recirculation, Pressurizer Relief Tank Cooling. RHR can be deenergized for up to **2** hour provided that core outlet temperature is maintained at least **50°F** below saturation temperature.

D. ✓ Cold Leg Recirculation, Refueling Cavity Draining, Cold Overpressure Protection, Cold Leg Injection. RHR can be deenergized for up to **1** hour provided that core outlet temperature is maintained at least **10°F** below saturation temperature.

Feedback

Distractor Analysis:

A. Incorrect: Hot Leg Recirculation, Alternate Water supply to Reactor Building Coolers, Pressurizer Relief Tank Cooling are all incorrect functions. RHR can be deenergized for up to **1** hour provided that core outlet temperature is maintained at least 10°F below saturation temperature.

B. Incorrect: Hot Leg Recirculation, Alternate Water supply to Reactor Building Coolers are incorrect functions.

C. Pressurizer Relief Tank Cooling is an incorrect function.

D. Correct answer

References: AB-7, RHR system, page 9
AB-2, RCS, page 9
IB-1, SW System, page 17
TS 3.4.1.3, page 237 and 241

K/A CATALOGUE QUESTION DESCRIPTION:
- Residual Heat Removal System; Knowledge of system purpose and or function.

Categories

Tier:	2	Group:	1
Key Word:	RHR	Cog Level:	M (2.8/2.9)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	RFA/SDR

79. 007A2.03 002/2/1/PRT PRESSURE/C/A(3.6/3.9)/N/SM05301/S/FJE/SDR

Plant conditions are as follows:

- The unit is in Cold Shutdown.
- The RCS is water solid with one train of RHR providing shutdown cooling.
- RHR letdown is in service with PCV-145 controlling RCS pressure in AUTO.
- ALL pressurizer PORV control switches are in AUTO.
- RCS temperature is 140 °F.
- PRT level is 78%.
- PRT pressure is 6 psig.
- PRT temperature is 95 °F

Assuming no operator action, a _____ will result in a pressure increase in the PRT and the crew can restore PRT parameters by _____.

A. A HIGH failure of PT-444, pressurizer pressure control channel transmitter.
Spraying down the PRT using reactor makeup water per SOP-101, Reactor Coolant System.

B. ✔ Loss of air to HCV-142, LTDN FROM RHR.
Draining the PRT to the Recycle Holdup Tanks per SOP-108, Liquid Waste Processing System.

C. A HIGH failure of PT-444, pressurizer pressure control channel transmitter.
Draining the PRT to the Recycle Holdup Tanks per SOP-108, Liquid Waste Processing System.

D. Loss of air to HCV-142, LTDN FROM RHR.
Spraying down the PRT using reactor makeup water per SOP-101, Reactor Coolant System.

Feedback

DISTRACTORS:

A Incorrect failure. A failure of PT-444 high will not cause a pressurizer PORV to open because the P-11 signal (2/3 pressurizer protection channels less than 1985 psig) will prevent automatic operation of the pressurizer PORVs in this plant Mode.
Plausible because the discharge of a pressurizer PORV will cause an increase in PRT pressure.
Incorrect corrective action. ???At 180°F/6+ psig, the PRT is saturated (no vapor bubble).???
Spraying the PRT would not reduce PRT pressure (but would increase PRT pressure as PRT level increased from the addition of reactor makeup water). Plausible because this action would reduce PRT pressure following a relief or safety valve discharge at power.

B Correct failure. HCV-142 will fail shut on loss of air. A failure of HCV-142 in the closed position isolates the RHR system from the letdown system. With charging flow in manaul, RCS pressure will increase until the RHR suction relief valve(s) lift, relieving to the PRT.
Correct corrective action. Draining the PRT will reduce PRT pressure.

C Incorrect failure. See A. Correct corrective action. See B.

D Correct failure. See B. Incorrect corrective action. See A.

REFERENCES:
1. Panel XCP-616, Annunciator Point 4-4
2. AB-2, Reactor Coolant System, Pressurizer Relief Tank
3. AB-7, Residual Heat Removal System
4. SOP-101, Reactor Coolant System

K/A CATALOGUE QUESTION DESCRIPTION:
- Ability to (a) predict the impacts of the following malfunctions or operations on the P S (Pressurizer Relief Tank / Quench Tank System); and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malfunctions or operations: Overpressurization of the PZR (3.6/3.9)

Categories

Tier:	2	Group:	1
Key Word:	PRT PRESSURE	Cog Level:	C/A(3.6/3.9)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	FJE/SDR

80. 007EA2.01 002/1/1/REACTOR TRIP/C/A(4.1/4.3)/M/SM05301/S/MC/SDR

At 50% power, the plant experienced a loss of BOTH running Main Feedwater Pumps with a concurrent failure of the Reactor trip breaker A to open. The crew is performing the immediate actions of EOP-1.0, "Reactor Trip/Safety Injection Actuation."

Current plant conditions are as follows:

- The Integrated Plant Computer System has failed.
- SG LO-LO Level annunciators are lit.
- Reactor Power is 7% and slowly decreasing.
- All EFW Pumps failed to start.

Which ONE of the following describes the procedure path based on the above information?

A. Remain in EOP-1.0, until directed to monitor Critical Safety Functions then transition to EOP-15.0, "Response To Loss of Secondary Heat Sink."

B. Directly enter EOP-15.0, "Response To Loss of Secondary Heat Sink."

C. ✓ Remain in EOP-1.0, until directed to monitor Critical Safety Functions then transition to EOP-13.0, "Response To Abnormal Nuclear Power Generation."

D. ✓ Transition from EOP-1.0 to EOP-13.0, "Response To Abnormal Nuclear Power Generation."

Feedback

DISTRACTORS:

A INCORRECT Should transition directly to EOP-13.0.

B INCORRECT Should transition directly to EOP-13.0.

C INCORRECT Should transition directly to EOP-13.0.

D CORRECT Should transition directly to EOP-13.0. Since there are no given conditions that would warrant an SI, the CRS should follow the Alternative Action for Step 5 of EOP-1.0 and transition to EOP-1.1. Upon transition from EOP-1.0, the STA begins monitoring of CSFs, and should infrom CRS of Red path to EOP-13.0 based on power >5%.

REFERENCES:
1.

K/A CATALOGUE QUESTION DESCRIPTION:
- Reactor Trip; Ability to determine or interpret the following as they apply to a reactor trip: Decreasing power level, from available indications.

Facility POST EXAM comment resulted in accepting two answers for this question. With a decreasing power level the applicant may not transition immediately based on the indications present and wait until directed by the status trees.

Categories

Tier:	1	Group:	1
Key Word:	REACTOR TRIP	Cog Level:	C/A(4.1/4.3)
Source:	M	Exam:	SM05301
Test:	S	Author/Reviewer:	MC/SDR

81. 008A2.04 002/2/1/CCW/C/A (3.3/3.5)/M/SM05301/S/RFA/SDR

The Unit is operating at 100% power with all systems in normal lineups when the following annunciators actuate:

- LTDN/SL WTR HX FLO LO TEMP HI
- CC LOOP A RM-L2A HI RAD
- CC SRG TK VENT 7096 CLSD HI RAD
- CCW SRG TK LVL HI/LO/LO-LO

NO other annunciators are lit and all associated automatic functions have occurred.

Which ONE of the following is the correct cause and action?

A. A leak exists in the Letdown HX; verify closure of PVT-8152, LTDN LINE ISOL, per SOP-102, CHEMICAL AND VOLUME CONTROL SYSTEM, and manually shut PVV-7096, CC SURGE TK VLV

B. ✔ A leak exists in the Letdown HX; manually close PVT-8152, LTDN LINE ISOL, per SOP-102, CHEMICAL AND VOLUME CONTROL SYSTEM, and verify closure of PVV-7096, CC SURGE TK VLV

C. RCP "A" thermal barrier has been breached. Conduct a normal shutdown per GOP-4B, POWER OPERATION (MODE 1 - DESCENDING), Stop RCP A within 8 hours per SOP-101, REACTOR COOLANT SYSTEM.

D. A Phase "B" Containment Isolation has actuated due to RM-L2A&B (Component Cooling) alarming. Immediately trip the reactor and trip ALL RCPs and enter EOP 1.0.

Feedback

Distractor Analysis:

A. Incorrect. PVT-8152 must be manually shut and PVV-7096 should close automatically and be verified closed.

B. Correct:

C. Incorrect: RCP seals have not failed nor has the thermal barrier been breached. Therefore, Stopping RCP A within 8 hours per SOP-101, REACTOR COOLANT SYSTE, does not apply.

D. Incorrect: RM-L2A&B 9 will not cause a Phase B Containment Isolation.

References:

AOP 101, Reactor Coolant Pump Seal Failure, page 8
SOP 102.2, CHEMICAL AND VOLUME CONTROL SYSTEM, page 70,
ARP-001-XCP-601, page 16

K/A CATALOGUE QUESTION DESCRIPTION:
- Component Cooling Water System (CCWS); Ability to (a) predict the impacts of the following malfunctions or operations on the CCWS, and (b) based on those predictions, use procedures to correct, control, or mitigate the consequences of those malufunctions or operations: PRMS alarm.

Categories

Tier:	2	Group:	1
Key Word:	CCW	Cog Level:	C/A (3.3/3.5)
Source:	M	Exam:	SM05301
Test:	S	Author/Reviewer:	RFA/SDR

82. 009EG2.4.30 002/1/1/REPORTABILITY/M(2.2/3.6)/N/SM05301/S/RFA/SDR

Which ONE of the following identifies an event that is required to be reported to the NRC within 1 hour per EPP-002, COMMUNICATION AND NOTIFICATION.

A. An unplanned ECCS initiation that does not discharge to the RCS during an SI surveillance test.

B.✔ An ECCS discharge to the RCS in response to a small break LOCA.

C. An airborne release of > 2X Appendix B limits.

D. A liquid release of > 2X Appendix B limits.

Feedback

Distractor Analysis:

A. Incorrect: This is a non-emergency event that does not discharge to the RCS this is a 4 hour notification requirement .
B. Correct: A LOCA is an emergency event which requires notification.
C. Incorrect: This is a 4 hour notification requirement
D. Incorrect: This is a 4 hour notification requirement

Reference: EPP-002, page 27

K/A CATALOGUE QUESTION DESCRIPTION:
- Small Break LOCA; Knowledge of which events related to system operations/status should be reported to outside agencies.

Categories

Tier:	1	Group:	1
Key Word:	REPORTABILITY	Cog Level:	M(2.2/3.6)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	RFA/SDR

83. 022AG2.4.49 001/1/1/RCS MAKEUP/C/A (4.0/4.0)/N/SM05301/S/RFA/SDR

The plant was operating at 80% power when the following annunciators (not all inclusive) came in:

- REGEN HX LTDN OUT TEMP HI
- VCT LVL HI/LO
- CHG LINE FLO HI/LO
- PZR LCS DEV HI/LO

Charging pump amps are fluctuating between 25 and 30 amps
Charging flow is fluctuating between 25 and 30 gpm
Charging pressure is oscillating between 2500 and 2600 psig

Which ONE of the following set of actions should the supervisor direct his board operators to perform (These actions are not all inclusive)?

A. ✔ Secure the operating charging pump, close all letdown isolation valves, and close FCV-122, charging flow control valve.

B. Verify at least one charging pump is operating, verify FCV-122 is open, and verify CCW flow to the RCP Thermal Barriers is GREATER THAN 90 gpm on FI-7273A(B), THERM BARR FLOW GPM.

C. Secure the operating charging pump, realign charging pump suction, and close both LCV-115B(D), RWST TO CHG PP SUCT.

D. Verify at least one charging pump is operating, verify FCV-122 is open, and open both LCV-115C(E), VCT OUTLET ISOL.

Feedback

Distractor Analysis:

A. Correct answer per AOP-102.2, page 4-6
B,C, and D. Charging flow is abnormal - must go to the RNO column. Closing both LCV-115B(D), RWST TO CHG PP SUCT, is an action if charging was initially aligned to the RWST.

Reference:

AOP-102.2, page 4-6

K/A CATALOGUE QUESTION DESCRIPTION:
- Loss of Reactor Coolant Makeup; Ability to perform without reference to procedures those actons that require immediate operation of system components and controls.

Categories

Tier:	1	Group:	1
Key Word:	RCS MAKEUP	Cog Level:	C/A (4.0/4.0)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	RFA/SDR

84. 032AA2.08 003/1/2/SRNI/M(2.2/3.1)/N/SM05301/S/MC/RFA/SDR

Refueling operations are in progress, with SR monitor N33 out of service, when power is suddenly lost to source range neutron flux monitor N31 and subsequently regained 30 minutes later.

Which ONE of the following describes the action to be taken for this situation when power is lost?

A. ✔ Suspend all core alterations and perform an analog channel operational test of source range neutron flux monitor N31 within 8 hours prior to the initial start of core alterations.

B. Suspend all core alterations and perform a neutron flux response time test AND operational test of source range neutron flux detector N31 within 8 hours prior to the initial start of core alterations.

C. Determine boron concentration and perform a channel check of source range neutron flux monitor N31 within 12 hours.

D. Determine boron concentration and perform a neutron flux response time test of source range neutron flux detector N31 within 12 hours.

Feedback

DISTRACTORS:

A CORRECT — T.S. 3.9.2 requires immediate suspension of CORE ALTERATIONS when one of the two SR monitors are lost

B INCORRECT — Per T.S. Table 3.3-2 (* and Note 1), neutron *detectors* (not the channel) are exempt from response time testing.

C INCORRECT — Boron concentration measurements are only required when both monitors are down.

D INCORRECT — Boron concentration measuriments are only required when both monitors are down. Neutron detectors are exempt from response time testing.

REFERENCES:
1. TS 3.9.2, "Instrumentation."
2. TS 3.9.1, "Boron Concentration."
3. TS Table 3.3-2, "Reactor Trip System Instrumentation Response Times."
4. IC-8, "Nuclear Instrumentation," pages 24, 48, & 50.

K/A CATALOGUE QUESTION DESCRIPTION:
- Loss of Source Range Nuclear Instrumentation; Ability to determine and interpret the following as they apply to the Loss of Source Range Nuclear Instrumentation: Testing required if power is lost, then restored.

Categories

Tier:	1	Group:	2
Key Word:	SRNI	Cog Level:	M(2.2/3.1)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	MC/RFA/SDR

85. 035G2.4.20 002/2/2/SG/C/A (3.3/3.4)/N/SM05301/S/RFA/SDR

The crew has just entered EOP-15.0, "Response to Loss of Secondary Heat Sink" from EOP-12.0, Monitoring of Critical Safety Functions.

The following conditions exist:

- WR SG "A" level is 25%
- WR SG "B" level is 12%
- WR SG "C" level is 11%
- Total Feed Flow is 290 gpm

Which ONE of the following sets of actions (not all inclusive) should be taken as directed by EOP-15.0, "Response to Loss of Secondary Heat Sink"?

A. Ensure all EFW valves are open and establish EFW flow to at least one SG.

B. Reset SI and establish MFW flow to either the "B" or "C" Steam Generators.

C. Reset SI, dump steam to the condenser and feed using a condensate pump.

D. ✔ Trip ALL RCPs, actuate SI, establish an RCS bleed path:

Feedback

NOTE: No other initial conditions are needed. The caution prior to step 4 of EOP-15 is a stand alone statement. If the SRO has entered this procedure and these conditions exist, there is no other option.

Distractor Analysis:

A, B, C. Incorrect: Not allowed due to caution prior to step 4. These steps are bypassed when the CAUTION prior to Step 4 is implemented.
D Correct:

Reference:

EOP-12, page 9
EOP-15, page 3 caution prior to step 4

K/A CATALOGUE QUESTION DESCRIPTION:
- Steam Generator; Knowledge of operational implications of EOP warnings, cautions, and notes.

Categories

Tier:	2	Group:	2
Key Word:	SG	Cog Level:	C/A (3.3/3.4)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	RFA/SDR

86. 054AA2.03 002/1/1/MFW/C/A (4.1/4.2)/N/SM05301/S/RFA/SDR

The following conditions exist:

- A plant startup was in progress.
- Power level was at 38%
- The reactor tripped
- SG blowdown isolation valves (PVG-503A(B)(C), A(B)(C) ISOL) closed
- Current SG narrow range levels in "A", "B", and "C" SGs are 8%, 10%, and 10%, respectively, and decreasing

Which ONE of the following correctly states the initiating event that caused the trip and the expected automatic actions based on these conditions?

A. The operating MFP tripped and ONLY the motor driven EFW pumps have a current start signal.

B. ✔ The operating MFP tripped and BOTH the turbine driven AND motor driven EFW pumps have a current start signal.

C. All SG flow control valves drifted closed and AMSAC should have actuated.

D. All SG flow control valves drifted closed and ONLY the turbine driven EFW pump has a current start signal.

Feedback

Unless the applicant keys on the fact that SG blowdown isolation valves (PVG-503A(B)(C), A(B)(C) ISOL) closed, he may consider C or D.

Distractor Analysis:

A. Incorrect: LO LO level both MDEFP AND TDEFP will start

B. Correct:

C. Incorrect: All SG flow control valves drifting closed could cause this. ????However, SG blowdown isolation valves (PVG-503A(B)(C), A(B)(C) ISOL) closed which don't according to ARP XCP-624.???? Additionally, AMSAC will not actuate since initial power was < 40%

D. Incorrect: All SG flow control valves drifting closed could cause this. ????However, SG blowdown isolation valves (PVG-503A(B)(C), A(B)(C) ISOL) closed which don't according to ARP XCP-624. ???? Additionally, both MDEFP AND TDEFP will start.

Reference:

ARP-001-XCP-624, page 22 and 26

K/A CATALOGUE QUESTION DESCRIPTION:
- Loss of Main Feedwater (MFW); Ability to determine and interpret the following as they apply to the Loss of Main Feedwater (MFW): Conditions and reasons for AFW pump startup.

Categories

Tier:	1	Group:	1
Key Word:	MFW	Cog Level:	C/A (4.1/4.2)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	RFA/SDR

87. 068G2.1.20 002/2/2/LIQUID RADWASTE/C/A(4.3/4.2)/N/SM05301/S/RFA/SDR

A Liquid Radwaste Release is been in progress:

- XCP-646 2-5, MON TK DISCH RM-L5 HI RAD, has just actuated for the second time.
- RCV00018-WL, Liquid Radioactive Waste Control Valve, indicates shut.
- Within 30 seconds of the alarm , RM-L5's reading returns to below the setpoint.

Which ONE of the following correctly states the next procedure steps to be taken.

A. ✔ The tank must be sampled and activity levels verified, then open RCV00018-WL and resume the release per SOP-108.

B. Verify that the RM-L5's reading is below the setpoint, then open RCV00018-WL and resume the release per SOP-108.

C. Verify that the RM-L5's reading is below the setpoint, then open RCV00018-WL and resume the release per SOP-108. Direct Heath Physics to continue to monitor the release and reduce the release rate.

D. ✔ Notify Health Physics and request a radiological survey. The release can not be reinitiated under the current release permit.

Feedback

DISTRACTORS:

A CORRECT — As per XCP-646-2-5, this is the first step of the supplemental actions.

B INCORRECT — This is the action if this is the first time the release has been automatically terminated.

C INCORRECT — This is the action if this is the first time the release has been automatically terminated, ????coupled with the actions for a malfunctioning RM-L5.????

D INCORRECT — This would be plausible if it is believed that the release can not be continued.

REFERENCES:
1. XCP-646 2-5 & 2-6, pages 12 & 13.
2. XCP-644 2-5, page 15.
3. XCP-643 4-1, page 22.

K/A CATALOGUE QUESTION DESCRIPTION:
- Liquid Radwaste System; Ability to execute procedure steps.

Facility POST EXAM comment resulted in accepting two answers for this question. The additional information provided by the facility in HPP-710 supports distractor D as an additional correct answer. Additionally, this additional answer was not identified by the facility during the examination review and validation activities. HPP-710 indicates that the current release permit must be closed.

Categories

Tier:	2	Group:	2
Key Word:	LIQUID RADWASTE	Cog Level:	C/A(4.3/4.2)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	RFA/SDR

88. 103G2.1.30 002/2/1/CONTAINMENT AIRLOCK/M (3.9/3.4)/N/SM05301/S/FJE/RFA/SDR

Plant conditions are as follows:

- The unit is currently in MODE 4, with temperature and pressure increasing.
- All major work inside containment was completed two hours ago and there are NO personnel inside the Reactor Building.
- An auxiliary operator has just called to report that the red indicating light above the Personnel Escape Airlock is LIT and that he was unable to operate the Fuel Handling Building door using the handwheel.

Which ONE of the following is correct regarding the status of the Personnel Escape Airlock AND Containment Integrity?

A. ✔ The Reactor Building door is OPEN.
The Personnel Escape Airlock is INOPERABLE.

B. The Reactor Building door is CLOSED.
The Personnel Escape Airlock is INOPERABLE.

C. Only the Reactor Building door position indicator has malfunctioned.
The Personnel Escape Airlock is OPERABLE.

D. The Personnel Escape Airlock is OPERABLE.
The Personnel Escape Airlock door interlock is INOPERABLE.

Feedback

Distractor Analysis

A Correct. The red bulkhead light and the inability to operate door operating handle No. 4 (after unlocking it) indicate that the remote (containment side) door is open. Per Tech Spec 3.6.1.3, Containment Air Locks, both airlock doors are required to be CLOSED in Mode 4 unless the air lock is being used for normal transit entry and exit. With NO personnel in containment for two hours, the air lock is NOT being used for normal transit entry and exit.

B Incorrect. Incorrect equipment status, correct Tech Spec application. See A.

C. The indicator is a positive indication of the status of the door. The door is open. The Personnel Escape Airlock is INOPERABLE.

D. The indicator is a positive indication of the status of the door. The door is open. The Personnel Escape Airlock is INOPERABLE.

Reference:

Technical Specification 3.6.1.3, Containment Air Locks

K/A CATALOGUE QUESTION DESCRIPTION:
- 103 Containment System
- G2.1.30 Ability to locate and operate components, including controls (3.9/3.4)

Categories

Tier:	2	Group:	1
Key Word:	CONTAINMENT AIRLOCK	Cog Level:	M (3.9/3.4)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	FJE/RFA/SDR

89. G2.1.13 002/3//ADMIN/M (2.0/2.9)/N/SM05301/S/RFA/SDR

Which ONE of the following (as stated in SAP-200, Conduct of Operations) has the final authority, per Management Directive 11, for a case where an individual's condition for work inside the protected area is in question?

A. General Manager, Nuclear Plant Operations

B. ✔ Shift Supervisor

C. Management Duty Supervisor

D. Security Manager

Feedback

Distractor Analysis:

A. Incorrect: per SAP 200, Paragraph 6.5.2 H, page 10

B. Correct: per SAP 200, Paragraph 6.5.2 H, page 10

C. Incorrect: per SAP 200, Paragraph 6.5.2 H, page 10

D. Incorrect: per SAP 200, Paragraph 6.5.2 H, page 10

Reference:

SAP 200, Conduct of Operations, Paragraph 6.5.2 H, page 10

K/A CATALOGUE QUESTION DESCRIPTION:
- Knowledge of facility requirements for controlling vital / controlled access.

Categories

Tier:	3	Group:	
Key Word:	ADMIN	Cog Level:	M (2.0/2.9)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	RFA/SDR

90. G2.1.34 002/3//CONDUCT OF OPS/C/A(2.3/2.9)/B/SM05301/S/MC/SDR

The unit is undergoing a normal heatup. Plant conditions are as follows:

- Hydrazine was added when RCS temperature was 185°F.
- RCS temperature is 200°F.
- A reactor coolant sample shows dissolved oxygen concentrations of 1.1 ppm.

Given the above conditions and in accordance with GOP-2,"Plant Startup and Heatup," and Tech Spec 3.4.7, "Chemistry," which ONE of the following is correct?

A. Secure the Heatup, plant chemistry is **NOT** in compliance with GOP-2; an LCO **HAS** been entered.

B. ✔ Secure the Heatup to prevent plant chemistry from **NOT** being in compliance with GOP-2; an LCO has **NOT** been entered.

C. The heatup can continue, plant chemistry **IS** in compliance with GOP-2; an LCO **HAS** been entered.

D. The heatup can continue, plant chemistry **IS** in compliance with GOP-2; an LCO has **NOT** been entered.

Feedback

DISTRACTORS:

A INCORRECT Per GOP-2, RCS temperature should not be permitted to exceed 200°F until oxygen scavenging of the primary is complete and chemistry is within specification.

B CORRECT Per GOP-2, RCS temperature should not be permitted to exceed 200°F until oxygen scavenging of the primary is complete and chemistry is within specification. Although the Steady State Limit for Oxygen is 0.1ppm in Modes 1 - 4, it is not applicable with Tavg ≤ 250°F (per * note below Table 3.4-2).

C INCORRECT Plant temperature has exceeded the GOP-2 limit of 200°F but not the TS limit of 250°F.

D INCORRECT Plant temperature has exceeded the GOP-2 limit of 200°F.

REFERENCES:
1. Tech Spec Table 1.1, "Operational Modes."
2. Tech Spec 3.4.7, "Chemistry," and Table 3.4-2, "Chemistry Limits."
2. GOP-2,"Plant Startup and Heatup (Mode 5 to Mode 3)," Step 2.1a page 2, Step 3.1 page 5, & the Reference Page.

K/A CATALOGUE QUESTION DESCRIPTION:
- Ability to maintain primary and secondary plant chemistry within allowable limits.

Categories

Tier:	3	Group:	
Key Word:	CONDUCT OF OPS	Cog Level:	C/A(2.3/2.9)
Source:	B	Exam:	SM05301
Test:	S	Author/Reviewer:	MC/SDR

91. G2.2.20 001/3//TROUBLESHOOTING/M2.2/3.3/M/SM05301/S/FJE/SDR

Which ONE of the following is a VIOLATION of administrative procedures when troubleshooting an INOPERABLE system or component, the condition of which is specified by a Technical Specification Action Statement.

A. ✔ A Temporary Restoration to Service is used even though an alternative method of completing the work that will meet the action statement requirement was identified.

B. The troubleshooting requires posting a plant operator to immediately restore an affected component.

C. The Temporary Inoperable Status Change required to perform the troubleshooting was approved by the Duty Shift Supervisor.

D. The Work Document also includes an approved Bypass Authorization Request to install electrical jumpers.

Feedback

DISTRACTORS:

A Correct per SAP-205, 6.7.2.B

B Incorrect. Acceptable per 6.7.3.A.1. and 6.7.3.A.2. Plausible if applicant believes that the need to "immediately restore" would prevent a troubleshooting activity.

C Incorrect. SAP-205, Attachment V, Temporary Inoperable Status Change, requires approval by the Duty Shift Supervisor. Plausible because the Manager, Operations, approves some plant activities (e.g. extending the time an invalid nuisance annunciator may be removed from service).

D Incorrect. Allowed per SAP-0148 section 2.2. Plausible if applicant believes a Bypass Authorization Request is not used to authorize installation of electrical jumpers or that administrative procedures prohibit the use of electrical jumers during troubleshooting.

REFERENCES:
1. SAP-0205, Status Control and Removal and Restoration
2. SAP-0148, Temporary Bypass, Jumper, and Lifted Lead Control

K/A CATALOGUE QUESTION DESCRIPTION:
- Knowledge of the process for managing troubleshooting activities (2.2/3.3)

Categories

Tier:	3	Group:	
Key Word:	TROUBLESHOOTING	Cog Level:	M2.2/3.3
Source:	M	Exam:	SM05301
Test:	S	Author/Reviewer:	FJE/SDR

92. G2.2.7 001/3//EQUIPMENT CONTROL/M(2.0/3.2)/B/SM05301/S/MC/SDR

A bypass authorization request, prepared per SAP-148, "Temporary Bypass, Jumper, and Lifted Lead Control," requires prior PSRC and NSRC review for which ONE of the following conditions?

A. A review indicates that system operability will be affected.

B. A review indicates that 10 CFR 50 Appendix R fire protection criteria are impacted.

C. A review indicates that Seismic or blowout provisions are being diminished.

D. ✓ A review indicates that a full safety evaluation is required per 10 CFR 50.59.

Feedback

DISTRACTORS:

A INCORRECT

B INCORRECT

C INCORRECT

D CORRECT

REFERENCES:

1. SAP-148, "Temporary Bypass, Jumper, and Lifted Lead Control." Attachment 1, page 14 of 20.

K/A CATALOGUE QUESTION DESCRIPTION:

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

Categories

Tier:	3	Group:	
Key Word:	EQUIPMENT CONTROL	Cog Level:	M(2.0/3.2)
Source:	B	Exam:	SM05301
Test:	S	Author/Reviewer:	MC/SDR

93. G2.3.2 002/3///M(2.5/2.9)/N/SM05301/S/RFA/SDR

Which ONE of the following is correct per HPP- 709, Sampling and Release of Radioactive Gaseous Effluents:

A. ✓ Discharges from the Waste Gas Decay Tank or other high activity gaseous releases should be avoided when the wind is from the East-Southeast. This will prevent the released activity from being drawn into the Auxiliary Building ventilation.

B. Discharges from the Waste Gas Decay Tank or other high activity gaseous releases should be avoided when the wind is from the West-Southwest. This will prevent the released activity from being drawn into the Auxiliary Building ventilation.

C. Discharges from the Waste Gas Decay Tank or other high activity gaseous releases should be avoided when the wind is from the East-Southeast. This will prevent the released activity from being drawn into the Control Building ventilation.

D. Discharges from the Waste Gas Decay Tank or other high activity gaseous releases should be avoided when the wind is from the West-Southwest. This will prevent the released activity from being drawn into the Control Building ventilation.

Feedback

Distractor Analysis:

A: Correct: Discharges from the Waste Gas Decay Tank or other high activity gaseous releases should be avoided when the wind is from the **East-Southeast**. This will prevent the released activity from being drawn into the **Auxiliary** Building ventilation. Per HPP-709 NOTE 5.1.H

B, C, D Incorrect

Reference:

HPP- 709, Sampling and Release of Radioactive Gaseous Effluents, page 10

K/A CATALOGUE QUESTION DESCRIPTION:
- Knowledge of facility ALARA program.

Categories

Tier:	3	Group:	
Key Word:		Cog Level:	M(2.5/2.9)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	RFA/SDR

94. G2.4.33 002/3//INOPERABLE ALARM/M2.4/2.8/B/SM05301/S/FJE/SDR

Which ONE of the following individual's approval is required to extend the time that an invalid nuisance annunciator is removed from service past 96 hours?

A. Duty Shift Engineeer

B. Duty Shift Supervisor

C. ✓ Manager, Operations

D. General Manager, Nuclear Plant Operations

Feedback

DISTRACTORS:

A

B

C Correct per OAP-100.5, Section 14.0

D

REFERENCES:
1.

K/A CATALOGUE QUESTION DESCRIPTION:

- Knowledge of the process used to track inoperable alarms.

Categories

Tier:	3	Group:	
Key Word:	INOPERABLE ALARM	Cog Level:	M2.4/2.8
Source:	B	Exam:	SM05301
Test:	S	Author/Reviewer:	FJE/SDR

95. G2.4.38 002/3//EMERGENCY PROCEDURES/M(2.2/4.0)/M/SM05301/S/MC/SDR

Plant conditions are as follows:

- An event has occurred resulting in substantial core degradation with potential loss of containment integrity.
- A General Emergency has been declared.
- The prevailing wind is blowing from the south.

Which ONE of the following must assume the duties of Interim Emergency Director, and to which area should he direct non-essential personnel be evacuated?

A. Shift Supervisor; Evacuate to their personal residence.

B. ✔ Shift Supervisor; Evacuate to the Southern Offsite Holding Area.

C. Manager, Operations; Evacuate to their personal residence.

D. Manager, Operations: Evacuate to the Southern Offsite Holding Area.

Feedback

DISTRACTORS:

A INCORRECT Correct individual; however, if there is a potential for personnel or vheicle contamination, the evacuation would NOT be to peronal residence.

B CORRECT

C INCORRECT If there is a potential for personnel or vheicle contamination, the evacuation would NOT be to peronal residence.

D INCORRECT

REFERENCES:
1. SAP-109, "Management Duty Supervisor."
2. EPP-012, "Onsite Personnel Accountability and Evacuation," pages 5 and 9.

K/A CATALOGUE QUESTION DESCRIPTION:
- Ability to take actions called for in the facility emergency plan, including (if required) supporting or acting as emergency coordinator.

Categories

Tier:	3	Group:	
Key Word:	EMERGENCY PROCEDURES	Cog Level:	M(2.2/4.0)
Source:	M	Exam:	SM05301
Test:	S	Author/Reviewer:	MC/SDR

96. W/E02EG2.4.6 001/1/2/SI TERMINATION/C/A(3.1/4.0)/N/SM05301/S/FJE/SDR

Plant conditions are as follows:

- A reactor trip and SI have occurred due to a steam break.
- ALL Main Steam Isolation Valves initially failed to close.
- EOP-3.1, Uncontrolled Depressurization of All Steam Generators, is in progress at Step 17, Establish Normal Charging.
- PZR level is 58%.
- EFW flowrate is 50 gpm to each Steam Generator due to required operator action.
- All Steam Generator Narrow Range levels are 4%.
- Reactor Building pressure has remained below 1 psig.
- RCS pressure is 1750 psig and going UP.
- Core Exit TCs are 435 ^{o}F and going DOWN.

The "C" Main Steam Isolation Valve closed 30 seconds ago and "C" Steam Generator pressure has changed from 80 to 130 psig.

Which ONE of the following correctly describes the actions the crew should take?

A. Must remain in EOP-3.1 until the Critical Safety Function Status Trees direct entering an orange or red path Emergency Operating Procedure.

B. IMMEDIATELY transition to EOP-3.0, Faulted Steam Generator Isolation, Step 1.

C. Complete EOP-3.1 through Step 20, verify SI Flow is NOT required, and then transition to EOP-3.0, Faulted Steam Generator Isolation, Step 1.

D. Complete ALL steps of EOP-3.1 and then transition to EOP-1.2, Safety Injection Termination, Step 1.

Feedback

DISTRACTORS:

A Incorrect. The C SG pressure has increased. Per EOP-3.1 Reference Page item 2, Secondary Integrity Transition Criteria, the crew should go to EOP-3.0, Faulted Steam Generator Isolation, Step 1, after completing EOP-3.0 SI Termination steps 15 through 20. Plausible if applicant does not recognize secondary integrity transition criteria.

B Incorrect. Per EOP-3.1, Reference Page item 2, the crew should go to EOP-3.0 if any SG pressure increases at any time EXCEPT while performing SI Termination in steps 15 through 20. Plausilbe if applicant does not recognize step number or step description as an SI Termination step or does not remember an exception to Secondary Integrigy Transition Critierion.

C Correct per EOP-3.1, Reference Page, item 2, Secondary Integrity Transition Criterion.

D Incorrect. Per EOP-3.1 Reference Page, item 2, the crew should transition to EOP-3.0 after completing SI Termination in Steps 15 through 20. Plausible because the last step of EOP-3.0, Faulted Steam Generator Isolation, directs a transition to EOP-1.2.

REFERENCES:
1. EOP-3.1, Uncontrolled Depressurization of All Steam Generators
2. EOP-3.1LP, Uncontrolled Depressurization of All Steam Generators Lesson Plan

K/A CATALOGUE QUESTION DESCRIPTION:
- W/E02 SI Termination
- Knowledge symptom based EOP mitigation strategies (3.1/4.0).

Categories

Tier:	1	Group:	2
Key Word:	SI TERMINATION	Cog Level:	C/A(3.1/4.0)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	FJE/SDR

97. W/E05EA2.1 001/1/1/HEAT SINK/C/A (3.4/4.4)/B/SM05301/S/GWL/RFA/SDR

The Crew has entered EOP-16.0 "Response to Pressurized Thermal Shock" due to an Orange path on the integrity CSF status tree. The Crew is at the step for Checking RCS Tcold Stable or Increasing.

While checking EFW flow it is determined that a Red path condition exists on the Heat Sink CSF status tree.

Which ONE of the following correctly describes the action that should be taken by the crew?

A. Remain in EOP-16.0 until it is completed, then transition to EOP-15.0, Response to Loss of Secondary Heat Sink.

B. Remain in EOP-16.0 until the Orange path is cleared, then tranistion to EOP-15.0.

C. ✔ IMMEDIATELY transition to EOP-15.0.

D. The transition to EOP-15.0 is NOT required since EOP 16.0 provides actions for adjusting EFW.

Feedback

DISTRACTORS:

A Incorrect, a red path exists for heat sink and it has priorty over integrity, the operator should tranistion immediately.

B Incorrect, a red path exists for heat sink and it has priorty over integrity, the operator should tranistion immediately.

C Correct, the operator should transition to EOP-15.0 immediately.

D Incorrect, a red path exists for heat sink and it has priorty over integrity, the operator should tranistion immediately. EOP-15.0 has a caution that states:
If total EFW flow is LESS THAN 450 gpm due to operator action, this procedure should NOT be performed, since these actions are NOT appropriate if 450 gpm EFW flow is available.
The stem does not support this and EOP-15.0 must be transitioned to for this CAUTION to apply.

REFERENCES:

1. EOP- 15.0, 16.0, 12.0. Summer Exam bank question EOPS 385.

K/A CATALOGUE QUESTION DESCRIPTION:

WE05EA2.1 Ability to operate and / or monitor the folowing as they apply to the (Loss of Secondary Heat Sink) Facility conditions and selection of appropriate procedures during abnormal and emergency operations. (3.4/4.4)

Categories

Tier:	1	Group:	1
Key Word:	HEAT SINK	Cog Level:	C/A (3.4/4.4)
Source:	B	Exam:	SM05301
Test:	S	Author/Reviewer:	GWL/RFA/SDR

98. W/E09EA2.2 001/1/2/NATURAL CIRC/C/A(3.4/3.8)/M/SM05301/S/GWL/SDR

A Reactor Trip with a loss of Off-site power has occurred. Power will not be restored for at least eight hours, and a cooldown is desired.

- RCS temperature is currently 557 °F
- Only one CRDM fan is operable.

Which ONE of the following correctly describes the actions to be taken in accordance with EOP-1.3 "Natural Circulation Cooldown"?

A. Reduce RCS pressure to below 1925 psig, maintain RCS subcooing greater than 80 °F, cooldown shall not exceed 50 °F/hr.

B. ✔ Maintain RCS pressure above 1925 psig, maintain RCS subcooling greater than 130 °F and cooldown shall not exceed 50 °F/hr.

C. Reduce RCS pressure to below 1925 psig, maintain RCS subcooing greater than 130 °F, cooldown shall not exceed 25 °F/hr.

D. Maintain RCS pressure above 1925 psig, maintain RCS subcooling greater than 80 °F and cooldown shall not exceed 25 °F/hr.

Feedback

DISTRACTORS:

A Incorrect, RCS pressure should not be reduced, subcooling must be greater than 130°F.

B Correct, RCS pressure should be maintained above 1925, subcooling must be greater than 130°F, and cooldown is limited to 50°F/hr.

C Incorrect, RCS pressure should not be reduced, subcooling must be greater than 130 °F, and the cooldown is limited to 50 °F/hr.

D Incorrect, the cooldown is limited to 50 °F/hr.

REFERENCES:

1. EOP-1.3 Natrual Circulation Cooldown.

K/A CATALOGUE QUESTION DESCRIPTION:

WE09EA2.2 Ability to operate and / or monitor the following as they apply to the (Natural Circulation Operations) Adherence to appropriate procedures and operation within the limits in the facilitys's license and amendments. (3.4/3.8)

Categories

Tier:	1	Group:	2
Key Word:	NATURAL CIRC	Cog Level:	C/A(3.4/3.8)
Source:	M	Exam:	SM05301
Test:	S	Author/Reviewer:	GWL/SDR

99. W/E12EG2.4.4 002/1/1/STEAM LINE RUPTURE/C/A(4.0/4.3)/N/SM05301/S/FJE/SDR

Plant conditions are as follows:

- The Unit experienced a Steam Generator Tube Rupture (SGTR) on the "B" Steam Generator (SG).
- The crew is currently performing EOP-4.0, Steam Generator Tube Rupture, Step 3, Isolate flow from each RUPTURED SG.

When the crew transitioned from EOP-1.0 to EOP-4.0, FOUR (4) minutes ago, plant parameters were as listed below:

	Loop A	Loop B	Loop C
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:

	Loop A	Loop B	Loop C
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 all 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 go to EOP-2.0, Loss of Reactor or Secondary Coolant.

B. ✓ IMMEDIATELY go to EOP-3.0, Faulted Steam Generator Isolation.

C. RETURN to EOP-4.0, Steam Generator Tube Rupture, Step 1.

D. COMPLETE EOP-4.0, Step 3 and THEN go to EOP-3.0, Faulted Steam Generator Isolation.

Feedback

DISTRACTORS:

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 EOP-4.0, Reference Page, Secondary Integrity Transition Criteria

C Incorrect. Plausible because this is item 4 (Multiple Tube Rupture Criteria) on the EOP-4.0 reference page.

D Incorrect. EOP rules of usage require immediate transition after performing applicable immediate actions. EOP-4.0 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.

REFERENCES:

1. EOP-4.0, Steam Generator Tube Rupture, Reference Page, item 2, Secondary Integrity Transition Criteria.
2. EO-2, Usage of Emergency Operating Procedures.

K/A CATALOGUE QUESTION DESCRIPTION:

- W/E12 Steam Line Rupture - Excessive Heat Transfer
- G2.4.4 Ability to recognize abnormal indications for system operating parameters which are entry-level conditions for emergency and abnormal operating procedures (4.0/4.3).

Categories

Tier:	1	Group:	1
Key Word:	STEAM LINE RUPTURE	Cog Level:	C/A(4.0/4.3)
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	FJE/SDR

100. W/E13EG2.2.25 001/1/2/S/G OVERPRESSURE/M2.5/3.7/N/SM05301/S/FJE/SDR

Which ONE of the following describes the basis for reducing the Power Range Neutron Flux High Trip Setpoint, in accordance with Summer Technical Specification Table 3.7-1, if one or more main steam line code safety valves are inoperable for more than 4 hours?

A. ✔ To ensure that sufficient relieving capacity is available to limit secondary system pressure to within 110% of design pressure.

B. To minimize the positive reactivity effects of the Reactor Coolant System cooldown associated with the blowdown of the INOPERABLE safety valve(s).

C. To limit the pressure rise within the reactor building to within the values assumed in the accident analysis in the event of a steam line rupture within the reactor building.

D. To ensure that pressure induced stresses in the steam generator with the INOPERABLE safety valve(s) do not exceed the maximum allowable fracture toughness stress limits.

Feedback

DISTRACTORS:

A Correct per Summer Technical Specification Bases 3/4.7.1.1, page B 3/4 7-1, paragraph 2.

B Incorrect. Plausible because this is part of the basis for the operability of MSIVs and FWIVs.

C Incorrect. Plausible because this is part of the basis for the operability of the MSIVs and FWIVs.

D Incorrect. Plausible because this is the basis for the Steam Generator Pressure / Temperature limitiation (3.7.2). Fracture toughness (brittle fracture) is not a concern at NOP/NOT.

REFERENCES:

1. Summer Technical Specification Bases 3/4.7.1.1, 3/4.7.1.5, 3/4.7.1.6, 3/4.7.2

K/A CATALOGUE QUESTION DESCRIPTION:

- W/E 13 Steam Generator Over-pressure.
  G2.2.25 Knowledge of bases in technical specifications for limiting conditions for operations and safety limits (2.5/3.7).

Categories

Tier:	1	Group:	2
Key Word:	S/G OVERPRESSURE	Cog Level:	M2.5/3.7
Source:	N	Exam:	SM05301
Test:	S	Author/Reviewer:	FJE/SDR

Final Submittal

(Blue Paper)

FINAL SRO

WRITTEN EXAMINATION

2/9/06

76. 002A2.04 001

A large LOCA has occurred. Which ONE of the following actions are corrrect given the following conditions:

- RWST level is 17% and continues to decrease.
- RHR sump level is 410 feet and increasing.
- All RCPs were tripped (by procedure) when RCS pressure dropped below 1400 psig
- The crew is currently performing the actions of EOP-2.0, LOSS OF REACTOR OR SECONDARY COOLANT

The following EOPs are being considered:

- EOP-2.2, TRANSFER TO COLD LEG RECIRCULATION
- EOP-2.4, LOSS OF EMERGENCY COOLANT RECIRCULATION

Transition to:

A. EOP-2.4 from EOP-2.0. When RHR sump level reaches the required level, transition to EOP-2.2.

B. EOP-2.4 from EOP-2.0. When RHR sump level reaches the required level, return to EOP-2.0 and transition to EOP-2.2.

C. EOP-2.2 from EOP-2.0 then transition to EOP-2.4. When RHR sump level reaches the required level, return to EOP-2.0 and transition to EOP-2.2.

D✔ EOP-2.2 from EOP-2.0 then transition to EOP-2.4. When RHR sump level reaches the required level, transition back to EOP-2.2.

77. 003A2.03 002

The following conditions exist:

- Reactor Power is 9%.
- A Total Loss of All Service Water has occurred.
- AOP-117.1, "Total Loss of Service Water," has been entered.
- RCP temperatures are beginning to rise.
- Service Water can not be restored.

Which ONE of the following describes the action(s) the operators must take **and** the sequence of those actions (in accordance with AOP-117.1)?

A. ✔ Initiate a reactor plant shutdown per GOP-4B, POWER OPERATION (MODE 1 - DESCENDING). Stop up to TWO RCPs. Isolate unnecessary CCW loads, and ensure FS is aligned to the D/Gs. When an RCP motor bearing temperatures or lower seal water bearing temperature exceeds the specified limit, stop the affected RCP.

B. Initiate a reactor plant shutdown per GOP-4B, POWER OPERATION (MODE 1 - DESCENDING). Isolate unnecessary CCW loads, and ensure FS is aligned to the D/Gs. Secure an RCP only if motor bearing temperatures or lower seal water bearing temperature exceeds the specified limit.

C. Initiate a reactor plant shutdown per GOP-4B, POWER OPERATION (MODE 1 - DESCENDING). Stop at least TWO RCPs. Isolate unnecessary CCW loads, and ensure FS is aligned to the D/Gs. When the running RCP motor bearing temperatures or lower seal water bearing temperature exceeds the specified limit, increase monitoring and continue pump operation until the unit is shutdown then stop the affected pump.

D. Stop ONE RCP. Initiate a reactor plant shutdown per GOP-4B, POWER OPERATION (MODE 1 - DESCENDING). When an RCP motor bearing temperatures or lower seal water bearing temperature exceeds the specified limit, trip the reactor and stop the affected RCP.

78. 005G2.1.27 001

Which ONE of the following correctly describes the purpose and or function (not all inclusive) of the RHR system and one of its Mode 4 Technical Specification requirements?

A. Hot Leg Recirculation, Refueling Cavity Cooling, Alternate Water supply to Reactor Building Coolers, Pressurizer Relief Tank Cooling. RHR can be deenergized for up to **2** hour provided that core outlet temperature is maintained at least **50°F** below saturation temperature.

B. Cold Leg Recirculation, Hot Leg Recirculation, Simultaneous Cold Leg - Hot Leg Recirculation, Alternate Water supply to Reactor Building Coolers. RHR can be deenergized for up to **1** hour provided that core outlet temperature is maintained at least **10°F** below saturation temperature.

C. Refueling Cavity Draining, Cold Overpressure Protection, Simultaneous Cold Leg - Hot Leg Recirculation, Pressurizer Relief Tank Cooling. RHR can be deenergized for up to **2** hour provided that core outlet temperature is maintained at least **50°F** below saturation temperature.

D✓ Cold Leg Recirculation, Refueling Cavity Draining, Cold Overpressure Protection, Cold Leg Injection. RHR can be deenergized for up to **1** hour provided that core outlet temperature is maintained at least **10°F** below saturation temperature.

79. 007A2.03 002

Plant conditions are as follows:

- The unit is in Cold Shutdown.
- The RCS is water solid with one train of RHR providing shutdown cooling.
- RHR letdown is in service with PCV-145 controlling RCS pressure in AUTO.
- ALL pressurizer PORV control switches are in AUTO.
- RCS temperature is 140 °F.
- PRT level is 78%.
- PRT pressure is 6 psig.
- PRT temperature is 95 °F

Assuming no operator action, a _____ will result in a pressure increase in the PRT and the crew can restore PRT parameters by _____.

A. A HIGH failure of PT-444, pressurizer pressure control channel transmitter.
Spraying down the PRT using reactor makeup water per SOP-101, Reactor Coolant System.

B. ✓ Loss of air to HCV-142, LTDN FROM RHR.
Draining the PRT to the Recycle Holdup Tanks per SOP-108, Liquid Waste Processing System.

C. A HIGH failure of PT-444, pressurizer pressure control channel transmitter.
Draining the PRT to the Recycle Holdup Tanks per SOP-108, Liquid Waste Processing System.

D. Loss of air to HCV-142, LTDN FROM RHR.
Spraying down the PRT using reactor makeup water per SOP-101, Reactor Coolant System.

80. 007EA2.01 002

At 50% power, the plant experienced a loss of BOTH running Main Feedwater Pumps with a concurrent failure of the Reactor trip breaker A to open. The crew is performing the immediate actions of EOP-1.0, "Reactor Trip/Safety Injection Actuation."

Current plant conditions are as follows:

- The Integrated Plant Computer System has failed.
- SG LO-LO Level annunciators are lit.
- Reactor Power is 7% and slowly decreasing.
- All EFW Pumps failed to start.

Which ONE of the following describes the procedure path based on the above information?

A. Remain in EOP-1.0, until directed to monitor Critical Safety Functions then transition to EOP-15.0, "Response To Loss of Secondary Heat Sink."

B. Directly enter EOP-15.0, "Response To Loss of Secondary Heat Sink."

C. Remain in EOP-1.0, until directed to monitor Critical Safety Functions then transition to EOP-13.0, "Response To Abnormal Nuclear Power Generation."

D✔ Transition from EOP-1.0 to EOP-13.0, "Response To Abnormal Nuclear Power Generation."

81. 008A2.04 002

The Unit is operating at 100% power with all systems in normal lineups when the following annunciators actuate:

- LTDN/SL WTR HX FLO LO TEMP HI
- CC LOOP A RM-L2A HI RAD
- CC SRG TK VENT 7096 CLSD HI RAD
- CCW SRG TK LVL HI/LO/LO-LO

NO other annunciators are lit and all associated automatic functions have occurred.

Which ONE of the following is the correct cause and action?

A. A leak exists in the Letdown HX; verify closure of PVT-8152, LTDN LINE ISOL, per SOP-102, CHEMICAL AND VOLUME CONTROL SYSTEM, and manually shut PVV-7096, CC SURGE TK VLV

B. ✔ A leak exists in the Letdown HX; manually close PVT-8152, LTDN LINE ISOL, per SOP-102, CHEMICAL AND VOLUME CONTROL SYSTEM, and verify closure of PVV-7096, CC SURGE TK VLV

C. RCP "A" thermal barrier has been breached. Conduct a normal shutdown per GOP-4B, POWER OPERATION (MODE 1 - DESCENDING), Stop RCP A within 8 hours per SOP-101, REACTOR COOLANT SYSTEM.

D. A Phase "B" Containment Isolation has actuated due to RM-L2A&B (Component Cooling) alarming. Immediately trip the reactor and trip ALL RCPs and enter EOP 1.0.

82. 009EG2.4.30 002

Which ONE of the following identifies an event that is required to be reported to the NRC within 1 hour per EPP-002, COMMUNICATION AND NOTIFICATION.

A. An unplanned ECCS initiation that does not discharge to the RCS during an SI surveillance test.

B. ✔ An ECCS discharge to the RCS in response to a small break LOCA.

C. An airborne release of > 2X Appendix B limits.

D. A liquid release of > 2X Appendix B limits.

83. 022AG2.4.49 001

The plant was operating at 80% power when the following annunciators (not all inclusive) came in:

- REGEN HX LTDN OUT TEMP HI
- VCT LVL HI/LO
- CHG LINE FLO HI/LO
- PZR LCS DEV HI/LO

Charging pump amps are fluctuating between 25 and 30 amps
Charging flow is fluctuating between 25 and 30 gpm
Charging pressure is oscillating between 2500 and 2600 psig

Which ONE of the following set of actions should the supervisor direct his board operators to perform (These actions are not all inclusive)?

A. ✔ Secure the operating charging pump, close all letdown isolation valves, and close FCV-122, charging flow control valve.

B. Verify at least one charging pump is operating, verify FCV-122 is open, and verify CCW flow to the RCP Thermal Barriers is GREATER THAN 90 gpm on FI-7273A(B), THERM BARR FLOW GPM.

C. Secure the operating charging pump, realign charging pump suction, and close both LCV-115B(D), RWST TO CHG PP SUCT.

D. Verify at least one charging pump is operating, verify FCV-122 is open, and open both LCV-115C(E), VCT OUTLET ISOL.

84. 032AA2.08 003

Refueling operations are in progress, with SR monitor N33 out of service, when power is suddenly lost to source range neutron flux monitor N31 and subsequently regained 30 minutes later.

Which ONE of the following describes the action to be taken for this situation when power is lost?

A. ✔ Suspend all core alterations and perform an analog channel operational test of source range neutron flux monitor N31 within 8 hours prior to the initial start of core alterations.

B. Suspend all core alterations and perform a neutron flux response time test AND operational test of source range neutron flux detector N31 within 8 hours prior to the initial start of core alterations.

C. Determine boron concentration and perform a channel check of source range neutron flux monitor N31 within 12 hours.

D. Determine boron concentration and perform a neutron flux response time test of source range neutron flux detector N31 within 12 hours.

85. 035G2.4.20 002

The crew has just entered EOP-15.0, "Response to Loss of Secondary Heat Sink" from EOP-12.0, Monitoring of Critical Safety Functions.

The following conditions exist:

- WR SG "A" level is 25%
- WR SG "B" level is 12%
- WR SG "C" level is 11%
- Total Feed Flow is 290 gpm

Which ONE of the following sets of actions (not all inclusive) should be taken as directed by EOP-15.0, "Response to Loss of Secondary Heat Sink"?

A. Ensure all EFW valves are open and establish EFW flow to at least one SG.

B. Reset SI and establish MFW flow to either the "B" or "C" Steam Generators.

C. Reset SI, dump steam to the condenser and feed using a condensate pump.

D. Trip ALL RCPs, actuate SI, establish an RCS bleed path:

86. 054AA2.03 002

The following conditions exist:

- A plant startup was in progress.
- Power level was at 38%
- The reactor tripped
- SG blowdown isolation valves (PVG-503A(B)(C), A(B)(C) ISOL) closed
- Current SG narrow range levels in "A", "B", and "C" SGs are 8%, 10%, and 10%, respectively, and decreasing

Which ONE of the following correctly states the initiating event that caused the trip and the expected automatic actions based on these conditions?

A. The operating MFP tripped and ONLY the motor driven EFW pumps have a current start signal.

B. ✔ The operating MFP tripped and BOTH the turbine driven AND motor driven EFW pumps have a current start signal.

C. All SG flow control valves drifted closed and AMSAC should have actuated.

D. All SG flow control valves drifted closed and ONLY the turbine driven EFW pump has a current start signal.

87. 068G2.1.20 002

A Liquid Radwaste Release is been in progress:

- XCP-646 2-5, MON TK DISCH RM-L5 HI RAD, has just actuated for the second time.
- RCV00018-WL, Liquid Radioactive Waste Control Valve, indicates shut.
- Within 30 seconds of the alarm , RM-L5's reading returns to below the setpoint.

Which ONE of the following correctly states the next procedure steps to be taken.

A. ✔ The tank must be sampled and activity levels verified, then open RCV00018-WL and resume the release per SOP-108.

B. Verify that the RM-L5's reading is below the setpoint, then open RCV00018-WL and resume the release per SOP-108.

C. Verify that the RM-L5's reading is below the setpoint, then open RCV00018-WL and resume the release per SOP-108. Direct Heath Physics to continue to monitor the release and reduce the release rate.

D. Notify Health Physics and request a radiological survey. The release can not be reinitiated under the current release permit.

88. 103G2.1.30 002

Plant conditions are as follows:

- The unit is currently in MODE 4, with temperature and pressure increasing.
- All major work inside containment was completed two hours ago and there are NO personnel inside the Reactor Building.
- An auxiliary operator has just called to report that the red indicating light above the Personnel Escape Airlock is LIT and that he was unable to operate the Fuel Handling Building door using the handwheel.

Which ONE of the following is correct regarding the status of the Personnel Escape Airlock AND Containment Integrity?

A. ✔ The Reactor Building door is OPEN.
The Personnel Escape Airlock is INOPERABLE.

B. The Reactor Building door is CLOSED.
The Personnel Escape Airlock is INOPERABLE.

C. Only the Reactor Building door position indicator has malfunctioned.
The Personnel Escape Airlock is OPERABLE.

D. The Personnel Escape Airlock is OPERABLE.
The Personnel Escape Airlock door interlock is INOPERABLE.

89. G2.1.13 002

Which ONE of the following (as stated in SAP-200, Conduct of Operations) has the final authority, per Management Directive 11, for a case where an individual's condition for work inside the protected area is in question?

A. General Manager, Nuclear Plant Operations

B. ✓ Shift Supervisor

C. Management Duty Supervisor

D. Security Manager

90. G2.1.34 002

The unit is undergoing a normal heatup. Plant conditions are as follows:

- Hydrazine was added when RCS temperature was 185°F.
- RCS temperature is 200°F.
- A reactor coolant sample shows dissolved oxygen concentrations of 1.1 ppm.

Given the above conditions and in accordance with GOP-2,"Plant Startup and Heatup," and Tech Spec 3.4.7, "Chemistry," which ONE of the following is correct?

A. Secure the Heatup, plant chemistry is **NOT** in compliance with GOP-2; an LCO **HAS** been entered.

B. ✔ Secure the Heatup to prevent plant chemistry from **NOT** being in compliance with GOP-2; an LCO has **NOT** been entered.

C. The heatup can continue, plant chemistry **IS** in compliance with GOP-2; an LCO **HAS** been entered.

D. The heatup can continue, plant chemistry **IS** in compliance with GOP-2; an LCO has **NOT** been entered.

91. G2.2.20 001

Which ONE of the following is a VIOLATION of administrative procedures when troubleshooting an INOPERABLE system or component, the condition of which is specified by a Technical Specification Action Statement.

A. A Temporary Restoration to Service is used even though an alternative method of completing the work that will meet the action statement requirement was identified.

B. The troubleshooting requires posting a plant operator to immediately restore an affected component.

C. The Temporary Inoperable Status Change required to perform the troubleshooting was approved by the Duty Shift Supervisor.

D. The Work Document also includes an approved Bypass Authorization Request to install electrical jumpers.

92. G2.2.7 001

A bypass authorization request, prepared per SAP-148, "Temporary Bypass, Jumper, and Lifted Lead Control," requires prior PSRC and NSRC review for which ONE of the following conditions?

A. A review indicates that system operability will be affected.

B. A review indicates that 10 CFR 50 Appendix R fire protection criteria are impacted.

C. A review indicates that Seismic or blowout provisions are being diminished.

D. A review indicates that a full safety evaluation is required per 10 CFR 50.59.

93. G2.3.2 002

Which ONE of the following is correct per HPP- 709, Sampling and Release of Radioactive Gaseous Effluents:

A. Discharges from the Waste Gas Decay Tank or other high activity gaseous releases should be avoided when the wind is from the East-Southeast. This will prevent the released activity from being drawn into the Auxiliary Building ventilation.

B. Discharges from the Waste Gas Decay Tank or other high activity gaseous releases should be avoided when the wind is from the West-Southwest. This will prevent the released activity from being drawn into the Auxiliary Building ventilation.

C. Discharges from the Waste Gas Decay Tank or other high activity gaseous releases should be avoided when the wind is from the East-Southeast. This will prevent the released activity from being drawn into the Control Building ventilation.

D. Discharges from the Waste Gas Decay Tank or other high activity gaseous releases should be avoided when the wind is from the West-Southwest. This will prevent the released activity from being drawn into the Control Building ventilation.

94. G2.4.33 002

Which ONE of the following individual's approval is required to extend the time that an invalid nuisance annunciator is removed from service past 96 hours?

A. Duty Shift Engineeer

B. Duty Shift Supervisor

C. ✔ Manager, Operations

D. General Manager, Nuclear Plant Operations

95. G2.4.38 002

Plant conditions are as follows:

- An event has occurred resulting in substantial core degradation with potential loss of containment integrity.
- A General Emergency has been declared.
- The prevailing wind is blowing from the south.

Which ONE of the following must assume the duties of Interim Emergency Director, and to which area should he direct non-essential personnel be evacuated?

A. Shift Supervisor; Evacuate to their personal residence.

B. ✔ Shift Supervisor; Evacuate to the Southern Offsite Holding Area.

C. Manager, Operations; Evacuate to their personal residence.

D. Manager, Operations: Evacuate to the Southern Offsite Holding Area.

96. W/E02EG2.4.6 001

Plant conditions are as follows:

- A reactor trip and SI have occurred due to a steam break.
- ALL Main Steam Isolation Valves initially failed to close.
- EOP-3.1, Uncontrolled Depressurization of All Steam Generators, is in progress at Step 17, Establish Normal Charging.
- PZR level is 58%.
- EFW flowrate is 50 gpm to each Steam Generator due to required operator action.
- All Steam Generator Narrow Range levels are 4%.
- Reactor Building pressure has remained below 1 psig.
- RCS pressure is 1750 psig and going UP.
- Core Exit TCs are 435 °F and going DOWN.

The "C" Main Steam Isolation Valve closed 30 seconds ago and "C" Steam Generator pressure has changed from 80 to 130 psig.

Which ONE of the following correctly describes the actions the crew should take?

A. Must remain in EOP-3.1 until the Critical Safety Function Status Trees direct entering an orange or red path Emergency Operating Procedure.

B. IMMEDIATELY transition to EOP-3.0, Faulted Steam Generator Isolation, Step 1.

C. ✔ Complete EOP-3.1 through Step 20, verify SI Flow is NOT required, and then transition to EOP-3.0, Faulted Steam Generator Isolation, Step 1.

D. Complete ALL steps of EOP-3.1 and then transition to EOP-1.2, Safety Injection Termination, Step 1.

97. W/E05EA2.1 001

The Crew has entered EOP-16.0 "Response to Pressurized Thermal Shock" due to an Orange path on the integrity CSF status tree. The Crew is at the step for Checking RCS Tcold Stable or Increasing.

While checking EFW flow it is determined that a Red path condition exists on the Heat Sink CSF status tree.

Which ONE of the following correctly describes the action that should be taken by the crew?

A. Remain in EOP-16.0 until it is completed, then transition to EOP-15.0, Response to Loss of Secondary Heat Sink.

B. Remain in EOP-16.0 until the Orange path is cleared, then tranistion to EOP-15.0.

C. ✔ IMMEDIATELY transition to EOP-15.0.

D. The transition to EOP-15.0 is NOT required since EOP 16.0 provides actions for adjusting EFW.

98. W/E09EA2.2 001

A Reactor Trip with a loss of Off-site power has occurred. Power will not be restored for at least eight hours, and a cooldown is desired.

- RCS temperature is currently 557 ^{O}F
- Only one CRDM fan is operable.

Which ONE of the following correctly describes the actions to be taken in accordance with EOP-1.3 "Natural Circulation Cooldown"?

A. Reduce RCS pressure to below 1925 psig, maintain RCS subcooing greater than 80 ^{O}F, cooldown shall not exceed 50 ^{O}F/hr.

B. ✔ Maintain RCS pressure above 1925 psig, maintain RCS subcooling greater than 130 ^{O}F and cooldown shall not exceed 50 ^{O}F/hr.

C. Reduce RCS pressure to below 1925 psig, maintain RCS subcooing greater than 130 ^{O}F, cooldown shall not exceed 25 ^{O}F/hr.

D. Maintain RCS pressure above 1925 psig, maintain RCS subcooling greater than 80 ^{O}F and cooldown shall not exceed 25 ^{O}F/hr.

99. W/E12EG2.4.4 002

Plant conditions are as follows:

- The Unit experienced a Steam Generator Tube Rupture (SGTR) on the "B" Steam Generator (SG).
- The crew is currently performing EOP-4.0, Steam Generator Tube Rupture, Step 3, Isolate flow from each RUPTURED SG.

When the crew transitioned from EOP-1.0 to EOP-4.0, FOUR (4) minutes ago, plant parameters were as listed below:

	Loop A	Loop B	Loop C
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:

	Loop A	Loop B	Loop C
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 all 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 go to EOP-2.0, Loss of Reactor or Secondary Coolant.

B. ✓ IMMEDIATELY go to EOP-3.0, Faulted Steam Generator Isolation.

C. RETURN to EOP-4.0, Steam Generator Tube Rupture, Step 1.

D. COMPLETE EOP-4.0, Step 3 and THEN go to EOP-3.0, Faulted Steam Generator Isolation.

100. W/E13EG2.2.25 001

Which ONE of the following describes the basis for reducing the Power Range Neutron Flux High Trip Setpoint, in accordance with Summer Technical Specification Table 3.7-1, if one or more main steam line code safety valves are inoperable for more than 4 hours?

A. To ensure that sufficient relieving capacity is available to limit secondary system pressure to within 110% of design pressure.

B. To minimize the positive reactivity effects of the Reactor Coolant System cooldown associated with the blowdown of the INOPERABLE safety valve(s).

C. To limit the pressure rise within the reactor building to within the values assumed in the accident analysis in the event of a steam line rupture within the reactor building.

D. To ensure that pressure induced stresses in the steam generator with the INOPERABLE safety valve(s) do not exceed the maximum allowable fracture toughness stress limits.