

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

76. G2.1.1 001/3/GENERIC/CONDUCT OF OPS/H/MODIFIED/SR 2012-301/RO/JAT/PGC

Current Conditions:

- Unit 1 is in INTERMEDIATE SHUTDOWN.
- 1-CH-MOV-1381 (RCP Seal Return) is required to be manually shut in preparation for a clearance.
- The manual shutting of 1-CH-MOV-1381 is NOT directed by a procedure.
- An emergency does NOT exist.

Which ONE of the following describes the necessary approval for manual operation and the reason for the approval, IAW OP-AA-100, "Conduct of Operations"?

Manual operation of 1-CH-MOV-1381 must be authorized by ___(1)___ because of ___(2)___.

- A. (1) Shift Manager
(2) possible changes in leakage characteristics
- B. (1) Shift Manager
(2) the potential to result in inoperability
- C✓ (1) Manager Nuclear Operations
(2) possible changes in leakage characteristics
- D. (1) Manager Nuclear Operations
(2) the potential to result in inoperability

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: C A D B C A A B B D

Scramble Range: A - D

Tier: 3

Group: GENERIC

K/A Keywords: CONDUCT OF OPS

Cog Level (H/L): H

Source (New/Bnk/Mod): MODIFIED

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: JAT/PGC

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77. G2.1.13 001/3/GENERIC/CONDUCT OF OPS/H/NEW/SR 2012-301/SRO/DB/PGC

Which ONE of the following correctly completes the statements listed below?

Per SY-AA-101 (Security Access and Control), (1) escort(s) is\are required for escorting ten personnel into the Control Room area.

And

Per OP-AA-100 (Conduct of Operations), the (2) shall give prior approval for Control Room tours.

- A. (1) one
(2) Unit Supervisor
- B. (1) one
(2) Shift Manager
- C. (1) two
(2) Unit Supervisor
- D✓ (1) two
(2) Shift Manager

MCS	Time:	1	Points:	1.00	Version:	0 1 2 3 4 5 6 7 8 9	
					Answer:	D B D B C D D B C C	Scramble Range: A - D
Tier:		3			Group:	GENERIC	
K/A Keywords:		CONDUCT OF OPS			Cog Level (H/L):	H	
Source (New/Bnk/Mod):		NEW			Exam:	SR 2012-301	
Test (RO/SRO):		SRO			Author/Reviewer:	DB/PGC	

78. G2.1.26 001/3/GENERIC/CONDUCT OF OPS/H/NEW/SR 2012-301/RO/AG/PGC

You are in work control on a rainy day when an operator comes to you and states he has been assigned to 34.5 KV switching and tagging tasks. The operator was checking his PPE and noticed that the test date for a pair of electrical rubber insulating gloves was 9 months old.

In accordance with SA-AA-125 Electrical Safety, which ONE of the following describes (1) if electrical rubber insulating gloves are required to be used when performing 34.5 KV switching and tagging tasks in the rain, and (2) If this pair of gloves needs to be retested before use?

- A✓ (1) yes
(2) yes
- B. (1) yes
(2) no
- C. (1) no
(2) yes
- D. (1) no
(2) no

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MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: A A D A C C A C B B Scramble Range: A - D
Tier: 3 Group: GENERIC
K/A Keywords: CONDUCT OF OPS Cog Level (H/L): H
Source (New/Bnk/Mod): NEW Exam: SR 2012-301
Test (RO/SRO): RO Author/Reviewer: AG/PGC

79. G2.1.34 001/3/GENERIC/CONDUCT OF OPS/F/MODIFIED/SR 2012-301/SRO/JAT/PGC

Initial Conditions:

- At time 0930, unexpected grid fluctuations caused an automatic turbine trip from 100% power.
- Chemistry personnel drew a post-trip RCS sample at time 1005.
- Control room operators have stabilized the unit at 547 °F and normal operating pressure.

Current conditions:

- At time 1045, chemistry reports the following:
 - E-bar is 10 Mev/disintegration.
 - Dose Equivalent I-131 is 0.5 microcuries/cc.
 - RCS specific activity 15 microcuries/cc.

Based on the current conditions, which ONE of the following describes (1) the appropriate actions in accordance with Technical Specification (TS) 3.1.D, "Maximum Reactor Coolant Activity", and (2) the reporting requirements IAW TS 6.6.A.2, if any?

LCO 3.1.D for Dose Equivalent I-131 ___(1)___ met, and the current chemistry results ___(2)___ reportable to the Commission pursuant to TS 6.6.A.2.

- A✓ (1) is
(2) are
- B. (1) is
(2) are NOT
- C. (1) is NOT
(2) are
- D. (1) is NOT
(2) are NOT

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9
Answer: A C D A B C B B A B Scramble Range: A - D
Tier: 3 Group: GENERIC
K/A Keywords: CONDUCT OF OPS Cog Level (H/L): F
Source (New/Bnk/Mod): MODIFIED Exam: SR 2012-301
Test (RO/SRO): SRO Author/Reviewer: JAT/PGC

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80. G2.1.8 001/3/GENERIC/CONDUCT OF OPS/H/MODIFIED/SR 2012-301/RO/JAT/PGC

Current Conditions:

- 1-FW-P-2, TURB DRVN AFW PUMP and 1-FW-P-3A, MD AFW PUMP are running, feeding Steam Generators A, B and C.
- 1-MS-SOV-102A, TURB DRVN AFW PUMP is OPEN.
- 1-MS-SOV-102B, TURB DRVN AFW PUMP is CLOSED.
- Turbine speed is 4630 rpm.

Based on the above conditions, which ONE of the following describes the action to take IAW 1-OP-FW-002, "Turbine Driven AFW Pump Startup and Shutdown"?

- A. In the MCR, take 1-MS-SOV-102A to CLOSE.
- B. In the MCR, verify 1-MS-SOV-102A in OPEN/RESET and take 1-MS-SOV-102B to OPEN/RESET. THEN take 1-MS-SOV-102A and 1-MS-SOV-102B to CLOSE.
- C. Locally at the pump, trip the pump by cycling 1-MS-TV-120, AFW Pump 2 Turb Trip Valve, at least one time and leave it in the LATCH position.
- D✓ Locally at the pump, trip the pump by pushing the Manual Push Trip Lever.

MCS	Time:	1	Points:	1.00	Version:	0 1 2 3 4 5 6 7 8 9	
					Answer:	D C C A C B C B D C	Scramble Range: A - D
Tier:		3			Group:	GENERIC	
K/A Keywords:		CONDUCT OF OPS			Cog Level (H/L):	H	
Source (New/Bnk/Mod):		MODIFIED			Exam:	SR 2012-301	
Test (RO/SRO):		RO			Author/Reviewer:	JAT/PGC	

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81. G2.2.11 001/3/GENERIC/EQUIP CONTROL/L/MODIFIED/SR 2012-301/SRO/JAT/PGC

A temporary level indicator is to be installed for the VCT using the Temporary Modification process detailed in VPAP-1403, "Temporary Modifications".

Which ONE of the following describes the Temporary Modification process IAW VPAP-1403?

The Manager Radiological Protection (or alternate) ___(1)___ required to be a member of the Facility Safety Review Committee (FSRC) for this modification, and the MINIMUM level of Station Management approval required for Extension of Temporary Modification Duration, assuming no unresolved conditions, is the ___(2)___.

- A✓ (1) is
(2) FSRC
- B. (1) is
(2) Site Vice President
- C. (1) is not
(2) FSRC
- D. (1) is not
(2) Site Vice President

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	Scramble Range: A - D
			Answer: A D C B D B C D C C	
Tier:	3		Group:	GENERIC
K/A Keywords:	EQUIP CONTROL		Cog Level (H/L):	L
Source (New/Bnk/Mod):	MODIFIED		Exam:	SR 2012-301
Test (RO/SRO):	SRO		Author/Reviewer:	JAT/PGC

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82. G2.2.12 001/3/GENERIC/EQUIP CONTROL/H/NEW/SR 2012-301/SRO/AG/PGC

The 1A RHR Pump surveillance has just been completed. The following data has been recorded on the Data Sheet from Attachment 4 of 1-OPT-RH-003, RHR System Operability Test:

Note: Recorded data is in the shaded region.

Record	Reference	Satisfactory	Alert	Unsatisfactory
Adjusted $\Delta P = 89.2$ psid From Substep 6.5.13.c	$\Delta P = 87.5$ psid	81.4 to 90.1 psid	78.8 to < 81.4 psid	$\Delta P < 78.8$ psid or $\Delta P > 90.1$ psid
$V_h = 0.1052$ in/sec	$V_h = 0.0837$ in/sec	$V_h < 0.2092$ in/sec	$0.2092 < V_h = 0.5022$ in/sec	$V_h > 0.5022$ in/sec
$V_v = 0.0972$ in/sec	$V_v = 0.0826$ in/sec	$V_v < 0.2065$ in/sec	$0.2065 < V_v < 0.4956$ in/sec	$V_v > 0.4956$ in/sec
$V_a = 0.1288$ in/sec	$V_a = 0.0502$ in/sec	$V_a < 0.1255$ in/sec	$0.1255 < V_a < 0.3012$ in/sec	$V_a > 0.3012$ in/sec

Which ONE of the following completes the statement:

The 1A RHR pump is ___(1)___; ___(2)___ required.

- A. (1) operable
(2) no further action is
- B. (1) operable
(2) a Condition Report is
- C. (1) inoperable
(2) an immediate retest is
- D. (1) inoperable
(2) a Work Request and Condition Report are

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B D C D A B C D A B

Scramble Range: A - D

Tier: 3

Group: GENERIC

K/A Keywords: EQUIP CONTROL

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): SRO

Author/Reviewer: AG/PGC

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83. G2.2.35 001/3/GENERIC/EQUIP CONTROL/H/NEW/SR 2012-301/RO/DB/PGC

Unit 1 Current Conditions:

- Tavg is 160F.
- The reactor is subcritical by 3% delta-k/k.
- Reactor defueling is scheduled to begin in 48 hours.

Based on the current conditions, which one of the following correctly completes the statements listed below in accordance with the Surry Power Station Technical Specifications?

Unit 1 is currently in (1)?

And

Following completion of refueling, the reactor must be subcritical by at least (2) % delta-k/k in order to be in INTERMEDIATE SHUTDOWN.

- A. (1) COLD SHUTDOWN
(2) 1
- B✓ (1) COLD SHUTDOWN
(2) 1.77
- C. (1) REFUELING SHUTDOWN
(2) 1
- D. (1) REFUELING SHUTDOWN
(2) 1.77

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B C D A D D D A B D

Scramble Range: A - D

Tier: 3

Group: GENERIC

K/A Keywords: EQUIP CONTROL

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DB/PGC

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84. G2.2.44 001/3/GENERIC/EQUIP CONTROL/H/BANK/SR 2012-301/RO/DRL/PGC

Unit 1 Conditions:

- Unit 1 was at 100% power.
- A SGTR occurred, resulting in an automatic SI.
- All systems responded as designed.
- The ruptured steam generator has been isolated.
- RCS cooldown has been completed.
- The operating crew has commenced RCS depressurization.
- The ruptured steam generator level is 100% WR.
- The other two steam generators are at 40% NR and rising.
- Pressurizer level is 20% and rising.
- Subcooling is 100 °F and rising.

Based on the above conditions, which ONE of the following describes the required actions of the operating crew?

The operating crew shall _____.

- A. immediately stop all high head safety injection pumps.
- B. go to 1-ES-0.0, "REDIAGNOSIS".
- C. continue with the procedure in effect.
- D. immediately go to 1-FR-H.3, "Response to Steam Generator High Level."

MCS	Time:	1	Points:	1.00	Version:	0 1 2 3 4 5 6 7 8 9	
					Answer:	C D A B A A B D C B	Scramble Range: A - D
Tier:		3			Group:	GENERIC	
K/A Keywords:		EQUIP CONTROL			Cog Level (H/L):	H	
Source (New/Bnk/Mod):		BANK			Exam:	SR 2012-301	
Test (RO/SRO):		RO			Author/Reviewer:	DRL/PGC	

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

85. G2.3.12 001/3/GENERIC/RAD CONTROL/L/NEW/SR 2012-301/RO/MKM/PGC

Initial Conditions:

- Unit 1 is in a refueling outage.

Current Conditions:

- The refueling team is preparing to load the first Fuel Assembly into the reactor vessel.

Based on the current conditions, which ONE of the following completes both of the below statements in accordance with 1-OP-FH-001, "CONTROLLING PROCEDURE FOR REFUELING?"

The MINIMUM allowable reactor cavity boron concentration for Refueling Shutdown is (1) .

AND

The LATEST point in time when base neutron count rates for SRNI N-31 and SRNI N-32 is allowed to be obtained is (2) .

- A. (1) 2250 ppm
(2) after the fourth (4th) Fuel Assembly is loaded into the core and before the fifth (5th) Fuel Assembly is loaded into the core.
- B. (1) 2350 ppm
(2) after the fourth (4th) Fuel Assembly is loaded into the core and before the fifth (5th) Fuel Assembly is loaded into the core.
- C. (1) 2250 ppm
(2) after the eighth (8th) Fuel Assembly is loaded into the core and before the ninth (9th) Fuel Assembly is loaded into the core.
- D✓ (1) 2350 ppm
(2) after the eighth (8th) Fuel Assembly is loaded into the core and before the ninth (9th) Fuel Assembly is loaded into the core.

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	Scramble Range: A - D
			Answer: D D C C A B B B C A	
Tier:	3		Group: GENERIC	
K/A Keywords:	RAD CONTROL		Cog Level (H/L): L	
Source (New/Bnk/Mod):	NEW		Exam: SR 2012-301	
Test (RO/SRO):	RO		Author/Reviewer: MKM/PGC	

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86. G2.3.13 001/3/GENERIC/RAD CONTROL/H/NEW/SR 2012-301/SRO/

Both units are at full power. 1-RM-RI-157, Main Control Room Radiation Monitor, alarms. It currently reads 2.6 mr/hr and is rising. Annunciator Response Procedure, 0-RM-G3, Control Room Alert/Failure, has been entered. All normal MCR ventilation has been secured and 1-VS-F-41, Emergency Supply Fan has been started.

The following data is noted:

- PDI-VS-100, D.P.-U1CR/U1TB -0.2" water
- PDI-VS-101, D.P.-U1RR/U1TB +0.1" water
- PDI-VS-200, D.P.-U2CR/U2TB -0.1" water
- PDI-VS-201, D.P.-U2RR/U2TB +0.1" water

Based on the above conditions, which ONE of the following describes (1) what action(s) is (are) required by 0-RM-G3, and (2) what the status of the Control Room Envelope is, per TS 3.21?

- A✓ (1) Secure MCR Boundary Fans ONLY.
(2) Operable
- B. (1) Secure MCR Boundary Fans ONLY.
(2) Inoperable
- C. (1) Secure all MCR Boundary and Turbine Building Supply and Exhaust Fans.
(2) Operable
- D. (1) Secure all MCR Boundary and Turbine Building Supply and Exhaust Fans.
(2) Inoperable

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: A B B D B D B C D A	Scramble Range: A - D
Tier:	3		Group:	GENERIC
K/A Keywords:	RAD CONTROL		Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	SRO		Author/Reviewer:	

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87. G2.3.7 001/3/GENERIC/RAD CONTROL/H/NEW/SR 2012-301/RO/DRL/PGC

- The unit was shutdown and placed on RHR Cooling due to indicated fuel failure. All fuel has been offloaded and the A train of RHR secured for maintenance.
- A pipe in the A Loop Room has been surveyed and is reading 175 mr/hr. This is the maximum dose observed in the room. The general area dose rate is 85 mr/hr.
- An Operator has been assigned the task to hang a clearance in the room. It is expected that this task will take 30 to 45 minutes to complete.

Which ONE of the following describes:

(1) In accordance with 10 CFR 20 requirements, how should HP post the room?

AND

(2) In accordance with VPAP-2101, Radiation Protection Program, can the Operator perform the task on the general Operator Clearance RWP, or must a specific RWP be obtained?

A. (1) Radiation Area
(2) General RWP is sufficient

B. (1) Radiation Area
(2) Specific RWP is required

C. (1) High Radiation Area
(2) General RWP is sufficient

D. (1) High Radiation Area
(2) Specific RWP is required

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: C A A B D B C C D D

Scramble Range: A - D

Tier: 3

Group: GENERIC

K/A Keywords: RAD CONTROL

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DRL/PGC

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88. G2.4.16 001/3/GENERIC/E-PLAN/H/BANK/SR 2012-301/SRO/JAT/PGC

Initial Conditions:

- Unit 1 is experiencing a sustained Loss of All AC Power condition.
- The TDAFW pump shaft sheared on startup, and all efforts to cross-connect AFW with Unit 2 have failed.

Current Conditions:

- All emergency buses remain de-energized.
- Operators have just completed the step in ECA-0.0 to Check DC Bus Loads, and have placed both the DC emergency oil pump and the Air Side seal oil backup pump in PTL.
- Core Exit Thermocouples (CETCs) are 1202 F and rising.
- STA reports the following Critical Safety Function Status Trees:
 - Core Cooling: RED
 - Heat Sink: RED
 - Containment: ORANGE
 - Inventory: YELLOW
 - Subcriticality: GREEN
 - Integrity: GREEN

Based on the current conditions, which ONE of the following describes the appropriate procedure to be used NEXT to mitigate the casualty?

- A✓ Transition to 1-SACRG-1, SEVERE ACCIDENT CONTROL ROOM GUIDELINE INITIAL RESPONSE.
- B. Continue in 1-ECA-0.0, LOSS OF ALL AC POWER.
- C. Transition to 1-FR-H.1, RESPONSE TO LOSS OF SECONDARY HEAT SINK.
- D. Transition to 1-FR-C.1, RESPONSE TO INADEQUATE CORE COOLING.

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: A D C C A C A D D B	Scramble Range: A - D
Tier:	3		Group:	GENERIC
K/A Keywords:	E-PLAN		Cog Level (H/L):	H
Source (New/Bnk/Mod):	BANK		Exam:	SR 2012-301
Test (RO/SRO):	SRO		Author/Reviewer:	JAT/PGC

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89. G2.4.20 001/3/GENERIC/E-PLAN/F/NEW/SR 2012-301/RO/DB/PGC

Unit 1 Conditions:

- The unit has experienced a Steam Generator Tube Rupture.
- 1-E-3 (STEAM GENERATOR TUBE RUPTURE) is in effect.
- An RCS Cooldown using the Steam Dumps has been initiated.
- One Charging Pump is running and flowing to the RCS.
- RCS subcooling is 29°F.

Based on the conditions listed above, which one of the following correctly completes the statements listed below?

Flow on each Main Steamline should be kept less than 1.0×10^6 PPH to prevent (1).

And

RCP trip criteria (2) apply.

A. (1) Main Steamline isolation
(2) do

B✓ (1) Main Steamline isolation
(2) do NOT

C. (1) exceeding the Technical Specification cooldown rate limit
(2) do

D. (1) exceeding the Technical Specification cooldown rate limit
(2) do NOT

MCS Time: 1 Points: 1.00

Version: 0 1 2 3 4 5 6 7 8 9

Answer: B C B B D D B D C B

Scramble Range: A - D

Tier: 3

Group: GENERIC

K/A Keywords: E-PLAN

Cog Level (H/L): F

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DB/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

90. G2.4.30 001/3/GENERIC/E-PLAN/H/BANK/SR 2012-301/SRO/DB/PGC

Unit 1 Initial Conditions:

- 100% power

Current conditions:

- A maintenance worker inadvertently tripped the Unit 1 Main Turbine while working at the front standard.
- The Reactor Protective System automatically initiated a Reactor Trip.

Based on the current conditions, which ONE of the following correctly describes (1) whether the Reactor Trip should be considered a VALID or INVALID actuation, as defined by VPAP-2802, "Notifications and Reports," AND (2) the shortest time requirement to report this event to the NRC, as specified by VPAP-2802?

REFERENCE PROVIDED

- A✓ (1) VALID actuation
(2) 4 hour notification
- B. (1) INVALID actuation
(2) 8 hour notification
- C. (1) VALID actuation
(2) 8 hour notification
- D. (1) INVALID actuation
(2) 4 hour notification

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: A A C C D B B C D B	Scramble Range: A - D
Tier:	3		Group:	GENERIC
K/A Keywords:	E-PLAN		Cog Level (H/L):	H
Source (New/Bnk/Mod):	BANK		Exam:	SR 2012-301
Test (RO/SRO):	SRO		Author/Reviewer:	DB/PGC

91. G2.4.37 001/3/GENERIC/E-PLAN/F/NEW/SR 2012-301/RO/DB/PGC

Which ONE of the following describes the lowest position on the Station Emergency Organization chart that may authorize the use of Emergency Exposure Limits?

- A. Unit Supervisor
- B✓ Station Emergency Manager
- C. Radiation Protection Supervisor
- D. Radiological Assessment Director

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: B D D B C A D D B B	Scramble Range: A - D

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Tier:	3	Group:	GENERIC
K/A Keywords:	E-PLAN	Cog Level (H/L):	F
Source (New/Bnk/Mod):	NEW	Exam:	SR 2012-301
Test (RO/SRO):	RO	Author/Reviewer:	DB/PGC

92. G2.4.5 001/3/GENERIC/E-PLAN/H/NEW/SR 2012-301/RO/MKM/PGC

Initial Conditions:

- Unit 1 experienced an automatic SI coincident with a total loss of offsite power

Current Conditions:

- All Power Range NI=4% and increasing
- All Intermediate Range SUR=+0.1 DPM and stable
- All CETs=715 °F and lowering slowly
- RVLIS Full Range=26% and increasing slowly
- RCS Subcooling based on CETs=superheated
- Total AFW Flow=200 GPM and stable
- All S/G NR levels=0% (downscale low)
- RWST Level=10% and lowering
- Recirculation has been established in accordance with 1-ES-1.3, "TRANSFER TO COLD LEG RECIRCULATION"
- Containment sump levels are oscillating erratically
- Amps, flows, and discharge pressures on the running ECCS pumps aligned for recirculation are all oscillating erratically
- A transition to Attachment 1, "CONTAINMENT SUMP SCREEN BLOCKAGE—CONTINGENCY ACTIONS," of 1-ES-1.3 has just been announced by the SRO

Based on the current conditions, which ONE of the following is a correct evaluation of critical safety function procedural implementation?

- A. Implementation of 1-FR-S.1, "RESPONSE TO NUCLEAR POWER GENERATION/ATWS," takes precedence over implementation of 1-FR-H.1, "RESPONSE TO LOSS OF SECONDARY HEAT SINK"
- B. Implementation of 1-FR-H.1, "RESPONSE TO LOSS OF SECONDARY HEAT SINK," takes precedence over implementation of Attachment 1 of 1-ES-1.3
- C✓ Implementation of Attachment 1 of 1-ES-1.3 takes precedence over implementation of 1-FR-C.1, "RESPONSE TO INADEQUATE CORE COOLING"
- D. Implementation of 1-FR-H.1, "RESPONSE TO LOSS OF SECONDARY HEAT SINK," takes precedence over implementation of 1-FR-C.2, "RESPONSE TO DEGRADED CORE COOLING"

MCS	Time:	1	Points:	1.00	Version:	0 1 2 3 4 5 6 7 8 9	Answer:	C D C C D C C B A A	Scramble Range:	A - D
Tier:		3			Group:					GENERIC
K/A Keywords:		E-PLAN			Cog Level (H/L):					H
Source (New/Bnk/Mod):		NEW			Exam:					SR 2012-301
Test (RO/SRO):		RO			Author/Reviewer:					MKM/PGC

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93. W/E03 G2.1.20 001/1/2/LOCA COOLDOWN/H/MODIFIED/SR 2012-301/RO/DRL/PGC

Initial Conditions:

- LOCA occurred on Unit 1.
- SI has been RESET.
- Operators are implementing 1-ES-1.2, "POST LOCA COOLDOWN AND DEPRESSURIZATION."
- 90 F/hr cooldown is in progress.
- RCP 'C' is the ONLY running RCP.
- Operators have stopped one CHG pump.

Current Conditions:

- Operators are at the step in 1-ES-1.2 to "CHECK SI FLOW NOT REQUIRED."
- RCS subcooling requirement is NOT met.

Based on the current conditions, which ONE of the following is the NEXT action required by 1-ES-1.2 to regain subcooling?

- A. Energize all available pressurizer heaters and maintain current RCS pressure.
- B. Increase the cooldown rate to <100 °F/hr and ensure PRZR level can be maintained >22%.
- C. Reinitiate SI by operation of the SI switches and verify HHSI flow path to RCS cold legs.
- D✓ Manually start CHG pumps and align HHSI flow path to RCS cold legs.

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: D B B B B C C B A	Scramble Range: A - D
Tier:	1		Group:	2
K/A Keywords:	LOCA COOLDOWN		Cog Level (H/L):	H
Source (New/Bnk/Mod):	MODIFIED		Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	DRL/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

94. W/E04 G2.4.45 001/1/1/LOCA OUTSIDE CONT/H/NEW/SR 2012-301/RO/DRL/PGC

A transient is in progress and the following alarms have been received:

- B-F3, SFGDS AREA SUMP HI LEVEL is in ALARM.
- C-B8, PRZR LO PRESS.
- C-D8, PRZR LO LVL.
- F-A7 (B7), STM GEN A LO LVL – CHN 1 (CHN 2)
- F-A8 (B8), STM GEN B LO LVL – CHN 1 (CHN 2)
- F-A9, (B9), STM GEN C LO LVL – CHN 1 (CHN 2)
- H-B8, AFW Pump 3A LOCKOUT OR OL TRIP is in ALARM.
- RM-D4, RM-RI-154 HIGH is in ALARM.

Which ONE of the following casualties is in progress?

- A. Steam Generator Tube Rupture
- B LOCA Outside Containment
- C. LOCA Inside Containment
- D. Loss of Secondary Heat Sink

MCS	Time: 1	Points: 1.00	Version: 0 1 2 3 4 5 6 7 8 9	
			Answer: B D A D C C A B A B	Scramble Range: A - D
Tier:	1		Group:	1
K/A Keywords:	LOCA OUTSIDE CONT		Cog Level (H/L):	H
Source (New/Bnk/Mod):	NEW		Exam:	SR 2012-301
Test (RO/SRO):	RO		Author/Reviewer:	DRL/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

95. W/E05 EK3.2 001/1/1/INADQ HEAT XFER/H/NEW/SR 2012-301/RO/DB/PGC

Unit 1 Initial Conditions:

- Unit 1 has experienced a LOCA from 100% power.

Unit 1 Current Conditions:

- PRZR pressure is 2200 psig.
- CETC temperatures are stable.
- Containment Pressure is 21 psia.
- RCS Hot Leg temperatures are 552 degrees F.
- AFW flow has been lost to all Steam Generators.
- WIDE RANGE level in 1A Steam Generators is 21 %.
- WIDE RANGE level in 1B Steam Generators is 20 %.
- WIDE RANGE level in 1C Steam Generators is 22 %.
- The Unit Supervisor has directed entry into 1-FR-H.1 (RESPONSE TO LOSS OF SECONDARY HEAT SINK).

Based on Current Conditions, which ONE of the following correctly completes the statements listed below in accordance with 1-FR-H.1 (RESPONSE TO LOSS OF SECONDARY HEAT SINK)?

Primary Bleed and Feed (1) required at this time.

And

When the ability to supply feedwater is restored, feed flow should initially be (2).

- A. (1) is NOT
(2) limited to 60 gpm per SG
- B. (1) is NOT
(2) limited to 100 gpm per SG
- C✓ (1) is
(2) limited to 100 gpm per SG
- D. (1) is
(2) established to ONE SG at the maximum available rate limited to 100 gpm per SG

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: C A D C C C A B A A

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: INADQ HEAT XFER

Cog Level (H/L): H

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DB/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

96. W/E08 EA2.2 001/1/2/RCS OVERCOOLING/L/NEW/SR 2012-301/RO/MPL/PGC

Unit 1 Conditions

- A reactor trip has occurred on Unit 1.
- 1-E-0, Reactor Trip or Safety Injection, has been entered.
- Step 5, Initiate Attachment 1, System Alignment Verification, is in progress.

Which ONE of the following statements describes the basis for checking FW isolation in 1-E-0, Attachment 1, System Alignment Verification?

- A. To minimize feed flow to reduce the likelihood of thermal shock to SG components.
- B. To preclude any excessive FW addition to intact SG's that would cause negative MTC to add positive reactivity insertion and return to criticality.
- C. To ensure that excessive FW flow does not cause an overpressure condition of the SG's.
- D✓ To prevent excessive RCS cooldown that could aggravate the initiating transient, especially if it were a steam line break.

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: D D D C D C B C C C

Scramble Range: A - D

Tier: 1

Group: 2

K/A Keywords: RCS OVERCOOLING

Cog Level (H/L): L

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: MPL/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

97. W/E10 EA2.1 001/1/2/NATURAL CIRC/H/NEW/SR 2012-301/SRO/DB/PGC

Unit 1 Initial Conditions:

- Unit 1 has experienced a Loss of All AC Power.
- 1-ECA-0.1 (LOSS OF ALL AC POWER RECOVERY WITHOUT SI REQUIRED) is complete.

Unit 1 Current Conditions:

- T_{ave} is 547 F.
- 1D-B5 (ICCM System Failure) is in alarm due to failed power supplies on Channels A & B.
- All Reactor Coolant Pumps are unavailable due to a prolonged loss of seal cooling.
- The Shift Manager has directed a cooldown to less than 200° F within 10 hours due to impending weather conditions.

Based on the current conditions, which ONE of the following correctly completes the statements listed below?

___(1)___ will be used to complete the cooldown.

And

___(2)___ if Pressurizer level increases to = 90% during RCS depressurization.

- A. (1) 1-ES-0.2 (NATURAL CIRCULATION COOLDOWN)
(2) Increase RCS Pressure by 100 psi using Pressurizer Heaters
- B. (1) 1-ES-0.2 (NATURAL CIRCULATION COOLDOWN)
(2) Adjust charging and letdown flows to restore Pressurizer level to required band
- C✓ (1) 1-ES-0.4 (NATURAL CIRCULATION COOLDOWN WITH STEAM VOID IN RX VESSEL) (W/O RVLIS)
(2) Increase RCS Pressure by 100 psi using Pressurizer Heaters
- D. (1) 1-ES-0.4 (NATURAL CIRCULATION COOLDOWN WITH STEAM VOID IN RX VESSEL) (W/O RVLIS)
(2) Adjust charging and letdown flows to restore Pressurizer level to required band

MCS	Time:	1	Points:	1.00	Version:	0 1 2 3 4 5 6 7 8 9	
					Answer:	C A A B D D B A C B	Scramble Range: A - D
Tier:		1			Group:		2
K/A Keywords:		NATURAL CIRC			Cog Level (H/L):		H
Source (New/Bnk/Mod):		NEW			Exam:		SR 2012-301
Test (RO/SRO):		SRO			Author/Reviewer:		DB/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

98. W/E11 EK1.2 001/1/1/LOSS EMERG RECIRC/L/NEW/SR 2012-301/RO/DB/PGC

Which one of the following correctly completes the statements listed below in accordance with the requirements of 1-ECA-1.1 (LOSS OF EMERGENCY COOLANT RECIRCULATION)?

Which ONE of the following completes the statements:

CHG and LHSI pumps taking suction from the RWST must be stopped when level decreases to a maximum level of (1) percent.

And

If emergency coolant recirculation capability is restored, (2).

- A. (1) 3
(2) return to the procedure and step in effect
- B✓ (1) 6
(2) return to the procedure and step in effect
- C. (1) 3
(2) continue on with procedure 1-ECA-1.1
- D. (1) 6
(2) continue on with procedure 1-ECA-1.1

MCS Time: 1 Points: 1.00 Version: 0 1 2 3 4 5 6 7 8 9

Answer: B A D D B B C A B A

Scramble Range: A - D

Tier: 1

Group: 1

K/A Keywords: LOSS EMERG RECIRC

Cog Level (H/L): L

Source (New/Bnk/Mod): NEW

Exam: SR 2012-301

Test (RO/SRO): RO

Author/Reviewer: DB/PGC

QUESTIONS REPORT

for RO-SRO Combined Questions Surry 2012

99. W/E13 EA1.1 001/1/2/SG OVERPRESS/H/MODIFIED/SR 2012-301/RO/AG/PGC

Given the following plant conditions:

- "A" S/G Pressure is 1250 psig.
- "A" S/G Narrow range level is 82%
- RCS hot leg temperatures are 574 degrees F.
- 1-FR-H.2, "Response to Steam Generator Overpressure" has been entered.
- The condenser is not available.
- The "A" S/G PORV is stuck closed.
- Turbine Driven AFW pump is out of service for bearing replacement.

Which ONE of the following describes the preferred method to reduce "A" S/G pressure in accordance with 1-FR-H.2?

- A. Feed "A" S/G with AFW and commence an RCS cooldown to less than 540 degrees F.
- B. Feed "A" S/G with AFW and establish Blowdown from the "A" steam generator.
- C✓ Isolate AFW to the "A" S/G and commence RCS cooldown to less than 540 degrees F.
- D. Isolate AFW to the "A" S/G and establish Blowdown from the "A" Steam Generator.

MCS	Time:	1	Points:	1.00	Version:	0 1 2 3 4 5 6 7 8 9	
					Answer:	C B B C C B D D B D	Scramble Range: A - D
Tier:		1			Group:		2
K/A Keywords:		SG OVERPRESS			Cog Level (H/L):		H
Source (New/Bnk/Mod):		MODIFIED			Exam:		SR 2012-301
Test (RO/SRO):		RO			Author/Reviewer:		AG/PGC

100. W/E15 G2.4.18 001/1/2/CTMT FLOODING/L/NEW/SR 2012-301/SRO/GWL/PGC

Which ONE of the following describes the assumed sources water used to determine the setpoint for entry into FR-Z.1, "Containment Flooding," and when FR-Z.1 is applicable?

- A. RCS, RWST, and SI accumulators only: FR-Z.1 is applicable between in Mode1 through Mode 3 only.
- B. RCS, RWST, and SI accumulators only: FR-Z.1 is applicable between in Mode1 through Mode 4.
- C. RCS, RWST, Chemical Addition Tank, and SI accumulators: FR-Z.1 is applicable between Modes1 through Mode 3 only.
- D✓ RCS, RWST, Chemical Addition Tank, and SI accumulators: FR-Z.1 is applicable between Mode1 through Mode 4.

MCS	Time:	1	Points:	1.00	Version:	0 1 2 3 4 5 6 7 8 9	
					Answer:	D B D D A B A C D A	Scramble Range: A - D

QUESTIONS REPORT
for RO-SRO Combined Questions Surry 2012

Tier:	1	Group:	2
K/A Keywords:	CTMT FLOODING	Cog Level (H/L):	L
Source (New/Bnk/Mod):	NEW	Exam:	SR 2012-301
Test (RO/SRO):	SRO	Author/Reviewer:	GWL/PGC