

Draft Submittal
(Pink Paper)

1. Reactor Operator Written Exam
✦ *OUTLINES*

**VOGTLE EXAM 2002-301
50-424 AND 50-425**

**NOVEMBER 26, &
DECEMBER 2 - 13, 2002**

Draft

Facility: Vogtle Date of Exam: Exam Level: RO														
Tier	Group	K/A Category Points											Point Total	
		K 1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G *		
1. Emergency & Abnormal Plant Evolutions	1	2	3	4				0	5			2	16	16
	2	4	3	1				5	1			3	17	17
	3	1	0	1				1	0			0	3	3
	Tier Totals	7	6	6	0	0	0	6	6	0	0	5	36	36
2. Plant Systems	1	3	1	2	3	3	3	2	2	0	2	2	23	23
	2	3	1	3	1	1	1	3	1	2	2	2	20	20
	3	1	1	1	1	1	0	0	1	1	0	1	8	8
	Tier Totals	7	3	6	5	5	4	5	4	3	4	46	51	51
3. Generic Knowledge and Abilities					Cat 1		Cat 2		Cat 3		Cat 4		13	13
					3		3		3		4			
<p>Note: 1. Ensure that at least two topics from every K/A category are sampled within each tier (i.e., the "Tier Totals" in each K/A category shall not be less than two).</p> <p>2. The point total for each group and tier in the proposed outline must match that specified in the table. The final point total for each group and tier may deviate by ±1 from that specified in the table based on NRC revisions. The final exam must total 100 points.</p> <p>3. Select topics from many systems; avoid selecting more than two or three K/A topics from a given system unless they relate to plant-specific priorities.</p> <p>4. Systems/evolutions within each group are identified on the associated outline.</p> <p>5. The shaded areas are not applicable to the category/tier.</p> <p>6.* The generic K/As in Tiers 1 and 2 shall be selected from Section 2 of the K/A Catalog, but the topics must be relevant to the applicable evolution or system.</p> <p>7. On the following pages, enter the K/A numbers, a brief description of each topic, the topics' importance ratings for the SRO license level, and the point totals for each system and category. K/As below 2.5 should be justified on the basis of plant-specific priorities. Enter the tier totals for each category in the table above.</p>														

ES-401

PWR RO Examination Outline
 Emergency and Abnormal Plant Evolutions - Tier 1/Group 1

Form ES-401-4

E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Points
BW/A02&A03 Loss of NNI-XY / 7									
K/A Category Totals:	2	3	4	0	5	2	Group Point Total:	16	16

E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Points
000001 Continuous Rod Withdrawal / 1	1						AK1.05 - Knowledge of the operational implications of the following concepts as they apply to Continuous Rod Withdrawal: Effects of turbine-reactor power mismatch on rod control (CFR: 41.8 / 41.10 / 45.3)	3.5/3.8	B
000003 Dropped Control Rod / 1						1	G2.4.49 - Ability to perform without reference to procedures those actions that require immediate operation of system components and controls. (CFR: 41.10 / 43.2 / 45.6)	4.0/4.0	B
000007 (BW/E02&E10; CE/E02) Reactor Trip - Stabilization - Recovery / 1									
BW/A01 Plant Runback / 1									
BW/A04 Turbine Trip / 4									
000008 Pressurizer Vapor Space Accident / 3	1						AK1.01 - Knowledge of the operational implications of the following concepts as they apply to a Pressurizer Vapor Space Accident: Thermodynamics and flow characteristics of open or leaking valves (CFR 41.8 / 41.10 / 45.3)	3.2/3.7	B
000009 Small Break LOCA / 3					1		EA2.39 - Ability to determine or interpret the following as they apply to a small break LOCA: Adequate core cooling. (CFR 43.5 / 45.13)	4.3/4.7	R
000011 Large Break LOCA / 3		1					EK2.02 Knowledge of the inter-relationship LB LOCA and pumps	2.6/2.7	B
W/E04 LOCA Outside Containment / 3									
BW/E08; W/E03 LOCA Cooldown/Depress. / 4		1					EK2.2 - Facility's heat removal systems, including primary coolant, emergency coolant, the decay heat removal systems, and relations between the proper operation of these systems to the operation of the facility. (CFR: 41.7 / 45.7)	3.7/ 4.0	B
W/E11 Loss of Emergency Coolant Recirc. / 4				1			EA1.3 - Desired operating results during abnormal and emergency situations. (CFR: 41.7 / 45.5 / 45.6)	3.7/4.2	B
W/E01 & E02 Rediagnosis & SI Termination / 3	1						EK1.2 - Normal, abnormal and emergency operating procedures associated with (Reactor Trip or Safety Injection / Rediagnosis). (CFR: 41.8 / 41.10 / 45.3)	3.4/4.0	R
000022 Loss of Reactor Coolant Makeup / 2						1	AG2.1.32 - Ability to explain and apply all system limits and precautions. (CFR: 41.10 / 43.2 / 45.12)	3.4/3.8	B
000025 Loss of RHR System / 4		1					AK2.02 - LPI or Decay Heat Removal/RHR pumps (CFR 41.7 / 45.7)	3.2/3.2	B
000029 Anticipated Transient w/o Scram / 1				1			EA1.13 - Manual trip of main turbine (41.8/41.10/45.3)	4.1/3.9	B
000032 Loss of Source Range NI / 7	1						AK1.01 - Effects of voltage changes on performance (CFR 41.8 / 41.10 / 45.3)	2.5/3.1	B
000033 Loss of Intermediate Range NI / 7									
000037 Steam Generator Tube Leak / 3			1				AK3.07 - Knowledge of the reasons for the following responses as they apply to the Steam Generator Tube Leak: Actions contained in EOP for S/G tube leak (CFR 41.5, 41.10 / 45.6 / 45.13)	4.2/4.4	B
000038 Steam Generator Tube Rupture / 3									
000054 (CE/E06) Loss of Main Feedwater / 4						1	EG2.4.48 - Ability to interpret control room indications to verify the status and operation of system, and understand how operator actions and directives affect plant and system conditions. (CFR: 43.5 / 45.12)	3.5/ 3.8	B

E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Points
BW/E04; W/E05 Inadequate Heat Transfer - Loss of Secondary Heat Sink / 4				1			EA1.3 - Desired operating results during abnormal and emergency situations. (CFR: 41.7 / 45.5 / 45.6)	3.8/4.2	B
000058 Loss of DC Power / 6									
000059 Accidental Liquid Radwaste Rel. / 9				1			AA1.01 - Radioactive-liquid monitor (CFR 41.7 / 45.5 / 45.6)	3.5/3.5	B
000060 Accidental Gaseous Radwaste Rel. / 9									
000061 ARM System Alarms / 7				1			AA1.01 - Ability to operate and / or monitor the following as they apply to the Area Radiation Monitoring (ARM) System Alarms: Automatic actuation (CFR 41.7 / 45.5 / 45.6)	3.6/3.6	R
W/E16 High Containment Radiation / 9									
CE/E09 Functional Recovery									
K/A Category Point Totals:	4	3	1	5	1	3	Group Point Total:	17	17

ES-401

PWR RO Examination Outline
Emergency and Abnormal Plant Evolutions - Tier 1/Group 3

Form ES-401-4

E/APE # / Name / Safety Function	K1	K2	K3	A1	A2	G	K/A Topic(s)	Imp.	Points
000028 Pressurizer Level Malfunction / 2									
000036 (BW/A08) Fuel Handling Accident / 8									
000056 Loss of Off-site Power / 6	1						AK1.01 - Principle of cooling by natural convection CFR 41.8 / 41.10 / 45.3)	3.7/4.2	R
000065 Loss of Instrument Air / 8				1			AA1.03 - Restoration of systems served by instrument air when pressure is regained (CFR 41.7 / 45.5 / 45.6)	2.9/3.1	B
BW/E13&E14 EOP Rules and Enclosures									
BW/A05 Emergency Diesel Actuation / 6									
BW/A07 Flooding / 8									
CE/A16 Excess RCS Leakage / 2									
W/E13 Steam Generator Over-pressure / 4			1				EK3.2 - Normal, abnormal and emergency operating procedures associated with (Steam Generator Over pressure). (CFR: 41.5 / 41.10, 45.6, 45.13)	2.9/3.3	R
W/E15 Containment Flooding / 5									
K/A Category Point Totals:	1	0	1	1	0	0	Group Point Total:	3	3

System # / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Points
025 Ice Condenser														
056 Condensate	1											K1.03 - MFW (CFR: 41.2 to 41.9 / 45.7 to 45.8)	2.6/2.6	B
059 Main Feedwater						1						K6.09 Effect of loss of MFW pump and flow regulating valves	2.4/2.6	B
059 Main Feedwater				1								K4.19 Knowledge of MFW design Features and / or interlocks that provide for automatic feedwater isolation of MFW (CFR 41.7)	3.2/3.4	R
059 Main Feedwater										1		A4.11 - Recovery from automatic feedwater isolation (CFR: 41.7 / 45.5 to 45.8)	3.1/3.3	B
061 Auxiliary/Emergency Feedwater					1							K5.01 Knowledge of the operational implications of the relationship between AFW flow and RCS heat transfer (41.5, 45.7)	3.6/3.9	R
061 Auxiliary/Emergency Feedwater							1					A1.04 - Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the AFW controls including: AFW source tank level. (CFR: 41.5 / 45.5)	3.9/3.9	B
068 Liquid Radwaste	1											K1.07 - Sources of liquid wastes for LRS (CFR: 41.2 to 41.9 / 45.7 to 45.8)	2.7/2.9	B
068 Liquid Radwaste						1						K6.10 Knowledge of the effect of a loss or malfunction on the following will have on the Liquid Radwaste System: Radiation monitors. (CFR: 41.7 / 45.7)	2.5/2.9	R
071 Waste Gas Disposal			1									K3.05 Knowledge of the effect that a loss of the waste gas disposal will have on ARM and PRM (CFR 41.7, 45.6)	3.2/3.2	B
072 Area Radiation Monitoring							1					A1.01 Predict/monitor changes in radiation levels to prevent exceeding design limits (CFR 41.5, 45.5)	3.4/3.6	B
072 Area Radiation Monitoring										1		G2.1.28 Knowledge of the purpose and function of major system components and controls. (CFR41.7)	3.2/3.3	B
	3	1	2	3	3	3	2	2	0	2	2	Group Point Total:	23	23

System # / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Points
002 Reactor Coolant					1							K5.10 Operational implications of relationship between reactor power and RCS differential temperature (CFR 41.5, 45.7)	3.6/4.1	B
006 Emergency Core Cooling	1											K1.07 Knowledge of the physical connections and/or cause-effect relationship between the ECCS and the following systems: MFW system. (CFR 41.2 to 41.9 / 45.7 to 45.8)	2.9/3.3	B
006 Emergency Core Cooling							1					A1.11 Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the ECCS controls including: Boron concentration. (CFR 41.5 / 45.5)	3.1/3.4	B
010 Pressurizer Pressure Control			1									K3.01 Knowledge of the loss of PZR PCS on RPS (CFR 41.7, 45.6)	3.8/3.9	B
011 Pressurizer Level Control									1			A3.03 Ability to monitor automatic operation of PZR LCS including: Charging and letdown (CFR 41.7 / 45.5)	3.2/3.3	B
012 Reactor Protection						1						K6.10 Effect of loss of permissive circuits on RPS (CFR 41.7, 45.5)	3.3/3.5	B
014 Rod Position Indication										1		A4.01 Rod selection control (CFR: 41.7 / 45.5 to 45.8)	3.3/3.1	B
016 Non-nuclear Instrumentation			1									K3.02 Knowledge of the effect that a loss or malfunction of the NNIS has on PZR LCS	3.4/3.5	R
026 Containment Spray							1					A1.01 - Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the CSS controls including: Containment pressure (CFR: 41.5 / 45.5)	3.9/4.2	B
029-Containment Purge	1											K1.02 Knowledge of the physical connections and/or cause-effect relationship between the Containment Purge System and the following systems: Containment radiation monitor	3.6/3.8	R
033 Spent Fuel Pool Cooling											1	G2.4.18 Knowledge of the specific bases for EOPs (CFR 41.10 / 45.13)	2.7/3.6	R
035 Steam Generator	1											K1.09 Cause / effect between S/G and RCS (CFR 41.2 - 9, 45.7 - 8)	3.8/4.0	B
039 Main and Reheat Steam							1					A1.03 Ability to predict and/or monitor changes in parameters (to prevent exceeding design limits) associated with operating the MRSS controls including: Primary system temperature indications, and required valves, during main steam system warm-up. (CFR 41.5 / 45.5)	2.6/2.7	B
055 Condenser Air Removal			1									K3.01 Knowledge of the effect that a loss or malfunction of the CARS will have on the following: Main condenser. (CFR 41.7 / 45.6)	2.5/2.7	R

System # / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Points
062 AC Electrical Distribution									1			A3.05 Ability to monitor automatic operation of the ac distribution system, including: Safety related indicators and controls. (41.7 / 45.5)	3.5/3.6	B
063 DC Electrical Distribution														
064 Emergency Diesel Generator		1										K2.03 Knowledge control power power supplies (CFR41.7)	3.6/3.9	B
073 Process Radiation Monitoring								1				A2.01 Ability to (a) predict the impacts of the following malfunctions or operations on the PRM system; and (b) based on those predictions, use procedure to correct, control, or mitigate the consequences of those malfunctions or operations: Erratic or failed power supply. (CFR: 41.5 / 43.5 / 45.3 / 45.13)	2.5/2.9	R
075 Circulating Water										1		A4.01 Ability to operate/monitor emergency / essential SWS pumps (CFR41.7, 45.5 - 8)	3.2/3.2	B
079 Station Air				1								K4.01 Knowledge of SAS design feature and cross-connection with IAS (CFR41.7)	2.9/3.2	B
086 Fire Protection											1	G2.4.25 Knowledge of fire protection procedures (CFR 41.10 / 45.13)	2.9/3.4	B
K/A Category Point Totals:	3	1	3	1	1	1	3	1	2	2	2	Group Point Total:	20	20

System # / Name	K1	K2	K3	K4	K5	K6	A1	A2	A3	A4	G	K/A Topic(s)	Imp.	Points
005 Residual Heat Removal					1							K5.03 Operational effects of reactivity effects of RHR fill water (CFR41.5, 45.7)	2.9/3.1	R
007 Pressurizer Relief/Quench Tank														
008 Component Cooling Water	1											K1.02 Knowledge of the physical connections and/or cause-effect relationship between the CCWS and the following systems: Loads cooled by CCWS. (CFR: 41.2 to 41.9 / 45.7 to 45.9)	3.3/3.4	R
027 Containment Iodine Removal														
028 Hydrogen Recombiner and Purge Control														
034 Fuel Handling Equipment				1								K4.01 Design features and interlocks which provide fuel protection from binding and dropping (CFR41.7)	2.6/3.4	B
041 Steam Dump/Turbine Bypass Control			1									K3.04 Effect of a malfunction of the SDS has on reactor power (CFR41.7, 45.6)	3.5/3.4	B
045 Main Turbine Generator									1			A3.05 Ability to monitor auto operation of the MT/G system, including: Electrohydraulic control. (CFR 41.7 / 45.5)	2.6/2.9	B
076 Service Water		1										K2.08 Power supplies to ESF-actuated MOV (CFR 41.7)	3.1/3.3	B
078 Instrument Air											1	G2.4.11 Knowledge of abnormal conditions procedures (CFR 41.10, 43.5, 45.13)	3.4/3.6	R
103 Containment								1				A2.03 Predict impact and use procedures to address malfunction of phase A and B isolation (CFR 41.5, 43.5, 45.3, 45.13)	3.5/3.8	R
K/A Category Point Totals:	1	1	1	1	1	0	0	1	1	0	1	Group Point Total:	8	8
Plant-Specific Priorities														
System / Topic	Recommended Replacement for...										Reason	Points		
Plant-Specific Priority Total: (limit 10)														

Facility:		Date of Exam:		Exam Level: RO	
Category	K/A #	Topic	Imp.	Points	
Conduct of Operations	2.1.3	Knowledge of shift turnover practices	3.0/3.4	B	
	2.1.2	Knowledge of operator responsibility during all modes of operation	3.0/4.0	B	
	2.1.32	Ability to explain and apply all system limits and precautions	3.4/3.8	B	
	2.1.				
	2.1.				
Equipment Control	Total			3	
	2.2.3	Knowledge of the design, procedural and operational differences between Units	3.1/3.3	B	
	2.2.12	Knowledge of surveillance procedures	3.0/3.4	B	
	2.2.22	Knowledge of limiting conditions for operations and safety limits	3.4/4.1	B	
	Total			3	
Radiation Control	2.3.1	Knowledge of 10 CFR 20 and related facility radiation control requirements	2.6/3.0	B	
	2.3.4	Knowledge of radiation exposure limits and contamination control including permissible levels in excess of those authorized	2.5/3.1	B	
	2.3.9	Knowledge of the process for performing a containment purge	2.5/3.4	B	
	Total			3	
Emergency Procedures/ Plan	2.4.1	Knowledge of EOP entry conditions and immediate action steps	4.3/4.6	B	
	2.4.14	Knowledge of general guidelines for EOP flowchart use	3.0/3.9	B	
	2.4.8	Knowledge of how the event-based emergency/abnormal operating procedures are used in conjunction with the symptom-based EOPs	3.0/3.7	B	
	2.4.11	Knowledge of abnormal condition procedures	3.4/3.6	B	
	Total			4	
Tier 3 Point Total RO				13	

QUESTIONS REPORT
for VOGTLEFINDRFT1028

1. 001AK1.05 001

The following conditions exist:

- Reactor power = 100 25%
- Control Bank D is at 137 steps withdrawn
- Rod control is in AUTO

If PT-505 fails LOW, how will the rods in Control Bank D respond?

- A. Move inward at 48 steps per minute.
- B. ✓ Move inward at 72 steps per minute.
- C. Move outward at 72 steps per minute.
- D. Move outward at 48 steps per minute.

REF: VG LP-27101 C-5 Rod Control
distracter A - 48 SPM is the speed for manual operation of control banks and wrong direction.

Distracter B - inward movement is a misapplication of PT-485 failing high.

Answer C - correct maximum speed of 72 SPM in the outward direction

Distracter D - 48 SPM is the speed for manual operation of control banks.
Changed Power to 22% as requested from Utility to get further above C-5 auto-rod interlock.

Made 4th item match MCB nomenclature.

Removed "for input to the rod control system" to avoid "teaching" in the stem.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

2. 001K1.05 001

Given the following:

- 75% power
- Channel N-41 - 74%.80
- Channel N-42 - 73%.75
- Channel N-43 - 75%.20
- Channel N-44 - 74%.50
- Rod control is in Automatic

Which of the following describes Rod Control system response to channel N-41 failing LOW low?

- A. Control Rods drive in at a maximum rate until C-5 blocks rod motion or a reactor trip on low PRZR press occurs.
- B. Control Rods drive in until the temperature mismatch equals the power mismatch and Tavg stabilizes at a lower temperature.
- C. Control Rods remain in present position until power mismatch causes a signal to move. Tave is 1.5 degrees F above Tref.
- D. Control Rods drive out until the temperature mismatch equals the power mismatch and Tavg stabilizes at a lower temperature.

New, REF: LO-LP-27101-21

- a. incorrect - auctioneered hi is used in the rod circuitry, and N-43 is the hi not N-41
- b. incorrect - auctioneered hi is used in the rod circuitry, and N-43 is the hi not N-41
- c. correct - auctioneered hi is used in the rod circuitry, and N-43 is the hi not N-41
- d. incorrect - auctioneered hi is used in the rod circuitry, and N-43 is the hi not N-41

QUESTIONS REPORT
for VOGTLEFINDRFT1028

3. 002K5.10 001

Given the following conditions:

- Tavg is on program
- Unit 1 is at 94% power and ramping up.
- Rods are in automatic with Bank D at 200 steps
- Turbine load set is raised to 1220 MWe using the increase pushbutton
- Turbine control valves are opening and megawatts are increasing

Which ONE of the following describes Tavg behavior assuming no operator action?

- A. ~~Tavg and Tref will increase and continue to be matched until the control valves reach the limiter setting-turbine reaches set load.~~
- B. ~~Tref will increase until the control valves turbine reaches set load the limiter setting, but Tavg will remain constant.~~
- C. ~~Tavg and Tref will remain constant and matched as the turbine load increases. control valves reach the limiter setting.~~
- D. ~~Tavg will initially increase, but then decrease as the control valves reach the limiter setting. until the turbine reaches set load.~~
Tavg will decrease and Tref will increase until the turbine reaches set load.

Ref: VG LO-LP-28103 - C

Distactor analysis:

D is correct because Bank D hits the C11 rod stop at 220 steps. As the governor valves continue to open, turbine power continues to rise along with Pimp (Tref). However, no more positive reactivity is added (no dilution per stem) and no rods due to C11, but doppler adds negative reactivity which drives Tavg down until Moderator temp coefficient balances at a lower Tavg.

A, B, and C are incorrect they have Tavg either rising or remaining constant.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

4. 003A2.02R 001

Given the following:

- Unit 1 is at 39% power
- Annunciator ALB08-A05 "RCP 1 CONTROLLED LKG HI/LO FLOW" alarms Panel 1A2, window A-4, RCP 1 No. 2 SEAL LKOF HI FLOW is lit
- RCP 1 Seal Inlet injection temperature is at 240°F and increasing.

Which ONE of the following describes the correct actions for the control room crew?

- A. Trip the RCP 1, close #1 Seal Return FGV valve, trip the Rx and initiate 19000-C, "E-0, Rx Trip or Safety Injection"
- B. Trip the Rx and initiate 19000-C, "E-0, Rx Trip or Safety Injection," trip RCP 1, and close #1 Seal Return FGV valve
- C. Trip the RCP 1, close #1 Seal Return FGV valve and continue in 12004-C, "Power Operation (MODE 1)"
- D. Trip the RCP 1, close #1 Seal Return FGV valve and initiate 18005-C, "Partial Loss of Flow"

Ref: VG 13003-1, 18005-C, 17008-1

Distractor analysis:

A is incorrect because actions are in wrong order

B is correct per procedures for RCPs 1 - 3

C is incorrect based procedures

D is incorrect because power is less than P-8, 48% but greater than 15% so should trip RX per procedure

QUESTIONS REPORT
for VOGTLEFINDRFT1028

5. 003G2.4.49 001

At 11:00 you are notified that RCP #1 ~~CCS~~- ACCW inlet line is leaking badly. Maintenance was notified and is in the process of determining what type of repairs are needed. At 11:05 via plant computer and other control room indications, you determine that the following conditions exist:

- Motor bearing temperature is 195 F and rising at 1 F / min
- Motor stator winding temperature is 315 F and steady
- Seal water Inlet temperature is 240 F and steady

Based on the above conditions, what action(s) should be taken?

A. Immediately trip the RCP

B. Trip the RCP if seal-injection ACCW to the pump is not re-established by 11:16 with total #1 seal flow ~~is~~-greater than 5 gpm

C. Trip the RCP if seal-injection ACCW flow is not re-established by 11:10

D. Trip the RCP, then the reactor if seal water temperature is not returned to 2350 F by 11:16

Ref: VG LO-LP-16401, 13003-1

QUESTIONS REPORT
for VOGTLEFINDRFT1028

6. 004A2.12 001

Given the following:

- Unit 2 is at 100% power
- CCP "A" is in service, providing normal charging flow
- An inadvertent "B" train SI was generated by I&C
- "A" train SI "A" train is ~~not~~ NOT present
- No operator action takes place

Which of the following is correct?

- A. Normal mini-flow paths for both CCPs are isolated, alternate flow-paths for both CCPs are available.
- B. ✓ Normal mini-flow paths for both CCPs are isolated, CCP "A" alternate miniflow path is isolated, CCP "B" alternate mini-flow path is available.
- C. CCP "A" normal mini-flow path is available, CCP "A" alternate miniflow path is isolated, CCP "B" alternate mini-flow path is available.
- D. Normal mini-flow paths for both CCPs are isolated, alternate flow-paths for both CCPs are isolated.

Ref : VG bank, LO-LP-09201-01-05

- A. incorrect - train A Isolation occurred
- B. correct
- C. incorrect - train A valves closed
- D. incorrect - train B valves unaffected

QUESTIONS REPORT
for VOGTLEFINDRFT1028

7. 004A4.07 001

Which of the following describes the proper reactor makeup control system valve positions after the reactor Makeup Master Control Switch is placed to the START position with the Reactor Makeup Mode selector switch in DILUTE?

A. ~~Blender Acid Supply Flow Control Valve - CLOSED~~
~~Makeup to CCP Suction Flow Control Valve - CLOSED~~
~~Boric Acid Blender to VCT Inlet Flow Control Valve - OPEN~~
~~Blender Primary Water Flow Control Valve - MODULATED~~

Boric Acid to Blender Valve (FV-0110A) - CLOSED
Blender Outlet to Charging Pumps Suction Valve (FV-0110B)- CLOSED
Blender Outlet to VCT Valve (FV-0111B)- OPEN
RX MU WTR to BA Blender Valve (FV-0111A)- MODULATED

B. ~~Blender Acid Supply Flow Control valve - CLOSED~~
~~Makeup to CCP Suction Flow Control Valve - OPEN~~
~~Boric Acid Blender to VCT Inlet Flow Control Valve - MODULATED~~
~~Blender Primary Water Flow Control Valve - CLOSED~~

Boric Acid to Blender Valve (FV-0110A) - CLOSED
Blender Outlet to Charging Pumps Suction Valve (FV-0110B)- OPEN
Blender Outlet to VCT Valve (FV-0111B)- MODULATED
RX MU WTR to BA Blender Valve (FV-0111A)- CLOSED

C. ~~Blender Acid Supply Flow Control valve - OPEN~~
~~Makeup to CCP Suction Flow Control Valve - OPEN~~
~~Boric Acid Blender to VCT Inlet Flow Control Valve - CLOSED~~
~~Blender Primary Water Flow Control Valve - MODULATED~~

Boric Acid to Blender Valve (FV-0110A) - OPEN
Blender Outlet to Charging Pumps Suction Valve (FV-0110B)- OPEN
Blender Outlet to VCT Valve (FV-0111B)- CLOSED
RX MU WTR to BA Blender Valve (FV-0111A)- MODULATED

D. ~~Blender Acid Supply Flow Control valve - MODULATED~~
~~Makeup to CCP Suction Flow Control Valve - MODULATED~~
~~Boric Acid Blender to VCT Inlet Flow Control Valve - OPEN~~
~~Blender Primary Water Flow Control Valve - OPEN~~

Boric Acid to Blender Valve (FV-0110A) - MODULATED
Blender Outlet to Charging Pumps Suction Valve (FV-0110B)- MODULATED
Blender Outlet to VCT Valve (FV-0111B)- OPEN
RX MU WTR to BA Blender Valve (FV-0111A)- OPEN

Ref: Farley Exam Bank, verified for Vogtle, LP 09401

- a. correct dilute flowpath
- b., c, d, incorrect flowpaths see drawing

QUESTIONS REPORT
for VOGTLEFINDRFT1028

8. 004K4.04 001

~~NOT VALIDATED FOR VOGTLE can't find logic drawings for VCT makeup valves
VG LP 09401 talks about switch control
ASK Dan~~

~~Unit 1 is recovering from a Main Control Room evacuation in accordance with AOI-27, Main Control Room Inaccessibility and control has been formally transferred from the Auxiliary Control Room.~~

~~The UO attempted to perform a blended makeup to the VCT when annunciator 112 E, PW to Blender Flow Deviation alarmed.~~

~~Which ONE of the following describes the cause of the alarm?~~

~~Unit 1 is recovering from a remote shutdown outside the control room. The Auxiliary Building SO is currently locally controlling CVCS charging flow using 1FHC-0121 outside the charging pump rooms.~~

~~Which of the following is the correct method of transferring charging flow control back to the control room?~~

- ~~A. Transfer switch for Primary Water Pumps left in Aux position
Place both the local (FHC-0121) and control room (FIC-0121) controllers at 0% demand, then place the charging pump transfer switch in the control room position.~~
- ~~B. Transfer switch for FCV-62-143, Blender Primary Water Flow Control Valve left in Aux position
Match the control room demand (on FIC-0121) with the local controller (FHC-0121), then place transfer switch in the control room position.~~
- ~~C. Transfer switch for VCT LEVEL XMTR 1-LCV-62-118 left in Aux position
Place the local controller in "REMOTE", the control room demand automatically tracks the local demand.~~
- ~~D. Transfer switch for FCV-62-144, Makeup to CCP Suction Flow Control Valve left in Aux position
Place the control room controller (FIC-0121) in "AUTO", no local action is required.~~

Ref: WB procedure AOI-27
No learning objective found

Distractor analysis:

A is incorrect, switch does not exist

B is correct, in Aux position at the Auxiliary Control Room, FCV-143 remains closed regardless of activities on the Main Control Board

C is incorrect because level is not an input when performing a manual makeup

D is incorrect because this switch does not exist

QUESTIONS REPORT
for VOGTLEFINDRFT1028

9. 004K5.04 001

Which one of the following is a result of maintaining a hydrogen cover gas in the VCT during normal at power operations?

- A. To assure N-16 concentrations are ALARA
- B. To maintain RCS pH within TRM limits
- C. To maintain conductivity below .017 micro Mhos
- D. To maintain oxygen concentration below the TRM upper limit within limits

Ref: NA 2002 - validated to VG LO-LP-09001-10 and TRM 13.4.1 Chemistry

- a. incorrect N-16 is a bi-product of the nuclear reaction not influenced by hydrogen cover gases
- b. incorrect RCS pH is controlled by primary chemistry not with cover gases
- c. incorrect conductivity is controlled by water quality efforts not cover gases
- d. correct Hydrogen cover gases "scavenge" oxygen, thus lowering the oxygen concentration

QUESTIONS REPORT
for VOGTLEFINDRFT1028

10. 005AK2.02R 001

Unit 1 was at 25% power and ramping up when the RO noticed that one of the Control Bank C control rods is 13 steps below the other rods in Control Bank C which were at 215 steps and moving as designed.

Power accension was halted. The rod had an electrical problem which was repaired and the operations management staff has concurred with realignment of the misaligned rod in accordance with 18003-C, Rod Control System Malfunction. ~~Tech Spec requirements have been met.~~

Which ONE of the following outlines the method of realignment in accordance with AOP 18003-C?

- A. Record information from Bank Overlap Unit, step counters, and P/A converter. Disconnect lift coil for the affected rod, reset step counters, select Bank C and insert Bank C control rods. Log the final rod position.
- B. Reset Master Cyclor, record information from Bank Overlap Unit, step counters, and P/A converter. Disconnect lift coil of the affected rod, select Bank C and insert Bank C. Log final position of affected rod.
- C. Position Rod Bank Selector Switch to affected bank, ~~reset the affected group step counter to zero,~~ disconnect all lift coils in Bank C except the affected rod, and withdraw affected control rod, reset the affected group step counter to recorded position. Log the final rod position.
- D. Reset master cyclor, record information for P/A converter, and step counters. Disconnect all lift coils in Bank C except the affected rod, select Bank C and withdraw the affected rod.

Ref: VG AOP 18003-C

Distractor analysis:

A is incorrect the procedre for aligning a rod NOT in the controlling bank is to move the rod to the bank, not the bank to the rod.

B is incorrect same as A, also missing some steps.

C is correct per 18003-c

D is incorrect because information from BOU and P/A converter do not have to be recorded prior to realignment.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

11. 005K5.03R 001

Unit 1 is in Mode 4 with #1 Reactor Coolant Pump running. "A" train RHR has JUST been placed in service when the Reactor Operator notes source range counts suddenly increasing on both channels. ALB10 C01 "SOURCE RANGE HI FLUX LEVEL AT SHUTDOWN" alarms.

Which ONE of the following describes the correct action?

- A. Commence a ~~maximum~~ emergency boration per 13009-1, CVCS Reactor Makeup Control System.
- B. Start the #2 Reactor Coolant Pump and secure the #1 Reactor Coolant Pump.
- C. Start "B" Train RHR and secure "A" train RHR.
- D. Commence a normal boration until the source range counts begin to decrease.

Ref: TP Exam Bank, no specific learning objective found
Need to verify per UOP

Distractor Analysis:

A is correct because operating procedure 13009-1 provides guidance to immediately borate when uncontrolled +reactivity is inserted.

B is incorrect because swapping RCP's will not add negative reactivity to the core.

C is incorrect same as answer B.

D is incorrect because there is no guidance for a normal boration.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

12. 006A1.11 001

Given the following plant conditions:

- SGTR has occurred on SG #1.
- 19031, "ES-3.1, Post-SGTR Cooldown Using Backfill", is in progress.
- Ruptured SG level is 25% NR.
- ~~RCS is at 390°F.~~
- ~~RCS is at 400 psig.~~
- Crew is cooling down using steam dumps to condenser.
- RCP #4 in service.

19031, Post-SGTR Cooldown Using Backfill"

- Step 14 requires a return to step 3 if RCS temperature is greater than 200°F.
- Step 3 requires the operator to ensure adequate shutdown margin.

~~ES 3.1, step 14 requires a return to step 3 if RCS temperature is greater than 200°F. Step 3 requires the operator to ensure adequate shutdown margin.~~

Why is it necessary to re-verify shutdown margin at this point in the procedure?

- A. The RCS temperature change during cooldown will cause significant boron concentration changes due to PZR outsurge.
- B. Charging to maintain PZR level during cooldown will cause significant boron concentration changes.
- C. The secondary fluid in the ruptured SG will cause significant boron concentration changes, dilution of the RCS.
- D. The auxiliary spray will cause significant boron concentration changes.

Ref: WB bank, VG 19031

- a. incorrect - cooldown does not effect the boron concentration
- b. incorrect - charging should be set for the desired boron concentration
- c. correct - this guidance results in the S/G backfeeding into the RCS with the nonborated feedwater
- d. incorrect - spray should be causing increased boron concentration which will increase the shutdown margin

QUESTIONS REPORT
for VOGTLEFINDRFT1028

13. 006K1.07 001

Given the following sequence of events conditions:

- The plant is operating at 100% power.
- ~~Inadvertent Safety Injection occurred due to an instrument -~~
- ~~----- Maintenance technician working in the instrument racks who -~~
- ~~----- accidentally shorted a circuit board.~~
- Reactor tripped due to the SI signal
- Controlling #1 SG level transmitter that controls MDAFW pump LCV failed
- ~~low. the MFRV fails closed low after the trip~~
- #4 SG PG ARV opened momentarily after the reactor trip and developed a large packing leak.

Which ONE of the following would cause the INITIAL initial main feedwater isolation during this transient?

- A. The #1 SG level reached 86%.
- B. The safety injection actuation signal.
- C. Tavg dropping to 564°F following the reactor trip.
- D. ~~When the south valve vault level had risen to 4 inches due to the PORV packing leak. When #4 SG level reached 38%.~~

Ref: LP-28103

- a. Incorrect - level may reach 86% but FWI would already have been actuated by the SI.
- b. Correct - SI causes immediate FWI.
- c. Incorrect - would normally actuate FWI following a reactor trip however the SI initiated the FWI immediately.
- d. Incorrect - PORV leak would cause increase in level in the vault room however FWI would have already been actuated by the SI.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

14. 008AK1.01 001

Given the following:

- Unit 1 is stable at 100% power
- A pressurizer safety valve opens and fails to reseal, remaining 25% open and the Unit trips
- RCS pressure stabilizes at 1600 psig SI actuates
- PRT pressure gradually increases from 5 psig to 100 psig

Which of the following indications would the operator expect to see as a result of this event in the next 30 minutes?

- A. Safety tailpipe temperature would increase to greater than 600 F and then slowly decrease.
- B. Safety tailpipe temperature would increase to greater than 600 F and then slowly increase.
- C. ~~Safety tailpipe temperature would increase to between 220 and 340 F and then slowly decrease and stabilize.~~

Safety tailpipe temperature would increase to approximately 230 F and then slowly decrease to 212 F as PRT pressure gradually increases.

- D. ~~Safety tailpipe temperature would increase to between 220 and 340 F and then slowly increase and stabilize.~~

Safety tailpipe temperature would increase to approximately 230 F and then slowly increase to 330 F as PRT pressure gradually increases.

Ref- Farley 2000, validated for VG, LO-LP-16301, Pzr and PRT

- a. incorrect - the temperature is correct for pressures of 2240
- b. incorrect - the temperature is correct for pressures of 2240
- c. correct - since it relieves to the PRT, the pressure will increase until the rupture disc relieves (100 psig) and then the pressure (and temperature) will decrease and eventually stabilize
- d. incorrect - will not continue to increase once the PRT rupture disc relieves.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

15. 008K1.02R 001

Which ONE of the following correctly describes the uses of ACCW in the containment building.

- A. RCP motor coolers, Seal Water HtxX and RCP thermal barriers.
- B. RCP motor coolers, RCP thermal barriers and CVCS Letdown Regen HtxX.
- C. RCP motor coolers, RCP thermal barriers and CVCS Normal Letdown HX
Non-Regen Htx.
- D. RCP motor coolers, RCP thermal barriers and CVCS Excess Letdown HXtx.

Ref: WB bank, verified VG LP-04101-19-C

Distractor analysis:

- a. incorrect - seal wtr hx not in containment
- b. incorrect - regen hx not an ACCW load
- c. Non-regenerative hx not ACCW load
- d. correct

QUESTIONS REPORT
for VOGTLEFINDRFT1028

16. 009EA2.39R 001

Given the following conditions:

- Small break LOCA in progress
- RCS pressure is at 1100 psig
- No SI pumps
- No Charging pumps

Which one of the following explains why RCPs are NOT tripped under these conditions?

~~Which ONE of the following explains why it is preferable to leave the RCP's running during a small break LOCA if the RCS pressure RCP trip criteria on the foldout page are met but there is SI flow?~~

- ~~A. To provide heat removal through the break and the S/G's.~~
- B. To maintain two phase mixture level above the break longer.
- C. To limit single phase inventory loss out of the break.
- D. To prevent boron stratification in the core.

Ref: DC Cook exam bank, VG LP-37111-15-C, pg 9

A is correct because the pumps will pump two phase (or steam) flow and cool by reflux in S/G's
B is incorrect because the two phase mixture will continue to exit the vessel.
C is incorrect same as B.
D is incorrect because there will be boron stratification in the core due to severe inventory depletion.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

17. 010K3.01 001

Given the following:

- The Pressurizer Master Pressure Controller fails to a constant output equivalent to ~~2230~~ 2219 psig.
- Pressurizer pressure is ~~2230~~ 2270 psig and rising.
- The variable heaters are energized.
- The spray valves are closed.

Which ONE of the following describes the response of the pressure control system if the operator takes no further action?

- A. Pressure will rise until the spray valves open to control pressure.
- B. Pressure will rise until PORV 456 opens to control pressure.
- C. Pressure will rise until PORV 455 opens to control pressure.
- D. Pressure will cycle on the variable heaters at a higher setpoint.

Ref: WB bank, VG LP-16303-19-C, LP-16301

Distractor analysis:

A is incorrect because PORV continues to receive a constant input and therefore remains closed.

B is correct because PORV 456 receives input from PT 456 which is seeing the actual pressure rise.

C is incorrect because the spray valves remain closed because their input is not changing from the master controller and is spray open setpoint.

D is incorrect because the input to the variable heaters is constant at a value less than their shutoff point.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

18. 011A3.03 001

Given the following:

- Unit is at 50% power.
- All automatic control systems are in their normal lineup.
- Pressurizer program level sticks at constant output for 50% power.
- ~~Controlling pressurizer program level fails to an output corresponding to 50% load.~~
- Assume no operator action is taken.

Which of the following describes the effect on charging flow and PZR level as the plant load is increased to 100%?

- A. Charging flow increases and actual PZR level remains constant.
Actual PZR level remains constant and charging flow increases.
- B. Charging flow decreases and actual PZR level decreases.
Actual PZR level decreases and charging flow decreases.
- C. ~~Charging flow decreases and actual PZR level increases.~~
Actual PZR level increases and charging flow decreases.
- D. Charging flow remains constant and actual PZR level increases.
Actual PZR level increases and charging flow remains constant.

Reference: WB bank, VG LO-LP-16302

Distractor analysis:

A is incorrect because T_{av} increases as power increases which will make PZR actual level increase.

B is incorrect, same reason as A

C is correct because as PZR level rises with coolant expansion due to T_{av} increase, with LT-459 output at 50%, an error is generated that PZR level is too high, causing charging flow to decrease.

D is incorrect, same as A for PZR level, charging flow increases, see C.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

19. 011EK2.02 001

Given the following conditions:

- A large break LOCA occurred
- ~~- Operators have just completed swa~~per~~over to Containment Sump~~
- Operators have just completed 19013-C, "Transfer to Cold Leg Recirculation"
- A loss of offsite power occurs

Which ONE of the following describes the actions required for this condition?

- A. Pull to lock SIPs and CCPs until the RHR pumps are started by the blackout sequencer after the diesel generators start and load the 4160 vital buses.
- B. ✓ ~~Ensure the RHR pumps are manually started after the diesel generators start and load the 4160 vital buses, then manually start SIPs.~~
Manually start the RHR pumps after the diesel generators start and load the 4160 vital buses, then manually start SIPs.
- C. Ensure both RHR pumps are started by the blackout sequencer after the diesel generators start and load, then manually start CCPs and SIPs as needed
- D. Ensure all ECCS pumps are started by the blackout sequencer when the diesel generators reenergize 4160 vital buses.

WB bank - modified distractors Validated in 19013-C caution statement

- a. incorrect - RHR pumps manually started
- b. correct
- c. incorrect - RHR pumps are manually started
- d. incorrect - only RHR and SIPs are addressed in 19013 caution.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

20. 012K6.10 001

Given the following conditions

- Unit shutdown in progress
- Power at 9%
- Permissive "P-7 LO POWER TRIPS BLOCKED" illuminates

Unit 1 is at 100% power

~~Permissive 70-D, P-7 LO POWER TRIPS BLOCKED~~ illuminates

Which ONE of the following describes the effects on RPS?

- A. The reactor will not trip on Pressurizer High Pressure.
- B. ~~The reactor will not trip on Pressurizer Low Water Level.~~
The reactor will not trip on high positive rate
- C. The reactor will not trip on Pressurizer Low Pressure.
- D. ~~The reactor will not trip on Loss of Flow in one loop.~~
The reactor will not trip on low steam generator level

Ref: VG LO-LP-28103 NEED WINDOW INFORMATION

Distractor analysis:

- A is incorrect because P-7 is not an input to the trip.
- B is incorrect because PZR Lo Water Level is not a trip.
- C is correct, because P-7 blocks it when P-7 is off (light on).
- D is incorrect because P-8 is unaffected and trips Rx on 1/4 logic.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

21. 013K2.01 001

Given the following:

- SIP 1A & 1B are in Auto
- Control power is lost to SIP 1A
- Safety injection (SI) occurs

- ~~1A-A and 1B-B Si pump breakers are "racked in"~~
- ~~A fuse blows in the NORMAL DC Trip Circuit for the 1A-A SI pump~~
- ~~A safety injection (SI) acutation occurs~~

Which of the following describes the response of the SI pumps to the Safety Injection SI signal?

- A. ~~1B-SI pump will start, but 1A-SI pump will not auto start until the control power supply is transferred.~~
SIP 1B will start, but SIP 1A will not auto or manually start until the control power supply is restored.
- B. ~~1B-SI pump will start, but 1A-SI pump will not auto start and must be started from MCR handswitch.~~
SIP 1B will start, but SIP 1A will not auto start and must be started from MCR handswitch.
- C. ~~Both SI pumps will auto start, but the 1A-SI pump can not be stopped from the MCR.~~
Both SI pumps will auto start, but the SIP 1A can not be stopped from the MCR.
- D. ~~Both SI pumps will auto start, but the 1A-SI pump can not be stopped from the mechanically at the breaker.~~
Both SI pumps will auto start, but the SIP 1A can not be stopped except mechanically at the breaker.

Watts Bar exam bank - NEED CONFIRMATION ON BREAKER LOGIC

QUESTIONS REPORT
for VOGTLEFINDRFT1028

22. 013K6.01R 001

An upscale failure of which one of the following will result in an automatic actuation of ESFAS equipment?

- A. Containment pressure instrument, PT-936.
- B. Control Room Area monitor, RE-0001.
- C. Pressurizer Pressure instrument, PT-454 455.
- D. Control Room Air Intake monitor, RE-12116

Ref: Lo-LP-32101

QUESTIONS REPORT
for VOGTLEFINDRFT1028

23. 014A4.01 001

Given the following:

- Operators are preparing for conducting a reactor startup
- ~~Both shutdown banks were withdrawn~~
- All control banks are still fully inserted being withdrawn in 50 step increments
- ~~The rod control startup reset switch is manipulated in error~~
- The SS notices that Control Bank A is at 200 steps and Control Bank B is at 0 steps

~~Which of the following describes the required actions to proceed with the startup?~~
Which of the following explains these indications?

- A. ~~Restore the P/A converter to 230 steps.~~
Rod bank selector switch is in the manual position.
- B. ✓ ~~Restore the shutdown group step counters to 230 steps.~~
Rod bank selector switch is in the Control Bank A position.
- C. ~~Restore the bank overlap unit to 230 steps.~~
The rod control startup switch is stuck in the reset position.
- D. ~~Reinsert all shutdown banks.~~
DRPI Data B failure has occurred.

INPO bank - validated for VG in LO-LP-27102-12

- a. incorrect - P/A converter does not need to be reset because the control banks are fully inserted
- b. correct - all group step counters are reset to 0 by the reset switch
- c. incorrect - bank overlap counters are at 0 because the control rods are fully inserted
- d. the shutdown group counters can be manually reset - reinsertion is not required

QUESTIONS REPORT
for VOGTLEFINDRFT1028

24. 015G2.2.12R 001

Which one of the following describes when the HFASA (hot functional at Shutdown Alarm) is applicable in Mode 6?

~~HFASA must be operational if the borated water source isolation valve(s) are opened....~~

NIS channel check surveillance is required every 12 hours by technical specifications. The last channel check was completed at 0615 on 10/31/02. Outage activities are hindering completion of this surveillance.

The NIS channel would be declared INOPERABLE if the next channel check is not completed by:

- A. ~~for any reason other than performance of Source Range N31 or Intermediate Range N35 surveillances performed at the same time.~~
2115 on 10/31/02
- B. ~~for any reason other than performance of individual Source Range N31 or Intermediate Range N35 surveillances.~~
2215 on 10/31/02
- C. ~~for any reason other than the performance of TS 3.9.2 surveillances.~~
0615 on 11/01/02
- D. ~~for any reason.~~
1215 on 11/01/02

REF: Procedure 14423-1

The purpose of this procedure is to verify the operability of the Nuclear Instrumentation System (NIS) Source Range and/or Intermediate Range Instrumentation for Channels N31 and/or N35.

In Mode 6, the HFASA must be operational if the unborated water source isolation valve(s) are opened for any reason. Ensure the valves are secured per TS 3.9.2 prior to initiating this surveillance.

Section 5.1 is also performed in Mode 3, 4, 5 and 6 to verify Source Range Instrument operability and the HFASA function if not performed in the last 92 days. Performance of Sections 5.2 and 5.3 will satisfy the Source Range Instrument operability requirements if performed within the last 92 days. (TS SR 3.3.1.7)

At least once every 92 days for HFASA when in Modes 3, 4 and 5.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

25. 015K4.06 001

While operating at 90% power, ~~one~~ power range channel N41 of nuclear instrumentation ~~Power Range High Flux Reactor Trip~~ is placed in bypass (BTI) for a surveillance.

~~What is the coincidence for this reactor trip and how long can this reactor trip remain in bypass?~~

Which one of the following conditions would result in a reactor trip?

- A. ~~2 out of 4 and can be bypassed for no more than 12 hours.~~
Any of the other 3 PR NIS channels fail high
- B. ~~1 out of 3 and can be bypassed for no more than 12 hours.~~
Any 2 of the 4 channels reading 105%
- C. ~~2 out of 4 and can be bypassed for no more than 72 hours.~~
PR channels N41 and N44 lose control power
- D. ~~1 out of 3 and can be bypassed for no more than 72 hours.~~
Operator places PR channel N42 in test

INPO bank - validated for Vogtle by LO-LP-17301-24, TS 3.3.1

- a. incorrect - coincidence changes to 1 out of three when in bypass
- b. correct - coincidence changes to 1 out of 3 and in bypass for 12 hrs for surveillance
- c. incorrect - wrong logic and bypass limited to 4 hours
- d. incorrect - bypass status limited to 12 hours for surveillance

QUESTIONS REPORT
for VOGTLEFINDRFT1028

26. 015K5.04 001

Manual calibration of the NIS is being performed in accordance with procedure 14030-2, "Nuclear Instrument Calorimetric Calibration." Feedwater average temperature is incorrectly calculated to a value 17 degrees less than actual. For these conditions, which of the following is correct?

Calculated reactor thermal power will be.....

- A. lower than actual and a gain adjustment of the NI channels using the calculated value would be non-conservative such that the indicated power is farther from the setpoints.
- B. higher than actual and a gain adjustment of the NI channels using the calculated value would be non-conservative such that the indicated power is farther from the setpoints.
- C. lower than actual and a gain adjustment of the NI channels using the calculated value would be non-conservative such that the indicated power is closer ~~from~~ to the setpoints.
- D. ~~higher~~ higher than actual and a gain adjustment of the NI channels using the calculated value would be conservative such that the indicated power is closer ~~from~~ to the setpoints.

ref: 14030-2, LP-LO-17301

- a. incorrect the calculated is higher than actual and conservative
- b. incorrect the calculated is higher but conservative
- c. incorrect the calculated is higher but conservative.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

27. 016K3.02 001

With Pressurizer Level Control Selector Switch LS-459D selected to 459/460, the following SEQUENTIAL plant events occur due to a failure without operator action.

- Charging flow increases to maximum
- Pressurizer level begins to rise
- Letdown isolates and heaters turn off
- Pressurizer level eventually rises to the high level reactor trip

Which ONE of the following failures occurred?

- A. Level channel LT-459 failed high.
- B. Level channel LT-460 failed high.
- C. Level channel LT-459 failed low.
- D. Level channel LT-460 failed low.

Ref: Vogtle LP-16302, proc 17011, 18001

Distractor analysis:

A is incorrect because charging "see" the level as high, throttles to minimum. Actual level decreases and channel LT 459 shut letdown valve and isolates heaters. With no letdown, even an minimum charging, actual level rises to the high level trip setpoint.

B is incorrect because LT-460 can't be selected for input to master level controller

C is correct because failing low makes charging increase and level would initially go up rapidly due to letdown also isolating and cause a trip the Rx

D is incorrect same as B

QUESTIONS REPORT
for VOGTLEFINDRFT1028

28. 017AK1.02 001

IF RCP #1 trips when the plant is at 13 30% power during a load increase to 100%, which one of the following statements is correct?

- A. A reactor trip will occur and operators should implement 19000-C.
- B. ✓ The affected pressurizer spray valve should be shut to prevent spray flow from bypassing the pressurizer.
- C. The affected S/G blowdown rate may be isolated to facilitate level control.
- D. ~~An immediate plant shut down is required per technical specification 3.4.1.1.~~

Reactor trip breakers should be immediately opened to comply with the action statement for LCO 3.4.4, "RCS Loops-Modes 1 and 2".

Ref: VG bank

QUESTIONS REPORT
for VOGTLEFINDRFT1028

29. 017K3.01 001

Given the following conditions:

- Reactor trip
- All RCPs are tripped
- All core-exit thermocouples are inoperable

19001-C step 9 has the operators verify that natural circulation flow is occurring. What indication(s) would the operator use?

~~If all core-exit thermocouples are inoperable during an event in which the RCPs were tripped, what indication(s) may be used to verify that natural circulation cooling is occurring?~~

- A. ~~RCS hot leg temperatures only~~
RCS loop delta T's stable or lowering
- B. ~~RCS cold leg temperatures only~~
RCS loop delta T's increasing to full power values
- C. ~~Both RCS cold leg and hot leg temperatures-~~
Both RCS hot leg temperature stable or lowering and RCS cold leg temperature at saturation for SG pressure
- D. There are no adequate indications for RCS temperature is available in this condition.

Bank (NA'02) - validated for Vogtle in EOP 19001-C

- a. incorrect - insufficient information
- b. incorrect - insufficient information
- c. correct - the difference in temperatures will be adequate to determine if natural circulation has been established
- d. incorrect, using both hot and cold legs is adequate

QUESTIONS REPORT
for VOGTLEFINDRFT1028

30. 022AG2.1.32 001

During water solid operations with letdown from RHR, procedure 13011-1 requires that 1-HV-0128, Letdown From RHR, be full open.

Which ONE of the following describes the basis for this precaution?

- A. To ensure maximum letdown flow rate for purification.
- B. To ensure VCT level can be maintained under all charging flow conditions.
- C. To ensure 1-PIC-0131, Low Pressure Letdown Controller can control pressure transients.
- D. To ensure RCS to RHR Supply Line Relief Valves PSV-8708B and PSV-8708A isn't challenged.

VG 13011-1, pg 21 caution

Distractor analysis:

Answer A is incorrect because charging flow controls letdown flow.

Answer B is incorrect because balancing charging and letdown controls VCT level.

Answer C is correct because with hv-0128 less than full open, it can in effect limit flow and prevent pressure reduction when pic-0131 fully opens in response to a high pressure transient.

Answer D is incorrect because the suction relief can be challenged by other factors (eg. pump starts) even with hv-0131 full open.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

31. 024AK2.01 001

~~The unit was at 100% power when a reactor trip occurred. While responding to the event, the RO identifies 2 control rods failed to insert. An emergency boration was initiated, using both boric acid transfer pumps, aligned through emergency borate valve 1 HV-8104. However, HV-8104 failed to operate correctly and 1 FI-0183A indicated an emergency boration flow of 23 gpm, although charging flow was indicating 42 gpm.~~

Given the following conditions:

- 2 rods stick out on a reactor trip
- The RO initiates emergency boration using HV-8104
- Boric flow on FI-0183A is 23 gpm and charging flow is 42 gpm

Which of the following is the correct response to this condition?

The RO can correct this condition by.....

- A. Placing charging flow controller FIC-0121 in manual and increasing the set point to >42 gpm, ensuring charging flow increases and FI-0183A indicates >30 gpm.
- B. ~~Realign the emergency boration flow path by closing HV-8104, opening FV-110A, closing FV-110B, and ensuring~~ FI-0183A indicates >30 gpm.
- C. realign the emergency flow path by closing HV-8104, opening HV-112D and HV-112E, then closing HV-112B and HV112C, ensuring charging flow is >87.5 gpm.
- D. ~~realign the emergency flow path by closing HV-8104, opening HV-112B and HV-112C, then closing HV-112D and HV112E, ensuring charging flow is >87.5 gpm.~~

Ref: LO-LP-09402, 13009-1, 17010-1 window D04

- a. incorrect because the intial conditions indicate HV-1804 is limiting the boration flow, charging flow is adequate.
- b. incorrect because FV-110B also needs to be open for a complete flowpath
- c. correct, correct valves in the correct order
- d. incorrect because the order will isolate the suction to the charging pumps causing cavitation.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

32. 025AK2.02 001

Given the following:

- RCS temperature is 118 F
- Reactor Vessel head is removed
- Reactor Upper Internals are installed in the reactor vessel
- Refueling Level is ~~186 ft, 6 inches~~ 188 ft, 3 inches.
- RCS draining is in process at 10 gpm
- The RO increases RHR pump A flow from 3000 to 3800 gpm
- ~~RHR pump A is running with indicated flow of 3800 gpm~~
- RHR pump A begins to exhibit indications of cavitation

The cavitation and resulting loss of RHR is occurring due to

- A. draining with the upper internals in place, which reduced the RHR suction pressure.
- B. steam binding of the RHR pump, caused by low recirculation flow.
- C. air entrapment at the RHR suction inlet, caused by the high flow conditions.
- D. draining with the upper internals in place, which reduced the RHR discharge pressure.

Ref. Bank - VG verification LO-LP-12101-39, 12008, Data Book, Tab 8

- a. incorrect, upper internal installation will not effect RHR suction pressure.
- b. incorrect, recirculation flow valve shuts at 14000gpm
- c. correct, air entrapment occurs at higher flow rates, normal midloop flow rate is 3000 - 3500
- d. incorrect, upper internals installed will not effect RHR discharge pressure to this extent

QUESTIONS REPORT
for VOGTLEFINDRFT1028

33. 026A1.01 001

Given the following conditions on Unit 2:

- Following a LOCA, containment pressure is rising.
- Containment pressure has reached 20 psig on three channels and 22 psig on one channel.

Which of the following is a complete list of the minimum required automatic/manual manipulations required to start containment spray?

Which one of the following will result in containment spray actuation?

- A. ~~When one (1) more containment pressure channel transmitter indicates containment pressure of 22 psig, or when one (1) manual handswitch is actuated on the QMCB.~~

When 1 more containment pressure channel indicates 22 psig, or when 1 manual handswitch is actuated.

- B. ✓ ~~When one (1) more containment pressure channel transmitter indicates containment pressure of 22 psig, or when two (2) manual handswitch is actuated on the QMCB.~~

When 1 more containment pressure channel indicates 22 psig, or when 2 manual handswitches are actuated.

- C. ~~When two (2) more containment pressure channel transmitter indicates containment pressure of 22 psig, or when one (1) manual handswitch is actuated on the QMCB.~~

When 2 more containment pressure channels indicate 22 psig, or when 1 manual handswitch is actuated.

- D. ~~When two (2) more containment pressure channel transmitter indicates containment pressure of 22 psig, or when two (2) manual handswitch is actuated on the QMCB.~~

When 2 more containment pressure channels indicate 22 psig, or when 2 manual handswitches are actuated.

Ref: VG LO-LP-15101

all actuation signals for Containment spray - when 2/4 containment pressure transmitters indicate cont press of 21.5 psig or when 2/2 manual switches are actuated on the QMCB

QUESTIONS REPORT
for VOGTLEFINDRFT1028

34. 026AK3.01 001

Given the following plant conditions:

- Unit 2 is in Mode 3 for Maintenance
- ALB 04, window A2, "ACCW LO HDR PRESS" is alarming
- ALB 07, window D3, "LTDN HX OUT HI TEMP" is alarming

Which one of the following events would cause both of these alarms?

- A. Letdown Hx Tube Rupture
- B. ✓ ACCW Supply Header Rupture
- C. Loss of Seal Injection
- D. Loss of Charging Flow

Ref: VG exam 2000 -

- a. incorrect - alarms indicate ACCW not Letdown HX problem
- b. correct
- c. incorrect - loss of seal injection will not cause either of these
- d. incorrect loss of charging would cause the hi temp alarm but not the letdown alarm

Reference:

QUESTIONS REPORT
for VOGTLEFINDRFT1028

35. 027AK3.03 001

Given the following conditions:

- Unit 1 is at 100% power.
- ~~Annunciator 89A, PZR PORV LINE TEMP HI, illuminates.~~
- ALB12 E01 "PRZR RELIEF DISCH HI TEMP" illuminates
- Both PORV's indicate closed.
- PORV-455 tailpipe temperature is reading 220 degrees F.
- PORV-456 tailpipe temperature is reading 187 degrees F.
- Pressurizer pressure is lowering normal.

~~In accordance with ARP-17012-1 which ONE of the following is the correct action and reason?~~

Which one of the following is the correct action?

- A. Close the associated block valve for PORV-4565 because a vapor-space leak causes PZR level to increase.
- B. Close both block valves because a vapor-space leak causes PZR level to increase.
- C. Close the associated block valve for PORV-455 to stop leakage to the PRT ~~because the PRT will rupture.~~
- D. Close both block valves to stop leakage to the PRT ~~because the PRT will rupture.~~

Ref: NEED VOGTLE EQUIVALENT INDICATION AND RESPONSE

Disaster analysis:

Answer A is incorrect because PZR level rise is only associated with large leaks that affect PZR pressure.

Answer B is incorrect because the _____ requires the leaking PORV to be determined by alternately closing the block valve and AOI requires closing only the associated block valve.

Answer C is correct because it follows the ARI guidance and small leaks can raise PRT pressure to the rupture disc setpoint.

Answer D is incorrect same as B and A.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

36. 029EA1.13 001

Which ONE of the following is the NEXT action the operator is required to take if the main turbine does NOT trip automatically and CANNOT be manually tripped from the Control Room, MCR: per FR-S.1 per 19211-C "RESPONSE TO NUCLEAR POWER GENERATION/ATWT"?

- A. Place both EHC pumps control switches in PTL.
- B. Trip the turbine locally at the front standard.
- C. Manually Runback the turbine.
- D. Shut the MSIV's.

WB exam bank, validated VG procedure 19211-C, step 2 RNO

Distractor analysis:

- A is incorrect because it is a followup action later in the procedure, step 9 RNO.
- B is incorrect because it is a local action if MCR actions fail, step 9 RNO.
- C is correct per RNO step 2
- D is also in RNO step 2, but only occurs if runback doesn't work.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

37. 029K1.02 001

Which ONE of the following describes the sample path of 1RE-2565 RE-002, Cntmt Low Range, and effect of exceeding the HIGH alarm setpoint?

RE-2565 RE-90-130 samples the _____ and initiates a Containment _____ upon high alarm.

- A. Cntmt Purge Exhaust discharge ; Purge trip
- B. Cntmt Purge Exhaust suction; Vent Isolation
- C. Cntmt Purge Exhaust discharge Supply ; Vent Isolation
- D. Cntmt Purge Exhaust suction Supply ; Purge trip

Ref: Vogtle Lesson P Lan lo-lp-32101, drawing 1x4db213-1

- A. incorrect, sample on suction pipe
- B. correct
- c. incorrect sample suction pipe and causes CVI
- d. incorrect - causes CVI

QUESTIONS REPORT
for VOGTLEFINDRFT1028

38. 032AK1.01 001

Given the following conditions:

- Reactor Startup in progress
- ~~— Shutdown Banks withdrawn~~
- ~~— Control Bank withdrawal is imminent~~
- SRM N-32 indicates approximately 1000 cps
- SRM N-31 is in bypass

Which ONE of the following will occur if the control power fuse for SRM N-31 blows?

- A. Lose indication for SRM N-31 on Main Control Board and NIS cabinets.
- B. Both SRM drawers deenergizes and the "non-operate" alarm acuates.
- C. Reactor will trip.
- D. Rod withdrawal is blocked.

Modified from WB bank - rewrote question stem and changed distractor. Validated for Vogtle in LO-LP-17103-00-C

- a. incorrect-not all indicatipon lost since instrument power is available
- b. incorrect-SRM N132 unaffected by loss of control power to SRM N131
- c. correct- loss of control power deenergizes bistables and initiates trip signal (1/2 logic)
- d. incorrect - Source range low does not initiate rod stop

QUESTIONS REPORT
for VOGTLEFINDRFT1028

39. 033G.2.4.18R 001

~~During a refueling outage in which the entire core has been discharged into the fuel pool a maintenance error disables both trains of spent fuel pool cooling. The fuel pool temperature is rising slowly. You enter Abnormal Operating Procedures 18030-C. After 20 minutes the temperature is 125-135 degrees F and increasing with one of the trains has been restored. Which ONE of the following is the appropriate action?~~

Given the following conditions:

- Unit 1 core has been completely off loaded to the SFP
- Both trains of SFPC are in service
- SFP temperature steady at 115 degrees F
- A total loss of SFPC occurs
- The crew implemented AOP 18030-C, "Loss of SPF Cooling"
- 20 minutes later train B SFPC has been restored
- SFP temperature is 135 degrees F and increasing

Which ONE of the following is the appropriate action?

- ~~A. A Remain in Abnormal Operating Procedures 18030-C because one train of spent fuel pool cooling may not be able to maintain the temperature below 130 F. Exit Abnormal Operating Procedure 18030-C after placing the second train of SFPC in service and SFP temperature returns to normal.~~
- B. Exit Abnormal Operating Procedure 18030-C and return to the procedure step in effect.
- ~~C. Remain in Abnormal Operating Procedure 18030-C until the fuel pool temperature is below 110 F, then return to the procedure step in effect.~~
- Remain in Abnormal Operating Procedure 18030-C until CCW flow to the SFP Hx is increased, then return to the procedure step in effect.
- D. Remain in Abnormal Operating Procedure 18030-C, until the cask loading gates are closed, then return to the procedure step in effect.

Ref: 18030-C 5 of 12

NOTE: During refueling outages after the entire irradiated core has been discharged to the SFP, one train of SFP cooling may not be able to maintain SFP water temperature less than 130°F. Open cask loading pit gates and maintain them open to allow circulation between pools.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

40. 034K4.01 001

Which one of the following describes a feature of the Refueling Machine designed to prevent the accidental release of a fuel assembly?

- A. The Gripper is mechanically engaged and disengaged by a remote operating handle on the bridge and requires no power or air to operate.
- B. The gripper requires air to disengage, however, a mechanical latch prevents gripper release under load even if air is supplied.
- C. The gripper will disengages upon loss of air, however, a mechanical latch prevents gripper release under load even if air is removed.
- D. When the gripper is engaged, the fuel handlers operators mechanically lock gripper in place with extension shaft which must be unlocked before the gripper can release.

Ref: lesson LO-LP-25101-19-C, STILL NEED DETAIL INFO ON THE MECHANICS OF THE GRIPPER

- a. incorrect - air required to disengage
- b. correct - mechanical latch on gripper works under load
- c. incorrect - engages on loss of air
- d. incorrect - no operator action required for gripper mechanical latch to operate

QUESTIONS REPORT
for VOGTLEFINDRFT1028

41. 035K1.09 001

Given the following plant conditions:

- The reactor is operating at 50% power.
- Rod control is in MANUAL.
- ~~Turbine control is in AUTO.~~
- #3 S/G ARV ~~PORV~~ fails OPEN.

Which ONE of the following describes the resulting steady-state conditions?
(Assume no reactor trip, no operator action and turbine power remains constant).

- A. Final Tav_g < initial Tav_g and final power > initial power.
- B. Final Tav_g < initial Tav_g and final power = initial power.
- C. Final Tav_g = initial Tav_g and final power > initial power.
- D. Final Tav_g = initial Tav_g and final power = initial power.

Reference: general theory

Distractor analysis:

A is correct steam loss through PORV causes Tav decrease which adds positive reactivity which causes power to rise. Tav will remain less than initial Tav because some of the reactivity is used to overcome power defect associated with power rise.

B, C, and D are incorrect because they conflict with the above correct answer.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

42. 037AK3.07 001

Given the following:

- A SG #3 tube leak of approximately has a 30 gpm leak ~~has been identified on SG #3.~~
- ~~The operating crew has entered AOP 18009-C, Steam Generator Tube Leak, is being implemented~~
- ~~Operators have completed Step A9 of the AOP and have isolated feed flow to SG #3.~~
- ~~Step A12 requires that the level in the leaking S/G (S/G #3) is maintained greater than 10%.~~

Which ONE of the following is a bases for ensuring the affected SG level greater than 10%?

- A. To ensure that the pressure and temperature limits of the SG shell are maintained.
- B. ✓ To prevent the RCS cooldown from causing depressurization of the affected SG.
- C. To prevent SG overflow.
- D. To prevent thermal shock to the tubes during RCS cooldown.

Ref: VG AOP 18009-C

A is incorrect in that these limits apply to CSD conditions

B is correct because the insulating layer of water above the tubesheet helps trap pressure in the S/G and minimize tube d/p during cooldown.

C is incorrect because level control is not an issue.

D is incorrect because there is no sudden introduction of cold water after the level is attained.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

43. 039A1.03 001

~~The crew is performing 13615-1, Condensate and Feedwater section 4.4.6, Main Feedwater System Warmup Using 5A/5B Feedwater Heaters. The crew completed the following sequence:~~

~~4.4.6.2 — Return FW heater 5A High Level Controller 1-LCH-4286 to AUTO—~~

- ~~a. ESTABLISH communications with personnel at the PHPF~~
- ~~b. PLACE Heater 5A Normal Level Controller 1-LCH-4282 in AUTO~~
- ~~c. ENSURE heater 5A High Level Controller, 1-LCH-4286, is in manual~~
- ~~d. SLOWLY RAISE the 1-LCH-4286 output to close 1-LV-4286~~

~~You note that 1-LCH-4286 is not responding and RCS temperature is decreasing slightly. Which one of the following could have caused this?~~

Unit 2 is in mode 3 at NOPT for a post refueling start up
MSIVs are shut and the main steamlines need to be warmed
SG ARVs are in manual controlling loop Taves at 557 F

Which of the following correctly describes the method used and the indications observed while warming the main steamlines?

- A. ~~inadequate level in the 5A heater~~
Slow open MSIVs one at a time. RCS pressure will remain constant while temperature decreases.
- B. ~~high level in the 5A heater~~
Open steam dumps to 1% to 2% after placing both bypass switches in the bypass position. RCS temperature will decrease and RCS pressure will decrease.
- C. ~~feed flow was not in service prior to establishing feedwater heating~~
Open MSIV bypass valve(s). RCS temperature and pressure will both decrease.
- D. ~~the unit is still in Long Cycle recirculation~~
Open MSIV bypass valve(s) after placing both steam dump bypass switches in the bypass position. RCS temperature and pressure will both decrease.

REF: 13615-1, Condensate and Feedwater sect 4.4.6

Note: Due to inadequate level in the heater 1-LV-4282 may not respond until heating steam has been initiated

QUESTIONS REPORT
for VOGTLEFINDRFT1028

44. 040AG2.4.4 001

Given the following plant conditions:

- Unit was at 100% power
- A main steam line break occurred in the Turbine Building
- Operators were unable to close the MSIVs and transitioned to ECA-2.1, "Uncontrolled Depressurization of All Steam Generators."
- ~~SI termination steps are in progress~~
- Loop 3 MSIV is closed locally
- The CRO observes the # 3 S/G pressure rising slowly

Which of the following actions should be performed?

- A. Immediately transition to E-2, "Faulted S/G Isolation"
- B. Immediately transition to ES-1.1, "SI Termination"
- C. Remain in ECA-2.1 until RHR is in service
- D. Remain in ECA-2.1 until SI is terminated

Ref: WB bank , verified for VG ECA-2.1, ES-1.1, E-2

- A. incorrect-wrong because do not leave ECA-2.1 until SI terminated
- B. incorrect - wrong because do not leave ECA-2.1 until SI terminated
- C. incorrect - wrong because stay in procedure until SI terminated not RHR in service
- D. correct - complete SI termination prior to transitioning to E-2

QUESTIONS REPORT
for VOGTLEFINDRFT1028

45. 041K3.04 001

Given the following conditions:

- Unit at 100-75% power, EOL conditions.
- ~~Turbine operating in manual~~
- A steam dump valve inadvertently comes full open.
- All other control systems normal.

Which ONE of the following correctly describes the plant conditions, when plant stabilizes, and assuming NO operator action?

- A. Megawatts electrical same as initial; reactor power increases.
- B. Megawatts electrical same as initial; reactor power dereases.
- C. Megawatts electrical decreases; reactor power increases.
- D. Megawatts electrical decreases; reactor power decreases.

Ref: WB Exam Bank, modified for VG

QUESTIONS REPORT
for VOGTLEFINDRFT1028

46. 045A3.05 001

The following plant conditions exist:

- Unit 1 is at 90% power
- Main Turbine is in STANDBY to repair a failed speed sensor

Which ONE of the following correctly describes the status of the Turbine Control System?

- A. All overspeed protection has been defeated except for the Mechanical Trip and the Backup Overspeed Trip.
- B. Overspeed protection from the speed control circuits and PLU has been defeated. IV Fast Closure, Mechanical Trip, and Backup Overspeed Trip are still operable.
- C. The Power Load Unbalance circuit is still active and will allow fast closure of the Control Valves and the Intercept Valves if a sudden load rejection of more than 40% occurs.
- D. The Power Load Unbalance circuit is defeated and the Backup Overspeed Trip setpoint is reduced to 105%.

Ref: VG Exam Bank
VG Lesson Plan LO-LB-30303 Obj. 20

QUESTIONS REPORT
for VOGTLEFINDRFT1028

47. 051AA2.02R 001

Given the following:

- Condenser pressure rising; operators dropping turbine load in attempt to maintain vacuum.
- Condenser vacuum is decreasing, currently reading 25.20 inches Hg.

Which ONE of the following would be the FIRST to automatically occur or be procedurally required if condenser pressure continues to rise?

- A. Auto main turbine trip on low vacuum.
- B. Manual reactor trip.
- C. Loss of steam dump capability.
- D. Manual turbine trip.

Ref: WB Exam bank - VG ARP 17019-2, window B04

Distractor analysis:

A is incorrect because auto trip does not occur until vacuum >22.42 Hg

B is incorrect because the procedure turbine trip not required.

C is correct because are incapable when vacuum reaches 24.92 Hg

D is incorrect - not required at that vacuum (24.92)

QUESTIONS REPORT
for VOGTLEFINDRFT1028

48. 054EG2.4.48 001

Given the following:

- Unit 1 is at 100% power.
- ~~Annunciator ALB13-D01-STM GEN 1 HI/LO LVL DEVIATION alarm~~ is illuminated
- ~~The operator notices only S/G #1 level rising along with MFP speed.~~
- S/G #1 level rising
- Both MFPs speed are rising
- The other S/G levels are slightly below program .

Which ONE of the follow describes the (1) cause, (2) required action and (3) direct consequence of an operator failing to take action?

- A. (1) #1 S/G FRV is opening, (2) stabilize #1 S/G level at new level, (3) Turbine Runback Initiated
- B. (1) #1 S/G FRV is opening, (2) return #1 S/G level to program, (3) Feedwater Isolation initiated
- C. (1) MFP master controller failing high, (2) control MFP speed using manual, (3) Auto Turbine Trip initiated
- D. (1) MFP master controller failing high, (2) manually trip turbine, (3) Feedwater Isolation initiated

Ref: VG 18016-C, section D

Distractor analysis:

A is incorrect because the consequence is a P-14, Hi-Hi SG level which initiates a FW isolation.
B is correct because only one SG is rising, hence a FRV is the cause, action is from 18016-c for FRV failure and FW isolation occurs with no operator action at P-14.
C is incorrect because a problem with the MFP controller would affect all SG's the same.
D is incorrect same as C.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

49. 055EK3.02 001

Which ONE of the following is a purpose of depressurizing all intact SGs to 300 psig during the performance of 19100-C ECA-0.0, "Loss of All AC Power"?

- A. Reduces DP across SG U-tubes to minimize possibility of tube rupture.
- B. Reduces DP across RCP seals to minimize leakage and loss of RCS inventory.
- C. Maximizes Natural Circulation flow before Reflux cooling begins as the RCS becomes saturated.
- D. Maximizes Natural Circulation flow to allow reactor vessel head to cool since CRDM are unavailable.

The correct answer is B

- a. Incorrect - the most likely failure for this event is loss of inventory through failed RCP seals not SGTR.
- b. Correct - reduces potential for a seal LOCA by reducing the driving force.
- c. Incorrect - steaming is a method to increase natural circ and would occur, however minimizing inventory loss is a greater concern at this point.
- d. Incorrect - steaming is a method to increase natural circ and would occur, however minimizing inventory loss is the greater concern at this point.

References: ECA-0.0; ECA0000.03
K/A 055 EK3.02 [4.3/4.6]

QUESTIONS REPORT
for VOGTLEFINDRFT1028

50. 055K3.01 001

Given the following conditions:

- Reactor power is steady-state at 100%.
- Rod control is in automatic.
- ~~Condenser Vacuum Pumps 1A and 1B are running with 1C pump out of service for maintenance.~~
- Sealing steam pressure drops to 0 psig due to a malfunction

Which ONE of the following conditions will result if NO operator action is taken in response to this condition?

~~Which ONE of the following conditions could result if NO operator action is taken in response to a COND VACUUM PUMP 1B SEAL WTR PRESS LOW alarm?~~

- A. Rising megawatt output and rising steam seal header pressure.
- B. Rising megawatt output and rising condenser hotwell level.
- C. Dropping megawatt output and dropping condenser pressure ~~condensate temperature.~~
- D. Dropping megawatt output and rising condenser pressure ~~condensate temperature.~~

WB Lesson plan 3-OT-SYS1100, obj 4 NEED TO GET VOGTLE VALIDATION

Distractor analysis:

Degraded vacuum causes megawatt output to decrease due to reduce delta H. Therefore, A and B are incorrect.

Condenser is a saturated system, so higher Psat means higher Tsat. Therefore D is correct and C is incorrect.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

51. 056AK1.01R 001

Given the following plant conditions:

- Unit 1 has experienced a Loss of Offsite Power
- The operating crew is currently performing a cooldown, in accordance with 19002-C ES-0.2, Natural Circulation Cooldown
- Prior to initiating the cooldown, two CRDM fans trip

Which ONE of the following describes the maximum allowable cooldown rate?

- A. <100 °F in any one hour
- B. ✓ <50°F in any one hour
- C. <25°F in any one hour
- D. <75°F in any one hour

Ref: VG procedure 19002-C, step 12

Distractor analysis:

Answer A is incorrect per ES=0.2

Answer B is correct

Answer C is incorrect per ES-0.2,

Answer D is incorrect per ES-0.2

QUESTIONS REPORT
for VOGTLEFINDRFT1028

52. 056K1.03 001

Unit 1 is at ~~72~~ 70% power. A ~~control problem~~ limit switch problem causes ~~2-HV-3140~~ MFP 1A turbine exhaust valve to close ~~1 to slowly close~~.

Which ONE of the following describes the effect on continued plant operation?

- A. 1A MFP rolls to idle, the Standby condensate ~~booster~~ pump starts and Rx power can remain at 70%
- B. 1A MFP trips, the standby condensate ~~booster~~ pump remains in standby, ~~does not start~~ and Rx power can remain at 70%.
- C. 1A MFP trips, the standby condensate ~~booster~~ pump starts and Rx power must be reduced to 56%.
- D. 1A MFP rolls to idle, the standby condensate ~~booster~~ pump does not start and Rx power must be reduced to below 56%

Ref: Vogtle ARP-17015-2.

Distractor analysis:

A and D are incorrect, because the 1A MFP trips on low condenser vacuum

C is incorrect because the standby condensate pump auto starts

B is correct, because the standby condensate pump starts and the 1b MFP can carry 76% , the sum of which is above 72%.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

53. 057AA2.18R 001

Given the following:

- Unit 1 at 100% power
- Alarms received indicate a failed electrical bus board
- ~~Other indications are:~~
 - All channel 1 trip status lights illuminated out
 - MSIV's remain open and the unit does not trip
 - All channel 1 instruments fail down scale
 - ~~Low seal flow to RCP's due to FCV-62-89 failing open~~
 - ~~High charging flow due to FCV-62-93 failing open~~

Which ONE of the following identifies which electrical bus board that was is de-energized last?

- A. ~~125 V DC Vital Battery Board I~~
125 V DC Vital Bus 1AD1
- B. ~~120 VAC Vital Instrument Power Board 1-I.~~
120 VAC Vital Instrument Bus 1AY1A
- C. ~~125 V DC Vital Battery Board II~~
125 V DC Vital Bus 1BD1
- D. ~~120 VAC Vital Instrument Power Board 1-II.~~
120 VAC Vital Instrument Bus 1BY1B

Ref: 18032-1

Distractor analysis:

See attached procedures which show loads from each of the above boards.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

54. 059A4.11 001

After which one of the following events can the feedwater isolation be reset by operating the feedwater isolation reset handswitches ~~pushbuttons~~ without performing any other actions?

- A. A spray valve fails open causing pressurizer pressure to drop to 1725 psig. The spray valve is closed and pressure returns to 2235.
- B. At 40–75% Rx power, the operator overfeeds a single steam generator to the High-High Level setpoint causing a turbine trip and then clears the High-High Level.
- C. A turbine trip from 65% Rx power, causing a reactor trip. Steam dumps open to control Tavg at 557°F.
- D. A high steam line flow causes a low Tavg and an SI. Main Steam isolation terminates high flow condition and allows Tavg to return to 557°F.

Ref: Vogtle lo-lp-18201-17C

Distractor analysis:

Answers A and D are incorrect because the SI input must also be reset.

Answer C is incorrect because both the FWI switches AND pushbuttons must reset.

Answer B is correct because when only a Hi-Hi S/G level input is present, when it clears, only the pushbutton needs depressing to break the seal-in. See attached logic drawing.

Note: This needs to be discussed with the licensee carefully

QUESTIONS REPORT
for VOGTLEFINDRFT1028

55. 059AA1.01 001

Given the following plant conditions:

- Plant is operating a 100% power
- Plant systems aligned ~~and operating~~ for normally at power operation
- RE-1950, Auxiliary Component Cooling Water radiation monitor, is in alarm

Which ONE of the following lists the type and process flows that are sensed by the alarming radiation monitor?

- A. Gamma; Thermal Barrier leakage
- B. Beta; Excess Letdown Hx leakage
- C. Gamma; RHR Hx leakage
- D. Beta; RCP Motor Cooler leakage

Ref: VG LO-LP-16401, LO-LP-04101

Distractor analysis:

- a. Correct - liquid process monitors utilize gamma scintillation detectors. The thermal barrier would give direct leakage path for RCS should it develop a leak.
- b. Incorrect - liquid process monitors utilize gamma scintillation detectors. The thermal barrier would give direct leakage path for RCS should it develop a leak.
- c. Incorrect - liquid process monitors utilize gamma scintillation detectors, but ACCW does not cool RHR hx
- d. Incorrect - liquid process monitors utilize gamma scintillation process monitors utilize gamma scintillation detectors.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

56. 059K4.19 001

Which ONE of the following describes the automatic functions which take place on receipt of a feedwater isolation signal due to a reactor trip with T-ave less than 564 degrees F?

- A. Main feed pumps trip, main feedwater isolation valves close, main feed regulating and bypass feed regulating valves close, bypass feed isolation valves close
- B. Main feedwater isolation valves close, main feed regulating and bypass feed regulating valves close, bypass feed isolation valves close
- C. Main feedwater isolation valves close, bypass feed isolation valves close, auxiliary feedwater isolation valves close
- D. Main feed pumps trip, main feedwater isolation valves close, auxiliary feedwater isolation valves close

REF:

LO-LP-18201-12-C

QUESTIONS REPORT
for VOGTLEFINDRFT1028

57. 059K6.09 001

Given the following:

- Unit is at 60% power with both A and B MFP's operating in AUTO.
- PT-507, Steam Header Pressure, output begins to slowly drift low.

Which ONE of the following describes the initial effect on the Main Feed Water System, assuming no operator action?

- A. Both MFP's discharge pressure begins to increase and all Feed Water Reg valves begin to close.
- B. Both MFP's discharge pressure begins to increase and all Feed Water Reg valves begin to open.
- C. Both MFP's discharge pressure begins to decrease and all Feed Water Reg valves begin to open.
- D. Both MFP's discharge pressure begins to decrease and all Feed Water Reg valves begin to close.

Ref: VG LO-LP-18001, student text 13A logic diagram

Distractor analysis:

C is correct because input from d/p program remains constant because steam flow remains constant. However, PT-507 failing low, causes the d/p actual (as sensed) to increase above program. This in turn causes the speed summer to decrease its output to the speed control station which will reduce feedpump speed and its discharge pressure. Flow rate will decrease and the FRV's will open to increase flow to the S/G's.

All other answers are incorrect because they are variations of the answer with one parameter going in the wrong direction.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

58. 061A1.04 001

Given the following plant conditions:

- The Unit 1 is at 100% power
- ~~CST level is lo-lo -~~
- ~~A loss of offsite power occurs~~
- A loss of both RATs occurs due to a switchyard fault
- The unit is manually tripped
- 1AA02 and 1BA03 are energized by their D/Gs
- ~~during the event, one of the S/G ARVs PORVs stuck open~~

Which of the following correctly describes the effect this will have on CST level and the actions that will be necessary?

~~Which of the following states the maximum capability of the CST under these conditions?~~

~~The CST supply to the TDAFW will be sufficient for -~~

CST #1 level will:

- ~~A. 4 hours followed by a controlled cooldown to cold shutdown.~~
continuously lower requiring manual swap to CST #2.
- B. ~~an immediate cooldown to hot shutdown.~~
be maintained by automatic makeup.
- C. ~~4 hours followed by a controlled cooldown to hot shutdown.~~
continuously lower and automatically swaps to CST #2.
- D. ~~an immediate cooldown to cold shutdown.~~
remain full until CST #2 level reaches 66% .

Modified from Byron - validated from LO-LP-20101-C,

- a. incorrect - capacity is for a 4 hour hold then cool to mode 4
- b. incorrect - capacity for 4 hours and then cool to mode 4
- c. correct - stand pipe in CST ensures 4 hours hold and then cooldown to mode 4
- d. incorrect - capacity to hold for 4 hours with cooldown to mode 4

QUESTIONS REPORT
for VOGTLEFINDRFT1028

59. 061AA1.01 001

Which of the following area radiation monitors initiate a CVI?

- A. ARE-014, Waste Gas Effluent Monitor
- B. ARE-003, Containment Low Range
- C. ARE-2533A, Fuel Handling Building
- D. RE-12117, Control Room Ventilation

New - Lesson plan LO-LP-32101-34-C

- a. incorrect - auto isolates gas release but not CVI
- b. correct - OO3 initiates a CVI
- c. incorrect - 2533A shifts the FHB to emergency mode, no CVI
- d. incorrect - places control room in emergency mode, no CVI

QUESTIONS REPORT
for VOGTLEFINDRFT1028

60. 061K5.01 001

Given the following plant conditions:

- The Unit 1 reactor tripped from 100% power
- All systems responded as designed

~~The heat transfer rate between RCS and the steam generators will~~

Which of the following would have the highest heat transfer rate from the RCS to the S/Gs?

- ~~A. increase as RCS temperature increases and AFW flow increases.
Steam Dumps are 50% open; total AFW flow 500 gpm~~
- ~~B. increase as RCS temperature stabilizes and AFW flow increases.
Steam Dumps are 25% open; total AFW flow 500 gpm~~
- ~~C. increase as AFW temperature increases and AFW flow increases.
Steam Dumps are 50% open; total AFW flow 250 gpm~~
- ~~D. decrease as AFW temperature stabilizes and AFW flow increases.
Steam Dumps are 25% open; total AFW flow 250 gpm~~

Modified from INPO bank -

- a. correct - as the temperature differential increases the heat transfer rate increases
- b. incorrect - as the temperature differential stabilizes the heat transfer rate stabilizes
- c. incorrect - as the temperature differential decreases the heat transfer rate decreases
- d. incorrect - as the temperature differential stabilizes the heat transfer rate stabilizes

QUESTIONS REPORT
for VOGTLEFINDRFT1028

61. 062A3.05 001

Given that the following occurred in sequence:

- A small break LOCA occurred which resulted in a reactor trip and SI.
- The SI signal was reset during the performance of 19010-C, "E-1, Loss of Reactor or Secondary Coolant."
- A loss of offsite power (LOSP) occurred and the diesel generators loaded as designed.

Assuming no operator actions, which ONE of the following would be the status of the loads on the 4160Vac 1E buses. ~~6.9kV SD boards?~~

- A. All equipment powered from the 4160Vac 1E buses ~~4160 safety boards~~ with the control board switch in automatic will be restarted.
- B. No 4160Vac 1E bus ~~6.9kV SD board~~ loads are automatically restarted.
- C. Equipment normally started during a LOSP will be automatically restarted; SI and RHR pumps remain OFF.
- D. All equipment that was operating prior to the LOSP will be automatically restarted; All running ESF equipment will be reenergized

Reference:WB bank, validated from VG LO-LP-280201.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

62. 062AG2.4.24 001

The crew is in 19100-C, "Reactor Trip or Safety Injection". Prior to the step that the crew places equipment in PTL, the procedure cautions that 2 NSCW pumps should be available to load on each AC Emergency Bus.

These pumps are required to provide cooling for the

- A. SI pump.
- B. MDAFW pump.
- C. ACCW pump.
- D. EDG

Ref: 19100-C Caution Before Step 7

QUESTIONS REPORT
for VOGTLEFINDRFT1028

63. 064K2.03 001

Unit 1 is at 100% power

All Diesel Generators are currently operable

Annunciator ALB38-B09, "DG1B ENGINE CNTL POWER B FAILURE", ~~B10, DG2B DISABLED
GEN CONTROL PWR FAILURE~~ just illuminated

Which ONE of the following describes the status of the Diesel Generator 2B with this annunciator in alarm?

- A. DG2B still has capability to start and load once and is operable.
- B. If DG2B was running ~~in parallel~~ when this occurred it will continue to operate and can be shutdown from the control room. ~~there is no affect but once stopped~~ DG2B must be declared inoperable.
- C. DG2B can be started and loaded manually but is inoperable.
- D. If DG2B was running ~~in parallel when this occurred, there will be a loss load control,~~ it will continue to operate and can only be shutdown from the front standard. DG2B must be declared inoperable.

Ref: VG ARP 17038-2, window B10Distractor analysis:

- A is incorrect because the starting air solenoids need power from the Diesel 125V DC.
- B is incorrect because the voltage regulator and governor are out of the droop circuit
- C is incorrect because the field flash is inoperable.
- D. is correct

QUESTIONS REPORT
for VOGTLEFINDRFT1028

64. 065AA1.03 001

Unit 1 just experienced a loss of air and entered AOP 18028-C, "Loss of Instrument Air" The header pressure is 70 psig. Given the current conditions, what action, per procedure, should be taken by the operator to prevent inadvertent operation of equipment repositioned due to the loss of air?

- A. Because pressure is less than 80 psig, verify the cask loading pit gate seal assemblies are supplied with bottled nitrogen > 50 psig.
- B. Because pressure is less than 80 psig, ensure ~~the control - to - aux air isol valve 0-FCV-32-82~~ PV-9375 "Service Air Header Isolation Valve" is open.
- C. If MSIVs closed due to low air pressure, place the MSIV hand switches to closed.
- D. If normal letdown had not isolated due to low pressure, place the normal letdown isolation switches in open.

New - ref: AOI-10, Loss of Air.

- a. correct - 18028-C, step A3 requires nitrogen bottle alignment to cask loading seals
- b. incorrect - less than 80 psig, ensure the control - to - aux air isol valve 0-FCV-32-82 should be closed
- c. incorrect - procedure gives no guidance to msiv handswitch placement
- d. incorrect - normal letdown isolation switches fail closed

QUESTIONS REPORT
for VOGTLEFINDRFT1028

65. 067AK1.02 001

There is a fire in the generator hydrogen cooling system. Fire fighting efforts have cause the fire main header pressure to lower. Which ONE of the following will cause the FIRST diesel driven fire pump to start automatically?

A fire header pressure of.....

- A. 85 psig.
- B. 95 psig.
- C. 105 psig.
- D. 110 psig.

REFERENCE

VEGP LO-LP-43101-07-C, pg. 33, LO 9.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

66.068AK3.18 001

Evacuation of the Control Room is required due to a Control Room fire.

The actions of AOP 18038-1, "Operation From Remote Shutdown Panels," prior to evacuating the control room, include which of the following?

- A. Tripping the both main feedwater pumps.
- B. Ensure S/G pressure control in AUTO
- C. Place the PZR pressure control in AUTO
- D. Trip all RCPs 1, 2, and 3

Ref: VG AOP 18038-1, steps 1 - 4

- a. correct, feedwater pump status is addressed prior to evacuation at the discretion of the SRO
- b. incorrect, this is done if there is NO control room fire
- c. incorrect - this is done if there is NO control room fire
- d. incorrect, only RCP 1 and 4 are tripped

QUESTIONS REPORT
for VOGTLEFINDRFT1028

67. 068K1.07 001

Which one of the following describes how the incore instrumentation seal table leakage enters the Liquid Rad Waste system?

- A. Drains to Reactor Cavity Sump, and then is pumped to the Waste Holdup Tank.
- B. Drains to the floor drain, overflows into the Reactor Cavity Sump, and then is pumped to the Waste Monitor ~~Evaporator~~ Holdup Tank
- C. Drains to the floor drain, overflows into the Reactor Cavity Sump, and then is pumped to the Waste Holdup Tank
- D. Drains to Reactor Cavity Sump, and then is pumped to the Waste Monitor ~~Evaporator~~ Holdup Tank.

Ref: Vg drawing 1x4db143 (e-1)
NEED LESSON PLAN ON DRAINS AND SUMPS
See see drawing

QUESTIONS REPORT
for VOGTLEFINDRFT1028

68. 068K6.10 001

Which ONE of the following would require termination of the release of Unit 1 Waste Monitor Tank (WMT) # 10 ?

- A. 1-RE-0018 fails high
- B. 1-RE-039A fails high
- C. ARE-0014 fails low
- D. 1-RE-039A fails low

VG Bank, changed distractors,

- A. correct - this is the monitor that actually monitors liquid releases
- B- D do not monitor liquid releases and would not isolate liquid release if alarmed

QUESTIONS REPORT
for VOGTLEFINDRFT1028

69. 069AK2.03 001

Unit 1 is at 100% power.

- ~~Operation~~ personnel enter Containment for a preoutage walkdown
- The inner door is discovered ajar with a broken latch.

~~Annunciator _____ UPR CNTMT AIRLOCK INNER/OUTER alarmed for no apparent reason on the previous shift. Operation personnel were dispatched to investigate the alarm. They reported that they opened the outer door and found the inner door ajar with a broken latch.~~

Which ONE of the following describes the correct actions required by technical specifications?

- ~~A. Verify the outer door closed within one hour and document the condition for TS tracking.
Close the outer door within 1 hour~~
- ~~B. Repair the inner door within one hour and lock the outer door within 24 hours.
Close both doors within 1 hour~~
- ~~C. Close the outer door within one hour and lock the outer door within 24 hours.
Place the unit in mode 3 within 1 hour~~
- ~~D. Commence plant shutdown within one hour and be in Mode 5 within 24 hours.
Commence a unit shutdown within 1 hour and apply LCO 3.0.3~~

Ref: VG Tech Specs need correct window

Distractor analysis:

A is incorrect because the ts action does not address logging tracking items

B is incorrect because there is no requirement to repair the inner door within one hour.

C is correct per Tech Specs 3.6.2 condition A.

D is incorrect because there is no requirement per AOI 12 to commence shutdown within 1 hour.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

70. 071K3.05 001

Chemistry has taken a grab sample of the release in progress from the gaseous radwaste system. The results indicate that the release is above the release permit setpoint 40 CFR 20 limits. Which one of the following caused this?

- A. Waste Gas effluent monitor, RE-14, failed low.
- B. Waste Gas effluent monitor, RE-14, failed high.
- C. A loss of 125 VDC power to radiation trip valve, RV-0014.
- D. A loss of instrument air to radiation trip valve, RV-0014

Ref: VG LO-LP-46101 LO -11, text 17c, pg 14

QUESTIONS REPORT
for VOGTLEFINDRFT1028

71. 072A1.01 001

ARE-2532A and ARE-2533A are indicating increasing levels of radiation.

If this trend continues which of the following should occur?

- A. Only the Train A FHB isolation dampers close, the supply unit trips but the post-accident filter unit does not start.
- B. The AREs will alarm locally and in the control room, causing normal FHB HVAC units and ~~FHB HVAC~~ to trip and isolate on an intermediate alarm from both monitors.
- C. Only the Train A supply and exhaust dampers isolate, supply and exhaust units continue to run and the post-accident filter units start.
- D. Train A and B supply and exhaust dampers isolate, the supply and exhaust units trip on low flow, and the post-accident filter units start on a high alarm from either monitor.

VG LO-LP-23301, LO-LP-32101-C

- a. incorrect because signal is 1/2 all dampers isolate
- b. incorrect - supply unit trips
- c. incorrect - the post accident unit will start
- d. correct - FHB normal supply and exhaust dampers isolate, supply and exhaust units trip and filter units start

QUESTIONS REPORT
for VOGTLEFINDRFT1028

72. 072G2.1.28 001

RE-0019, 0020 and 0021 are in alarm. Waste Water Retention Basin Valve RV-0021 and SGBD Demin Isolation Valve HV-1150 have just closed.

Which equipment caused the closure?

- A. RE-0019 Only
- B. RE-0020 Only
- C. RE-0021 Only
- D. The Combination of both RE-0019 and RE-0020

Ref: LO-LP-24101

Learning Objective 9

EXPLAIN THE PURPOSE OF RAD MONITORS RE-0019 AND RE0021:

RE-0019

Measures radiation levels of Blowdown fluid upstream of demins - Alarms and indication only

RE-0021:

Measures radiation levels of Blowdown fluid downstream of demins

Isolates blowdown flow to Waste Water Retention Basin by closing RV-21 and HV-1150 on high radiation alarm. Also gives indication of valve position.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

73. 073A2.01R 001

Given the following:

- Unit 1 is at 100% power
- a liquid waste release is in progress.
- Annunciator ALB 05, window C03, The HIGH RADIATION ALARM, alarms is lit.
- Looking at the Process and Effluent Radiation Monitoring System alarms it is determined that 1-RE-0018 spiked to high alarm due to an erratic power supply, and is now decreasing to less than background.

Which ONE of the following describes the initial required actions by the control room operators?

- A. Have the detector assembly cleaned.
- B. Notify RADCON to take radiation readings in the detector area.
- C. Verify liquid rad waste release valve 1-RV-0018 is shut.
- D. Initiate a work order to repair 1-RE-0018.

Ref: VG Io-lp-32101, ARP 17100-1ARP 17005-1

Distractor analysis:

A is incorrect because there is no guidance to clean the detector although low readings could be the result of fouling.

B is incorrect due to no guidance to confirm that areas readings are suddenly less than typical background

D is correct based on the guidance in the ARI and the philosophy to secure releases to the environment when process monitors fail.

D is incorrect as an initial action although ultimately the detector will need repair at a later time.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

74. 075A4.01 001

An operator making rounds reports that 1-TI-1712, which measures the NSCW temperature at the outlet of the CCW Hx is reading 204 degrees F and suspects that it is broken.

Which one of the following describes how this can be verified in the control room?

- A. Use D/G jacket water inlet temperature since this is essentially the same temperature as the CCW Hx outlet temperature.
- B. ACCW Hx outlet temperature can be used, a table is available to convert the indicated temperature.
- C. Use the IPC since redundant information is available on the IPC at point T2607.
- D. CCW Hx and ACCW Hx flow can be used since a nomograph is available to convert the indicated temperature.

Ref: procedure 13150, step for setting additional jacket water Hx NSCW flow.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

75. 076K2.08 001

~~Which ONE of the following describes the power supply for 1-FCV-67-91B, Lower Containment 1C Cooler Supply?~~

Which one of the following describes the power supply for containment coolers 7 & 8 NSCW Supply Valve (HV-1809)?

- A. ~~480 V Reactor MOV Board 1B2-B~~
480 Vac switchgear 1AB16
- B. ~~480 V Shutdown Board 1B2-B~~
480 Vac switchgear 1NB21
- C. ✓ ~~480 V Reactor MOV Board 2B1-B~~
480 Vac MCC 1BBD
- D. ~~480 V Shutdown Board 1B1-B~~
480 Vac MCC 1NBM

Ref: WB Lesson Plan 3-OT-SYS067A, no specific learning objective

Dwgs: 1-45W760-67-5

1-45W751-11

1-45W749-4

1-45-W724-2

Distractor Analysis:

A is correct based on attached dwg's.

B and D are incorrect because the 480 V shutdown board does not directly feed any MOV's

C is incorrect because they have unit 2 designators.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

76. 078G2.4.11 001

Given the following conditions:

- Plant in Mode 3.
- Total Loss of Instrument Air has occurred.
- The RO QATC reports that Pressurizer level is 92% and slowly rising.
- ~~CCS is in service with flow to the RCP thermal barriers.~~

Which ONE of the following actions should be taken to control Pressurizer level per 18028-C, "Loss of Instrument Air"?

- A. Locally isolate charging and letdown and place excess letdown in service.
- B. Stop CCPs until PZR level is less than 70% then cycle a CCP on and off to maintain PZR level between 65 and 70%.
- C. Locally Isolate charging until PZR level is less than 70% then ~~adjust then~~ locally operate 1FHC-0121 ~~+FCV-62-93~~ to control charging flow.
- D. Place the reactor Head Vent System in service, adjust head vent flow valves to desired letdown rate.

Ref: VG- AOP 18028-C, step B13

Distractor Analysis:

- A is incorrect, the procedure does not direct placing excess letdown in service
- B is incorrect, no procedural guidance to cycle charging between 65% and 70 %
- C is incorrect, no procedural guidance to locally operat FCV
- D is correct per 18028 section B step B13

QUESTIONS REPORT
for VOGTLEFINDRFT1028

77. 079K4.01 001

If Station Instrument and Service Air System air pressure is dropping, the Turbine Building Service Air System automatically isolates from the Instrument Air System when pressure drops below which ONE of the following?

- A. 80 psig.
- B. 100 psig.
- C. 78 psig.
- D. 70 psig.

Ref: WB Exam Bank, VG lo-lp-02110Distractor analysis:

A is correct, see lesson plan pp. 33 (attached)

B is incorrect, corresponds to service air header lo pressure alarm

C is incorrect, doesn't correspond to any auto event

D is incorrect, instrument air lo pressure

QUESTIONS REPORT
for VOGTLEFINDRFT1028

78. 086G2.4.25 001

During the response to a fire in the turbine building, an injured person must be transported off site. The only safe way to transport this person is via the Turbine Building elevator. The elevator is locked out. According to procedure 92005-C, which one of the following persons can authorize the use of ~~17103A-C~~ for the elevator during the fire ~~fire service recall~~?

- A. Fire Team Captain, only
- B. The Unit Shift Supervisor of the affected unit, only
- C. Any Fire alarm response Team Member
- D. The Burke County Emergency Management Agency

Ref: If the fire team captian has determined it is safe to use the elevator(s), and the elevator is locked out, it may be necessary to reference proc. 17103A-C for the elevator fire service recall section

QUESTIONS REPORT
for VOGTLEFINDRFT1028

79. 103A2.03R 001

Given the following conditions for Unit 1:

- Safety Injection has actuated
- The crew is performing 19000-C, "E-0, Reactor Trip or Safety Injection", when the RO notes that Containment Pressure is 23.2 psig and Containment Spray has not actuated.

Which ONE of the following describes the minimum action(s) required?

- A. ~~Manually actuate either Phase A manual handswitches and manually start the Containment Spray pumps.~~
Manually actuate both containment spray handswitches
- B. Must manually actuate both Train A manual handswitches and manually start the Containment Spray pumps.
- C. Manually actuate either Phase A manual handswitches and manually shut the MSIV's and bypasses.
- D. Must manually actuate both Train A manual handswitches and manually shut the MSIV's and bypasses.

Ref: VG procedure 19000-C, LO-LP-28103, drawing 7243D07

Need licensee to check switch name and common title use (is it called phase B on the board or how are the switches designated)

Distractor analysis:

Get Vogtle to review this closely for terminology and accuracy, (what handles the the valves other sites control with Phase B?)

QUESTIONS REPORT
for VOGTLEFINDRFT1028

80. G2.1.2 001

Given the following indications on Unit 1:

- ~~— Steam generator tube rupture has occurred and you are performing actions of 19030-C (SGTR)~~
- 19030-C, SGTR is being implemented
- ~~— Reactor is tripped and power is in the source range~~
- Both CCPs and both SIPs are running
- ~~— Pressurizer level is 10% and falling slowly~~
- RCS pressure 1350 psig and falling slowly
- Level in S/G 1 is 80% NR rising slowly
- Level in other S/Gs is 5% NR rising slowly
- MSIVs are open
- RCS temperature is 558 degrees F and rising slowly

Which ONE of the following describes the action to be taken and the basis for that action?

- A. Dump steam at the maximum rate to cooldown the RCS.
- B. Isolate SG#1 to minimize RCS cooldown.
- C. Stop all RCPs because RCP trip Criteria have been met prior to initiation of RCS cooldown.
- D. Stabilize the level in intact S/Gs to preserve a heat sink for cooldown.

*REFERENCE

LO-LP-37311-08-C, Objective 10, RCP Trip Criteria is met

QUESTIONS REPORT
for VOGTLEFINDRFT1028

81. G2.1.3 001

~~An procedure writer instructor~~ with an active RO license is in the control room to review a ~~material for procedure revision an upcoming walkthrough examination~~. The ~~RO OATG~~ is called for a random drug test. The ~~RO OATG~~ requests that the ~~procedure writer instructor~~ relieve him for about 15 minutes for the drug test.

Which one of the following describe the shift relief requirements for this situation?

The procedure writer ~~instructor~~ may ~~relieve~~ the RO OATG provided...

- A. ...the procedure writer ~~instructor~~ reviews the narrative logs, rounds sheets, and checklists for his station. The review shall include narrative logs since the last shift worked or the preceding 3 days, which ever is longer.
- B. ...the procedure writer ~~instructor~~ and the on-shift RO OATG independently walk-down their assigned control boards to verify checklists items and discuss equipment status.
- C. ...~~up to 45 minutes provided that~~ a) the relieving operator is knowledgeable of plant conditions, b) they perform a joint walkdown of applicable control panels, and c) the Unit Shift Supervisor acknowledges the relief.
- D. ~~.....however, a full turnover is required as described in procedure 10004-C, Shift Relief.~~

Ref: Surry exam 2002, VG 10004-C section 4

NEED to check this closely - does it matter if the relieving RO is the BOP or assigned plant tours

QUESTIONS REPORT
for VOGTLEFINDRFT1028

82. G2.1.32 001

Which **ONE** of the following describes the normal configuration of the Component Cooling Water system and the reason, respectively?

- A. 2 pumps running, one pump in pull-to-lock, to prevent CCW Hx tube vibration damage from excessive flow rates.
- B. 2 pumps running, one pump in pull-to-lock, to avoid system pressure exceeding relief setpoints
- C. 2 pumps running, one pump on standby, to avoid system pressure exceeding relief setpoints
- D. 2 pumps running, one pump on standby, to prevent CCW Hx tube vibration damage from excessive flow rates.

Ref: VG proc 13715-1

Distractor analysis:

C is correct, see P&L

A,B, and D are incorrect due to pump in pull-to-lock or wrong reason.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

83. G2.2.12 001

Unit 1 is at 100%
Surveillance 14905-1, RCS Leakage Calculation (Inventory Balance) is in progress
~~1-hour has elapsed since commencing data collection~~
~~Final readings indicate that the total RCS leakage rate is 0.08 gpm~~

~~Which ONE of the following describes the correct action to be taken?~~

~~Which ONE of the following would invalidate the leak rate calculation?~~

- ~~A. Sign the surveillance as satisfactory~~
RCS diluted 50 gallons to raise RCS temperature back to program
- ~~B. Continue data collection for an additional hour~~
Main turbine load reduced 5 MWe to prevent exceeding allowed power limits.
- ~~C. Void the surveillance and perform at a later time~~
Control rods inserted 5 steps for AFD control.
- ~~D. Investigate to determine the source of inleakage to the RCS~~
ECCS accumulator filled with an SI pump due to a slow leak

Ref: Vogtle 14905-1 pg 2

- A is incorrect because data must be collected for at least an additional hour before the surveillance can be termed complete
- B is correct, see SI-68-32, pp. 16 & 17
- C is incorrect because it is contrary to procedure guidance
- D is incorrect - surveillance already considers normal inleakage calculations

QUESTIONS REPORT
for VOGTLEFINDRFT1028

84. G2.2.22 001

Using the reference provided determine which one of the following sets of conditions represents a violation of a technical specification safety limit and required action?

- A. Power = 10%, Pressure = 2400 psig, Tavg = 655°F, restore to within limits OR be in Mode 3 in 1 hour
- B. Power = 80%, Pressure = 2250 psig, Tavg = 640°F, restore to within limits AND be in Mode 3 in 1 hour
- C. Power = 10%, Pressure = 2400 psig, Tavg = 655°F, restore to within limits in 2 hrs or be in Mode 3 in 6 hrs
- D. Power = 80%, Pressure = 2250 psig, Tavg = 640°F, restore to within in 2 hrs or be in Mode 3 in 2 hrs

Ref: Modified from TP 2000, validate VG TS 2.0

Distractor analysis:

A and C are incorrect because they are within limits and no action required

D is incorrect, because even though it is out of limits, it must be restore within 1 hour, 2 hours is the DNB parameter spec.

B is correct because it is both out of limits and has the correct required action per TS

QUESTIONS REPORT
for VOGTLEFINDRFT1028

85. G2.2.3 001

Which one of the following describes the Plant Integrated Computer (IPC) terminals?

They are in mirror image locations. The IPC terminals are identical except that the

- A. common radiation monitors go to Unit 2 only and weather data goes to Unit 1.
- B. common radiation monitors go to Unit 1 only and weather data goes to Unit 2.
- C. ~~both, the common radiation monitors and weather data go to Unit 1 only.~~
- D. ~~both, the common radiation monitors and weather data go to Unit 2 only.~~

Ref: 61300

The IPCs do not have common inputs to Unit 2, so both, the common radiation monitors and weather data go to Unit 1 only.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

86. G2.3.1 001

Which one of the following dose components are combined in a Radiation Worker's Occupational Dose?

- A. Total Effective Dose Equivalent and Planned Special Exposures.
- B. Planned Special Exposures and Committed Effective Dose Equivalent.
- C. Total Effective Dose Equivalent and Committed Effective Dose Equivalent
- D. Deep Dose Equivalent and Committed Effective Dose Equivalent.

Ref: Surry exam 2002, VG lo-lp-63920

QUESTIONS REPORT
for VOGTLEFINDRFT1028

87. G2.3.4 001

Given the following plant conditions:

- A LOCA occurred and a Site Area Emergency was declared.
- ~~_____ The TSC and OSC have been activated.~~
- It is recommended that entry be made into the Safety Injection Pump Room 1A to determine why the pump will not start.
- Projected dose rate in the pump room is 1.16×10^5 mr/hr.
- Duration of the exposure is expected to be 3 minutes.

Which ONE of the following is required to may authorize this exposure?

- A. EOF Manager
- B. Operations Support Center Manager
- C. Health Physics Supervisor
- D. Emergency Director

REFERENCES:

WBN Exam Bank, VG proce 91102-C, 91301-C

Exposure calculates to be 5.8 rem/hr, greater than 10 CFR 20 limit for any
ONLY the Emergency director can approve exposures that exceed the 10 CFR 20
limits

QUESTIONS REPORT
for VOGTLEFINDRFT1028

88. G2.3.9 001

Given the following conditions:

- Unit 1 is in Mode 2 following a refueling outage
- Containment Mini-Purge System was placed in operation for ALARA considerations in preparation for maintenance personnel to make a containment entry.
- Maintenance has requested the Mini-purge system be shutdown prior to entry to reduce noise levels while they perform their activities.
- ~~The Shift Manager has directed that the Containment Purge System be secured in accordance 13125-1, Containment Purge System.~~

Which ONE of the following should be considered prior to securing Containment Purge?

- A. Outside air temperature and pressure
- B. Containment humidity
- C. Containment Radiological implications-conditions
- D. Containment Purge HEPA and Charcoal filter DP

Ref: VG Procedure 13125-2

Distractor analysis:

A and D are incorrect because they only apply while the system is in service

B is incorrect, because it only applies when placing the system in service

C is correct because changes in ventilation, particularly reduction in ventilation can have adverse affects on radiation levels. This is also a precaution in the procedure related to securing CTMT purge. (see below)

Caution in procedure:

For ALARA and respirable air quality, the Mini-Purge System should be placed in service approximately 48 hours prior to planned containment entries. After work is complete and all personnel have exited containment, the Mini-Purge System should be shut down.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

89. G2.4.1 001

Given the following events:

- Unit 1 reactor trip
- Operators enter 19000-C and observe the following conditions on step 3
 - 1AA02 is deenergized due to a bus fault
 - 1B-DG supplying 1BA03
 - 1BB06 feeder breaker trips during load sequencing

Which of the following would describe the correct actions to take?

~~Unit 1 just had a loss of all AC power. Which one of the following describes your required actions?~~

~~Enter 19100-C, then verify reactor and turbine trip, then~~

- A. ~~....start a diesel generator, verify AC emergency bus of the started D/G automatically energized.~~
Remain in 19000-C on step 3 until power is restored to 1BB06
- B. ~~....check if RCS is isolated, and verify AFW flow is greater than 570 gpm.~~
Transition to 19100-C "LOSS OF ALL AC POWER"
- C. ~~...transition to 19100-C, then start a diesel generator, and verify AC emergency bus of the started D/G automatically energized.~~
Perform 18031-C ' LOSS OF CLASS IE ELECTRICAL SYSTEMS" in parallel with 19000-C
- D. ~~...transition to 19100-C, then check if RCS is isolated, and verify AFW flow is greater than 570 gpm.~~
Continue in 19000-C while trying to restore power to 1AA02 and 1BB06

ref - VG 19000-C, 19100-C, lo-lp-37031

19100-C is entered directly, and the awf is verified after the reactor and turbine trip prior to attempting to address the DGs

The first two IMMEDIATE OPERATOR ACTIONS required by procedure 19100-C, Loss of All AC Power (ECA-0.0) are:

"Verify Reactor trip and Verify Turbine trip".

Which ONE of the following describes the remaining step(s).

- a. Start a Diesel Generator, verify AC emergency bus of started DG automatically energized.
- b. Check if RCS is isolated, verify AFW flow - GREATER THAN 570 GPM.
- c. Check AC emergency busses - AT LEAST ONE ENERGIZED, restore DC loads.
- d. Check SGs secondary pressure boundaries, verify if CST is isolated from hotwell

QUESTIONS REPORT
for VOGTLEFINDRFT1028

90. G2.4.11 001

Unit 1 is at 100% power operating in 18009-C "STEAM GENERATOR TUBE LEAK"
Action Level 1, with known leakage in SG #2 of 0.05 gpm 72 GPD.

- ~~Leakage is being monitored validated by chemistry, sampling every 4 hours.~~
- ~~- RE-724 & RE-810 both indicate leakage increased to 86 GPD and has remained constant for 1 hour~~
 - ~~- Chemistry sampling confirms the radiation monitor trends.~~

~~The chemistry personnel reports that the sample at 1300 hrs indicated leakage is 0.06 (86 GPD), up from 0900 hrs sample indication of 0.05 gpm leakage.~~

Which ONE of the following should be performed?

Reference provided

- A. Be in Mode 3 within 24 hours.
- B. Reduce load to hot standby within 2 hrs, then cooldown and depressurize the RCS.
- C. Trip the reactor; enter E-0, then transition to E-3.
- D. Convene PORC PRB to evaluate continued operation.

VG 180049-C,

Distractor analysis:

A is correct per step B3 RNO and caution prior to step (unstable leak rate change of > 10%)

B is incorrect the 2 hrs is the action for a leakage of 30 gpd/hr

C is incorrect because 0.6 is well within charging capability which is the decision point for E-0

D is incorrect because it is the action for leaks less than 0.05 per day

QUESTIONS REPORT
for VOGTLEFINDRFT1028

91. G2.4.16 001

While in the Emergency Response procedures the team is directed to "Go To" another procedure, which one of the following is the correct implementation of this action?

- A. The "GO TO" implies the procedure in use is still not applicable, and therefore any tasks in progress need not be completed.
- B. The original procedure remains applicable because tasks still in progress must be completed prior to the transition directed by the "GO TO" step.
- C. The "GO TO" implies the procedure in use is no longer applicable, transition to the new procedure but any tasks in progress should be completed.
- D. Tasks still in progress need not be completed prior to the transition directed by the "GO TO" step, unless preceded by a note stating otherwise.

Bank: From Surry 2002, Vogtle proc. 100012

Distractor analysis:

Answer C is correct,

Answer A and B are incorrect due to timing or required completion

Answer D is incorrect because double astericks relates to high and low level steps vice transitions.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

92. G2.4.8 001

~~Unit 1 is responding to a Reactor Trip and Safety Injection.~~

Unit 1 now has the following symptoms:

- Reactor is tripped
- core exit TC temperatures greater than 1200 F, and
- ~~a-RVLIS full range indication is 25% less than 3-1/2 feet above the bottom of the active fuel~~

Which ONE of the following are your required actions?

Enter 19221-C ~~FR-C.1~~, Response to Inadequate Core Cooling, from ~~one of the two~~...

A. ~~Orange paths from Critical Safety Function Status Tree, F-0.2 on Core Cooling, and~~

- 1) ~~Reinitiate~~ of high pressure safety injection
- 2) Rapidly depressurize the steam generators
- 3) Restart RCPs and/or opening PRZR PORVs

B. ~~Orange paths from Critical Safety Function Status Tree, F-0.2, on Core Cooling, and~~

- 1) ~~Reinitiate~~ of high pressure safety injection
- 2) Slowly depressurize the steam generators
- 3) Stop all running RCPs and open PRZR PORVs

C. ~~Red paths from Critical Safety Function Status Tree, F-0.2, on Core Cooling, and~~

- 1) ~~Reinitiate~~ of high pressure safety injection
- 2) Rapidly depressurize the steam generators
- 3) Restart RCPs and/or opening PRZR PORVs

D. ~~Red paths from Critical Safety Function Status Tree, F-0.2, G on Core Cooling, and~~

- 1) ~~Reinitiate~~ of high pressure safety injection
- 2) ~~Slowly secondary depressurization~~ Slowly depressurize the steam generators
- 3) Stop all running RCPs and open PRZR PORVs

WOG BACKGROUND:

FR-C.1, RESPONSE TO INADEQUATE CORE COOLING, has been developed to address the symptoms for inadequate core cooling.

The basis for these symptoms can be found in the Critical Safety Function Status Tree background document, F-0.2, CORE COOLING.

The guideline is entered from F-0.2 on either of two RED priorities. The major actions to be performed in this guideline include:

- 1) Reinitiation of high pressure safety injection
- 2) Rapid secondary depressurization
- 3) RCP restart and/or opening PRZR PORVs

QUESTIONS REPORT
for VOGTLEFINDRFT1028

93. WE02BK1.2R 001

19012-C, "Post LOCA Cooldown and Depressurization," is used following a LOCA event in which the RCS remains at pressure, and it is determined that.....

- A. ✓ SI termination criteria cannot be met or maintained.
- B. SI termination criteria have been met and can be maintained.
- C. the possibility of core voiding needs to be prevented.
- D. a pressurized thermal shock condition is imminent.

REFERENCE

LO-LP-37112-07, pg. 6

REFERENCES:

ES-0.2; ES-0.3; Modified INPO exam bank question

10CFR55.43.5/45.13

RO-N/A SRO-22

QUESTIONS REPORT
for VOGTLEFINDRFT1028

94. WE03EK2.2 001

Given the following plant conditions:

- A small break LOCA has occurred.
- RCPs have been tripped.
- Appropriate actions in accordance with 19000-C & 19010-C E-0 and E-1
_____ have been completed.
- RCS pressure is stable at 1525 psig.
- ECCS is operating in cold leg injection mode.

Which ONE of the following statements describes the primary method of decay heat removal at this time?

- A. Heat transfer between the RCS and the S/Gs due to natural circulation flow.
- B. Heat transfer between the RCS and CCS via the RHR Heat Exchangers.
- C. Heat transfer from the injection of water from the RWST and the removal of steam/water out of the break.
- D. Heat transfer from Reflux boiling in the S/Gs.

Ref: WB bank, VG 19000

Distractor Analysis:

A is correct because due to the thermodynamic ? H between the primary and secondary and resultant heat transfer rate will exceed the heat transfer into the injection flow water.

B is incorrect because CCS flow is isolated from the RHR Hx's at this point in the accident.

C is incorrect same as A

D is incorrect because at this point in the accident the S/G U-tubes are still filled with water.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

95. WE05EA1.3 001

Given the following plant conditions:

- ~~Unit is operating at 100% power at EOL.~~
- ~~Total loss of feedwater occurs and operators are implementing 19231-C, "FR-H.1, Response to Loss of Secondary Heat Sink".~~
- ~~No means of feedwater addition is available and the operators have~~
- ~~initiated RCS feed and bleed is required~~
- Manual Safety Injection was initiated and when the operator attempted to open the pressurizer PORVs, PORV 455 failed to open.

Which ONE of the following describes the correct operator mitigation strategy to respond to this problem?

- A. Stop one Centrifugal Charging Pump to reduce loss of inventory through PORVs.
- B. Close any open Pzr PORV to conserve RCS inventory and return to the steps to re-establish Main Feedwater.
- C. Open the reactor head vents to reduce RCS pressure since one pressurizer PORV may not provide sufficient heat removal capacity.
- D. Verify PORV 456 and it's block valve open to reduce RCS pressure since 1 Pzr PORV provides adequate heat removal capacity for a loss of heat sink.

Ref: WB lesson plan 3-OT-FRH0001, obj. 9 & 10

Distractor analysis: PORV a.

Incorrect - one PORV is not sufficient to provide adequate heat removal.

- c. Correct - increases the bleed path capability and reduce pressure to ensure the core remains cooled.
- b. Incorrect - procedure directs bleed and feed not depressurizing a SG which would be a less effective cooling method.
- d. Incorrect - more bleed path capacity is needed to ensure pressure reduction and cooling capability, not less injection.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

96. WE07A2.02R 001

Given the following plant conditions:

- The Unit has tripped from 100% power with a LOCA in progress
- Pzr pressure is 1700 ~~900~~ psig
- RCPs are tripped
- Core Exit thermocouples indicate 720 degrees F
- RVLIS full range indicates 36%

Which of the following describes the conditions existing in the core as applicable to the EOPs?

- A. Saturated conditions, which does not present an imminent extreme challenge to the fuel matrix and fuel cladding as long as the hot leg temperatures remain at saturated conditions.
- B. Super heated conditions, which does not present an imminent extreme challenge to the fuel matrix and fuel cladding as long as the cold leg temperatures remain at saturated conditions.
- C. Saturated conditions, which present an imminent extreme challenge to the fuel matrix and fuel cladding.
- D. Super heated conditions, which present an imminent extreme challenge to the fuel matrix and fuel cladding.

WB bank - validated on steam tables

- a. incorrect - not saturated conditions
- b. incorrect - is super heated but does challenge the fuel matrix and fuel cladding
- c. incorrect - not saturated conditions
- d. correct - superheated conditions that present a challenge to fuel matrix and cladding

QUESTIONS REPORT
for VOGTLEFINDRFT1028

97. WE08EA2.1R 001

Step 1 of 19241-C, "~~FRP-1~~, Response Imminent Pressurized Thermal Shock Condition", has the operator check: ~~that RCS pressure is greater than 300 psig.~~

- RCS pressure < 300 psig
- RHR flow > 500 gpm

This step is based on:

- A. ~~preventing implementation of actions in FR-P.1 if a large break LOCA has occurred.~~
preventing implementation of 19241-C because a large break LOCA is in progress
- B. ensuring adequate low head safety injection cooling prior to isolating ECCS accumulators
GLAs.
- C. preventing core exit temperatures from exceeding the required temperature to place RHR in service.
- D. ensuring RHR system is in service to provide adequate mixing in the cold leg downcomer region.

Ref: WB Lesson Plan 3-OT-FRP0001, obj. 9, WB Bank, validated against Vogle proc 19241-C
Answer A is correct, see attached lesson plan.

QUESTIONS REPORT
for VOGTLEFINDRFT1028

98, WE10EA2.2 001

Given the following plant conditions:

- Tech Spec action statement requires the unit to be in mode 4 within 60 minutes
- Reactor trip occurred with subsequent loss of RCPs.
- Operators have implemented 19002, "~~ES-0.2~~, Natural Circulation Cooldown".
- A cooldown rate of 50 ~~25~~°F/hour has been established.
- Current RCS temperature is 450°F
- ~~RCS depressurization has been initiated while maintaining subcooling -~~
→ 165°F.
- Operators are monitoring PZR level and RVLIS for void formation.

- ~~The OAC observes that loss of inventory in the Condensate Storage -~~
Tank is imminent.

Which ONE of the following describes the appropriate procedural actions to comply with the Tech Spec action statement?

- A. Stop the cooldown and remain in 19002, "ES-0.2, Natural Circulation Cooldown".
- B. Raise the cooldown rate and remain in 19002, "ES-0.2, Natural Circulation Cooldown" .
- C. Transition to 19003-C, "ES-0.3, Natural Circulation Cooldown With Steam Voids in Vessel (With RVLIS)" and LOWER ~~lower~~ the cooldown rate.
- D. ✓ Transition to 19003-C, "ES-0.3, Natural Circulation Cooldown With Steam Voids in Vessel (With RVLIS)" and RAISE ~~raise~~ the cooldown rate.

Ref Inpo quest, validated for VG - 19002, 19003

- a. Incorrect - loss of CST inventory should cue the examinee that transition to ES-0.3 is appropriate. Examinee may believe stopping cooldown is appropriate to conserve inventory.
- b. Incorrect - loss of CST inventory should cue the examinee that transition to ES-0.3 is appropriate. Examinee may believe raising cooldown rate would be appropriate in order to reach RHR conditions sooner however ES-0.2 does not provide instruction to do this.
- c. Incorrect - loss of CST inventory is an appropriate condition to require transition to ES-0.3 since more rapid cooldown rate is allowed while addressing voids in the RCS. Examinee may believe it is necessary to lower cooldown rate to conserve inventory.
- d. Correct - loss of CST inventory is an appropriate condition to require transition to ES-0.3 since more rapid cooldown rate is allowed while addressing voids in the RCS.

REFERENCES:

ES-0.2; ES-0.3; Modified INPO exam bank question

10CFR55.43.5/45.13

RO-N/A SRO-22

QUESTIONS REPORT
for VOGTLEFINDRFT1028

99. WE11EA1.3 001

Given the following plant conditions:

- Reactor trip and SI occurred on Unit 1 due to a small-break LOCA.
- Crew has transitioned from ~~19013, "ES-1.3, Transfer to Cold Leg Recirculation"~~, to 19111. "ECA-1.1, Loss of Emergency Coolant Recirculation", due to the failure of both RHR sump suction valves to open.
- ~~Crew has reduced ECCS flow to 1 CCP per step 11 of ECA-1.1.~~
- Current RCS conditions are 400°F and 700 psig
- RWST level is 10%
- ~~Crew is performing Step 19 of ECA-1.1 to check makeup flow adequate and observes the following indications:~~
 - ~~No RCP running~~
 - ~~RVLIS full range = 60% and slowly dropping~~

Which one of the following lists the correct operator action for this condition?

- A. ~~Ensure additional makeup source to RWST has been aligned.~~
Reduce ECCS to one train
- B. ~~Control charging to raise makeup flow.~~
Stop all ECCS pumps
- C. Place RHR shutdown cooling in service.
- D. ~~Slowly depressurize RCS to inject GLAs.~~
Isolate the ECCS accumulators

Ref: WB bank - validated for Vogtle, Procedures 19011, 19111

Per procedure

QUESTIONS REPORT
for VOGTLEFINDRFT1028

100. WE13EK3.2R 001

During the performance of FR-H.2, "Response To Steam Generator Overpressure", operators are directed to verify T-hot less than 540°F if initial attempts to depressurize the SG(s) is unsuccessful. - -

Which ONE of the following is bases for this verification?

Given the following conditions:

- FRP 19232-C, "Response to SG Overpressure" is being implemented
- SG #1 pressure is 1250 psig
- The MSIVs are shut
- SG #1 ARV and code safety valves are failed shut

Which one of the following actions is required to correct this situation?

- A. ~~Ensures that the SG level instruments (WR) will be within the required accuracy during the depressurization.~~
Dump steam from SG #1 by opening the MSIV bypass valves.
- B. ~~Determines whether SG blowdown can be used as a method to depressurize the affected SG(s).~~
Stop RCP #1 to reduce the heat input to SG #1
- C. ~~Ensures RCS saturation pressure is below shutoff head of SIPs in the event SGs become a heat SOURCE instead of a heat sink.~~
Emergency borate the RCS to help lower RCS temperature and SG #1 pressure
- D. ~~Ensures excessive heat transfer from the RCS is NOT the cause for the SG overpressure.~~
Actuate SI to inject cold water into the RCS to help lower SG #1 pressure

Ref: WOG ERG Bases, Procedure 19232
Source WB exam bank

Distractor analysis:
Answer D based on wog erg bases