Generator Capability Curve...

**Question 1** 

Question #15

ORIGINAL

<< Plant conditions occurred as follows:

- While at rated power, there was a disturbance on the electrical power grid which required the unit to perform a load reduction
- The CO reports that Main Generator MVARs have gone from 150 MVARs OUT to 40 MVARs IN and rising on the MCB

ID: 1814856

• Generator loading is 500 MWe

Using the provided Generator Capability Table, if current conditions continue:

1) Which Megavar limit will be met **FIRST**?

AND

2) In this condition, the grid is more \_\_\_\_\_.>>

- A. <<1) -159 MVARs</li>2) inductive>>
- B. <<1) 325 MVARs</li>2) inductive>>
- C. <<1) -159 MVARs 2) capacitive>>
- D. <<1) 325 MVARs</li>2) capacitive>>



# Answer Explanation

- A. <<<<<<INCORRECT. Plausible since the first part is correct and the candidate may believe that with the Main Generator taking MVARs IN that an inductive state exists.
- B. INCORRECT. Plausible since the Megavars limit is correct for the generator loading in an inductive (overexcited) state and the candidate may believe that voltage is leading current when a capacitive state exists.
- C. CORRECT. With MVARs coming into the Main Generator, a capacitive state exists on the electrical grid and the generator will be underexcited. In accordance with O-6.9, Attachments 16 and 17, the lower half of the curve is used (underexcited) and the limit is -159 Megavars.
- D. INCORRECT. Plausible since the Megavars limit is correct for the generator loading in an inductive (overexcited) state and the second part is correct.

>>

# **Question Information**

Topic					
User ID	***			System ID	<<1814856>>
Project	< <gn-ops>&gt;</gn-ops>				
Status	< <active>&gt;</active>	Point Value	<<1.00>>	Time (min)	<<0>>

Open or Closed Reference	< <closed>&gt;</closed>
Operator Type-Cognitive Level	< <job-memory>&gt;</job-memory>
Operator Discipline	< <lo-i>&gt;</lo-i>

<-References Provided	None
K/A Justification	
SRO-Only Justification	
Additional Information	

K/A APE 077, Generator Voltage and Electric Grid Disturbances, AA2.03 Ability to determine and interpret the following as they apply to Generator Voltage and Electric Grid Disturbance: Generator current outside the capability curve

# O-6.9, Attachment 16 to be provided to students>>

# K/A Reference(s)

# Question not linked to K/As

# Learning Objective(s)

To Describe indications and/or alarms associated with the Main Generation system that would cause entry into an:

- a. Annunciator Response Procedure
- b. Abnormal Procedure

c. Emergency Procedure

User (Sys) ID R0501C 1.11 (1306960)

#### **Cross Reference Links**

None

QUESTION #18 ORIGINAL

Question 1

ID: 1711453

<< Given the following plant conditions:

- The plant has experienced a LOCA
- The operators have taken appropriate action in accordance with E-0, Reactor Trip or Safety Injection, and E-1, Loss of Reactor or Secondary Coolant
- The ECCS is now operating in the cold leg recirculation mode
- RCS pressure is stable at approximately 150 psig with 300°F on core exit T/Cs
- S/G pressure is 300 psig

Which ONE of the following describes the method of core decay heat removal?>>

- A. <<Heat transfer between the RCS and the S/Gs due to natural circulation flow>>
- B. <<Injection water being boiled off in the core and steam exhausting out the break>>
- C. <<Heat transfer between the RCS and the S/Gs due to forced circulation flow>>
- D. <<The injection of water from the recirculation sump and the removal of steam/water out of the break>>

Answer D

# **Answer Explanation**

<< Justification

a,c. S/G heat removal not indicated because  $T_{SAT}$  RCS <  $T_{SAT}$  S/G

b. Sufficient subcooling exists to prevent core boiling.

d. Correct. Per ERG Background - Requires trainee to evaluate core conditions to determine correct answer.>>

# **Question Information**

Торіс	< <eop knowledge="" procedural="">&gt;</eop>				
User ID	< <pre>&lt;<poteet>&gt;</poteet></pre>			System ID	<<1711453>>
Project	< <gre>&lt;<gn-ops>&gt;</gn-ops></gre>				•
Status	< <active>&gt;</active>	Point Value	<<1.00>>	Time (min)	<<0>>

Open or Closed Reference	< <open>&gt;</open>
Operator Type-Cognitive Level	< <job-high>&gt;</job-high>
Operator Discipline	< <pre>&lt;<pre>program-ct&gt;&gt;</pre></pre>

<-References Provided	
K/A Justification	
SRO-Only Justification	
Additional Information	

>>

# K/A Reference(s)

**Question not linked to K/As** 

# Learning Objective(s)

# Question not linked to a Learning Objective

# **Cross Reference Links**

Level 3: Moderately discriminating. Expected miss rate of 20% - 30%	
Table: TRAINING-QUESTION-AN-Cognitive Level	

GDT operation/ accidental release...

**Question 1** 

ID: 1712411

QUESTION #23 ORIGINAL

<< Given the following conditions:

- Plant is at 100% power
- 'A' Gas Decay Tank (GDT) is in service
- 'A' Gas Decay Tank pressure starts, and continues, to rise

If the pressure rise is not stopped, which of the following will occur?

	'A' GDT Relief Lifts	'A' GDT Rupture Disk Breaks	R-10A, CNMT IODINE Trends UP	R-10B, PLANT VENT IODINE, Trends UP
>>				
۱.	<<142 psig	150 psig	YES	NO
	>>		F	
<b>3</b> .	<<142 psig	150 psig	NO	YES
	>>			
	<<150 psig	142 psig	NO	YES
	>>	đ		
).	<<150 psig	142 psig	YES	NO
	>>			
٨	nswer C			

# **Answer Explanation**

- A. <<Incorrect. Plausible because the examinee will be required to recall from system knowledge that GDT relief and rupture disk setpoints (wrong relief setpoints). The examinee will have to recall that rupture disc will break before the relief opens. The examinee should recognize that rad monitoring trends will rise, but not in CNMT R-10A) for this situation as the release will be to the Aux bldg. causing a rise on R-10B.
- B. Incorrect. Plausible because the examinee will be required to recall from system knowledge that GDT relief and rupture disk setpoints (wrong relief setpoints). The examinee will have to recall that rupture disc will break before the relief opens. The examinee should recognize that rad monitoring trends will rise, but not in CNMT for this situation as the release will be to the Aux bldg. causing a rise on R-10B.

- C. CORRECT. Plausible because the examinee will be required to recall from system knowledge that GDT relief and rupture disk setpoints (correct relief setpoints). The examinee will have to recall that rupture disc will break before the relief opens. The examinee should recognize that rad monitoring trends will rise, but not in CNMT (R-10A) for this situation as the release will be to the Aux bldg. causing a rise on R-10B.
- D. Incorrect. Plausible because the examinee will be required to recall from system knowledge that GDT relief and rupture disk setpoints. The examinee will have to recall that rupture disc will break before the relief opens. The examinee should recognize that rad monitoring trends will rise, but not in CNMT (R-10A) for this situation as the release will be to the Aux bldg. causing a rise on R-10B.>>

## **Question Information**

Topic	<gdt operati<="" th=""><th colspan="5">&lt;<gdt accidental="" operation="" release="">&gt;</gdt></th></gdt>	< <gdt accidental="" operation="" release="">&gt;</gdt>				
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Open or Closed Reference	< <closed>&gt;</closed>
Operator Type-Cognitive Level	< <job-memory>&gt;</job-memory>
Operator Discipline	< <lo-i>&gt;</lo-i>
10CFR55 Content	<-CFR: 41.11 Purpose and operation of radiation monitoring systems, including alarms and survey equipment.>>

<-References Provided	None
K/A Justification	
SRO-Only Justification	
Additional Information	

#### K/A APE 060 AK2.02

Knowledge of the interrelations between the accidental Gaseous Radwaste Release and the following: Auxiliary Building Ventilation system Tier 1, Group 2

10 CFR Part 55 Content: 55.41 (11) 55.43

LP R3801C, Obj. 7.02

# USED ON 2008 GINNA AUDIT EXAM (Q.18)

	'A' GDT Relief Lifts	'A' GDT Rupture Disk Breaks	R-10A, CNMT IODINE Trends UP	R-10B, PLANT VENT IODINE, Trends UP
Α.	142 psig	150 psig	YES	NO
B.	142 psig	150 psig	NO	YES
C.	150 psig	142 psig	NO	YES
D.	150 psig	142 psig	YES	NO

# consider putting distractors in table form below on actual exam page

>>

# K/A Reference(s)

Question not linked to K/As

# Learning Objective(s)

Question not linked to a Learning Objective

# Cross Reference Links

None

34. 006 K5.10 001 Given the following plant conditions:

-The reactor was at 100% RTP when a LOCA occurs

-A Safety Injection has been initiated and is injecting into the core

Immediately upon the Safety Injection Flow going to the core, the **INNER WALL** of the SI piping that connects to the RCS undergoes \_\_\_(1)\_\_ stress. If one of the SI pipes that connects to the RCS breaks from this stress, \_\_(2)\_\_ pipe(s) would still be available to supply SI flow to the core.

A. (1) tensile

1

(2) one

- B. (1) tensile (2) two
- C. (1) compressive (2) one
- D. (1) compressive (2) two

The correct answer is B

A) Incorrect. Tensile stress is correct. One pipe still carrying flow is incorrect. Plausible if the student is unaware of how many RCS loops have tap ins for SI flow. There are three total, if you lose one, you have two left.

B) Correct. The inner wall of the piping undergoes tensile stress. This is due to the large Temperature difference between the inner wall and the outer wall. The cold fluid is cooling down the inner wall while the outer wall is still at normal RCS temperature. There are still two pipes carrying flow to the RCS.

C) Incorrect. Compressive stress is incorrect. Plausible since the outer wall of the piping is undergoing compressive stress. One pipe still carrying flow is incorrect. Plausible if the student is unaware of how many RCS loops have tap ins for SI flow. There are three total, if you lose one, you have two left.

D) Incorrect. Compressive stress is incorrect. Plausible since the outer wall of the piping is undergoing compressive stress. There are still two pipes carrying flow to the RCS.

ORIGIJAL

QUESTION #33

Question: 34 Tier/Group: 2/1 K/A Importance Rating: RO 2.5 SRO 2.9

K/A: 006 Emergency Core Cooling System (ECCS)
 K5: Knowledge of the operational implications the following concepts as they apply to PRTS:
 K5.10: Theory of thermal stress

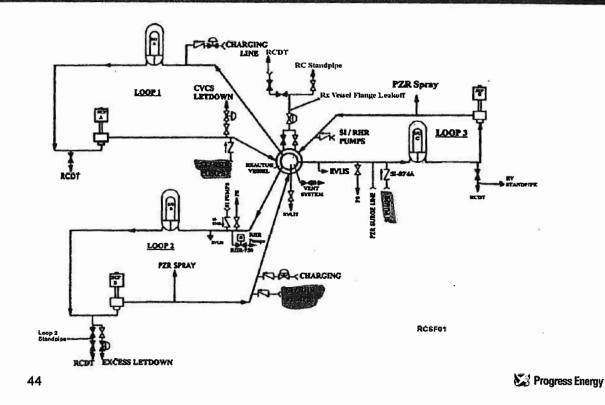
Reference(s): GFES, Brittle fracture, RCS drawing Proposed References to be provided to applicants during examination - None Learning Objective: 10 of Brittle Fracture lesson plan Question Source: New Question History: Question Cognitive Level: Comprehension 10 CFR Part 55 Content - 41.5 / 45.7 Comments -

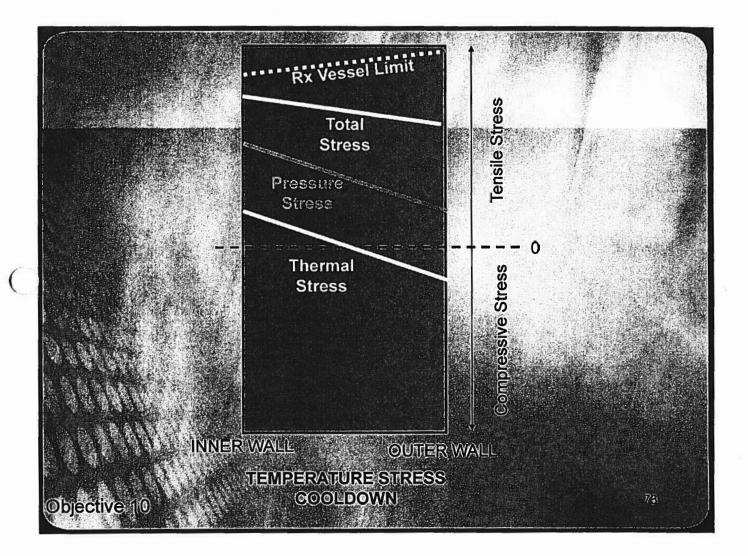
This question meets the K/A because the student must understand what stress the inner piping of the SI system goes through upon injection, then based off that piping failing, determine how many pipes are still carrying SI flow to the core.



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Pressurizer Relief Tank purpose of level band...

QUESTION #34 ORIGINAL

**Question 1** 

ID: 1704845

<<Which of the following describes the adverse effects of NOT maintaining the Pressurizer Relief Tank (PRT) within design level band?>>

- A. <<If the level is too high, the tank will overflow to CNMT sump causing possible false indication of RCS leakage to CNMT.>>
- B. <<If the level is too low the radioactive gases that leak from the top of the PRZR would not be adequately scrubbed, thus causing subsequent elevated gaseous activity levels inside CNMT.>>
- C. <<If the level is too high, the sparger pipe will be too far underwater rendering the cooling effect of makeup water ineffective.>>
- D. <<If the level is too low, there would be insufficient water volume to absorb and condense a design discharge of PRZR safety leading to possible over temperature and overpressure of the PRT.>>



#### **Answer Explanation**

<< If the level is too low, there would be insufficient water volume to absorb and condense a design discharge of PRZR safety leading to possible over temperature and overpressure of the PRT.>>

#### **Question Information**

Торіс	< <pressurizer< th=""><th colspan="4">&lt;<pressurizer band="" level="" of="" purpose="" relief="" tank="">&gt;</pressurizer></th></pressurizer<>	< <pressurizer band="" level="" of="" purpose="" relief="" tank="">&gt;</pressurizer>			
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Open or Closed Reference	<<>>
Operator Type-Cognitive Level	< <job-cog>&gt;</job-cog>
Operator Discipline	<program-ct>&gt;</program-ct>

<< References Provided
K/A Justification
 SRO-Only Justification

# Additional Information

>>

# K/A Reference(s)

**Question not linked to K/As** 

# Learning Objective(s)

1. Construction to the design features that enable the

Pressurizer and Pressurizer Relief Tank System to perform their functions.

User (Sys) ID R1401C 1.04 (1301041)

 Control of the Pressurizer and Pressurizer Relief Tank System or component, describe the reason/basis and the effect on the operations of the system or component User (Sys) ID R1401C 1.09 (1307144)

Cross Reference Links

Table: TRAINING-QUESTION-GN-OPS-General Data

Ginna Initial A precaution in P-4 gives maximum CCW flow require...

QUESTION #36 ORIGINAL

**Question 1** 

<<A precaution in P-4 gives maximum CCW flow requirements for CCW pump and heat exchanger combinations.

ID: 1704383

Which one of the following gives the basis for this maximum flow?>>

- A. <<Pump run out concerns.>>
- B. <<NPSH concerns>>
- C. << Piping stress concerns at major pipe turns/elbows>>
- D. <<CCW heat exchanger damage due to flow induced vibration.>>



# **Answer Explanation**

<<CCW heat exchanger damage due to flow induced vibration.>>

# **Question Information**

Topic		< <a and="" ccw="" combinations="" exchanger="" flow="" for="" gives="" heat="" in="" maximum="" p-4="" precaution="" pump="" requirements="">&gt;</a>				
User ID	< <c008.0072></c008.0072>	< <c008.0072>&gt; System ID &lt;&lt;1704</c008.0072>			<<1704383>>	
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Open or Closed Reference	<<>>
Operator Type-Cognitive Level	< <job-cog>&gt;</job-cog>
Operator Discipline	< <pre>&lt;<pre>rogram-ct&gt;&gt;</pre></pre>

<-References Provided	
K/A Justification	
SRO-Only Justification	
Additional Information	······

# K/A Reference(s)

#### **Question not linked to K/As**

#### Learning Objective(s)

- Be able to explain and apply the CCW system limits and precautions of P-4, "Precautions, Limitations and Setpoints Auxiliary Coolant System".
   User (Sys) ID R2801C 5.01 (1304220)
- Coven a specific fundamental principle, performance test, limits and/or precautions for the Component Cooling Water System or component, describe the reason/basis and the effect on the operations of the system or component.
   User (Sys) ID R2801C 1.09 (1307323)

# **Cross Reference Links**

Table: TRAINING-QUESTION-GN-OPS-General Data		
Ginna		
Initial		

QUESTION #38 ORIGINAL

**Question 1** 

ID: 1704671

<< Which one of the following lists describes the major plant responses to a loss of any single instrument bus?

Assume no corrective action is taken by the operator and plant at 100% power normal lineups on all system.>>

- A. <<1) Average Tavg Tref deviation rod stop 2) Turbine Load Limit runback 3) Delta T and rod stop single channel alert>>
- B. <<1) Average Tavg Tavg deviation rod stop 2) Dropped rod rod stop 3) Delta T and rod stop single channel alert>>
- C. <<1) Average Tavg Tref deviation rod stop 2) Dropped rod rod stop 3) Delta T and rod stop single channel alert>>
- D. <<1) Average Tavg Tavg deviation rod stop 2) Letdown isolation 3) Turbine Load Limit runback>>



# **Answer** Explanation

<<1) Average Tavg - Tavg deviation rod stop 2) Dropped rod rod stop 3) Delta T and rod stop single channel alert>>

#### **Question Information**

Торіс	<>Which one of instrum>>	< <which a="" any="" describes="" following="" instrum="" lists="" loss="" major="" of="" one="" plant="" responses="" single="" the="" to="">&gt;</which>				
User ID	< <c063.0020></c063.0020>	< <c063.0020>&gt;</c063.0020>			<<1704671>>	
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Open or Closed Reference	<<0PEN>>
Operator Type-Cognitive Level	< <sro-cog>&gt;</sro-cog>
Operator Discipline	< <lo-ct>&gt;</lo-ct>

<-References Provided	
K/A Justification	

SRO-Only Justification
Additional Information

>>

# K/A Reference(s)

#### **Question not linked to K/As**

#### Learning Objective(s)

- 1. Demonstrate the ability to predict and/or monitor the effects of operation of RPS circuit breakers. User (Sys) ID R3501C 6.15 (1304298)
- 2. Civen the loss of any instrument bus, predict the common effects on continued plant operation. User (Sys) ID RIC12C 1.03 (1305050)
- 3. Civen the loss of a specific instrument bus (A, B, C, D) predict the effect on continued plant operation. User (Sys) ID RIC12C 1.04 (1305051)
- 4. Predict the effect(s) of a loss or malfunction of the following component(s) and/or instrumentation on the Reactor Protection System:
  - a. 120 VAC Electrical Distribution System
  - b. 125 VDC Electrical Distribution System
  - c. Bistables and Bistable Test Equipment
  - d. Input (Instrument or Process) Loop Components
  - e. Logic Loop Components
  - f. Rod Stop (Block) Circuits
  - g. Permissive Circuits

User (Sys) ID R3501C 1.10 (1307542)

- 5. Predict the effect that a loss or malfunction in the 120 VAC Instrument Bus System will have on related plant system(s) and/or plant operations.
  - a. Rod Control System.
  - b. Nuclear Instrumentation System.
  - c. Rod Insertion Limits (RIL).
  - d. Pressurizer Pressure Control System.
  - e. Main Turbine EHC System.
  - f. Heater Drain System.
  - g. Steam Dump System.
  - h. Chemical and Volume Control System (CVCS).
  - i. Reactor Protection System.
  - j. Condensate System.
  - k. MCB Controllers.
  - I. Pressurizer Level Control System.
  - m. Main Turbine Auxiliaries.

User (Sys) ID RIC12C 1.06 (1308212)

6. Demonstrate the ability to predict and/or monitor the effects of operation of RPS circuit breakers. User (Sys) ID R3501C 6.15 (1310119)

#### **Cross Reference Links**

#### Table: TRAINING-QUESTION-GN-OPS-General Data

#### Ginna

Initial

**Question 1** 

ID: 2132300

QUESTION #47 ORIGINAL

<< Given the following plant conditions:

- An accident has resulted in automatic SI and Containment Spray actuation
- CNMT pressure is 30 psig and slowly lowering
- SI has NOT yet been reset
- Bus 16 NORMAL Supply breaker has just tripped
- D/G B output breaker closed and re-energized Bus 16

WHICH ONE of the following describes the response of SI pump B and CS pump B?>>

- A. <<Both pumps will automatically restart>>
- B. <<Both pumps must be manually restarted using the individual pump breaker controls>>
- C. <<SI pump B will automatically restart, but CS pump B must be started manually using its individual pump breaker control>>
- D. <<CS pump B will automatically restart, but SI pump B must be manually started using its individual pump breaker control>>



# **Answer Explanation**

< <a< th=""><th>CORRECT. Following the SI actuation, the subsequent UV condition (1/2 + 1/2 UV sensors) on Bus 16 trips SI pump B &amp; C breakers, CRFs B &amp; C, MDAFW pump B, and RHR pump B. Since SI has not been reset, the actuation signal is still present and when the D/G B re-energizes Bus 16 (SI+UV sequence), SI pump B breaker recloses and CS pump B (whose breaker was never stripped and does not open on UV), is re-energized. Both components restart automatically with no actions required.</th></a<>	CORRECT. Following the SI actuation, the subsequent UV condition (1/2 + 1/2 UV sensors) on Bus 16 trips SI pump B & C breakers, CRFs B & C, MDAFW pump B, and RHR pump B. Since SI has not been reset, the actuation signal is still present and when the D/G B re-energizes Bus 16 (SI+UV sequence), SI pump B breaker recloses and CS pump B (whose breaker was never stripped and does not open on UV), is re-energized. Both components restart automatically with no actions required.
В.	Incorrect. Plausible if the candidate does not recognize that the SI signal is still present nor recognize that the CS pump does not have UV protection.

C.	Incorrect. Plausible because part 1 is correct and if, in part 2, the candidate fails to recognize that the CS pump does not have UV protection and does not need to be manually restarted.
D.	Incorrect. Plausible because part 1 is correct and part 2 is plausible if the candidate fails to recognize that the SI signal has not been reset and ECCS components will restart.

>>

# **Question Information**

Topic	< <knowledge fo="" of="" the="">&gt;</knowledge>	< <knowledge a="" ac="" distribution="" effect="" fo="" have="" loss="" malfunction="" of="" on="" or="" system="" that="" the="" will="">&gt;</knowledge>				
User ID	< <sf6 062="" k3.01="">&gt;</sf6>			System ID	<<2132300>>	
Project	< <gn-ops>&gt;</gn-ops>					
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Open or Closed Reference	< <closed>&gt;</closed>
Operator Type-Cognitive Level	< <ro-memory>&gt;</ro-memory>
Operator Discipline	< LT >

<-References Provided	NONE
K/A Justification	Knowledge of the effect that a loss or malfunction of the ac distribution system will have
	on the following: Major system loads
SRO-Only Justification	N/A
Additional Information	33013-1353, Sheets 5 & 8
Audiuollai Illoillauoli	P-12
	R0701C 1.06
	Last NRC Exam: 2014 Ginna
	Bank 18470

>>

# K/A Reference(s)

GNA-SF6.062.K3	Safety Function	Tier	Group	RO Imp:	SRO Imp:
Knowledge and Abilities Knowledge of the effect that a loss or m 41.7 / 45.6)	alfunction of the ac dis	stribution	system wil	I have on the follo	wing: (CFR:

# Learning Objective(s)

Question not linked to a Learning Objective

# **Cross Reference Links**

None

Diagnose impact of loss of Bus 13 on Instrument Ai...

**Question 1** 

ID: 1704742

QUESTION #54 ORIGINAL

<<The following plant conditions exist:

- 100% power
- 'C' Instrument Air compressor is running
- All major control systems in AUTO
- Service and Instrument Air are aligned normally
- Bus 13 deenergizes

Without Operator action, which of the following is the Air Compressor that is expected to be running?>>

- A. <<Service Air Compressor>>
- B. <<'A' Instrument Air Compressor>>
- C. <<'B' Instrument Air Compressor>>
- D. <<'C' Instrument Air Compressor>>



# **Answer Explanation**

<<'C' Instrument Air Compressor>>

#### **Question Information**

Topic	< <diagnose im<="" th=""><th colspan="5">&lt;<diagnose 13="" air="" bus="" impact="" instrument="" loss="" of="" on="" system="">&gt;</diagnose></th></diagnose>	< <diagnose 13="" air="" bus="" impact="" instrument="" loss="" of="" on="" system="">&gt;</diagnose>					
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Open or Closed Reference	<< >>
Operator Type-Cognitive Level	< <job-memory>&gt;</job-memory>
Operator Discipline	< <program-r>&gt;</program-r>

<-References Provided
K/A Justification
SRO-Only Justification

# **Additional Information**

K/A GNA-SF8.078.K6.01>>

## K/A Reference(s)

#### **Question not linked to K/As**

#### Learning Objective(s)

- 1. Civen a set of plant conditions and a failure of one of the following major components in the Instrument/Service Air system, predict how the system will respond.
- a. Instrument Air Compressor A and B
- b. Service Air Compressor
- c. Air Dryer and Filters A and B
- d. Service Air Header
- e. Instrument Air Header
- f. 'C' Instrument Air Compressor
- g. 'C' Compressor Dryer Unit User (Sys) ID R4701C 5.01 (1302384)
- 2. Predict the effect(s) of a loss or malfunction of the following component(s) and/or instrumentation on the Instrument and Service Air System
  - a. Air Compressors
  - b. Air Dryers
  - C. Air Filters

User (Sys) ID R4701C 1.10 (1307656)

3. When given a task associated with the Secondary Operator Certification Guide, the operator will be able to perform the task with appropriate system knowledge IAW the Standard provided in the Certification Guide User (Sys) ID N/A (1311703)

# **Cross Reference Links**

Table: TRAINING-QUESTION-GN-OPS-General Data

Continuing Ginna Identify the electric power supplies to the follow...

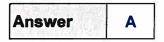
**Question 1** 

ID: 2058945

QUESTION #57 ORIGINAL

<<The plant is operating normally at 100%, with the electric plant in a Normal 50/50 lineup, when the normal feeder breaker to 480V Bus 14 trips on a fault. Because of the fault, the A Emergency Diesel Generator starts, but the Emergency Feeder Breaker to Bus 14 does NOT close. What is the current status of the Pressurizer Proportional Heaters?>>

- A. <<deenergized due to loss of power.>>
- B. <<fully energized because of the loss of power to pressure controller 431K.>>
- C. << partially energized, controlling RCS Pressure in band.>>
- D. << partially energized, as pressure controller 431K has failed "as-is" upon the loss of power.>>



# **Answer Explanation**

<< The proportional heaters are powered from 480V Bus 14. Since the normal and emergency feeder breakers to Bus 14 are open, the heaters are deenergized.

#### Ref. UFSAR, P-2, O-7>>

#### **Question Information**

Торіс	<pre></pre>				
User ID	< <eo-pzr-1>&gt;</eo-pzr-1>			System ID	<<2058945>>
Project	< <gn-ops>&gt;</gn-ops>				
Status	< <active>&gt;</active>	Point Value	<<1.00>>	Time (min)	<<0>>

Open or Closed Reference	< <closed>&gt;</closed>
Operator Type-Cognitive Level	< <eo-high>&gt;</eo-high>
Operator Discipline	< <eo-ct>&gt;</eo-ct>

None
N/A
N/A
None

>>

# K/A Reference(s)

#### Question not linked to K/As

# Learning Objective(s)

Reldentify the electric power supplies to the following system components:

- a. Pressure instruments.
- b. Level instruments.
- c. Pressurizer heaters.

User (Sys) ID R1901C 1.05 (1307184)

# **Cross Reference Links**

None

Mitigating actions of AP-CVCS.3...

**Question 1** 

ID: 1713804

QUESTION #86 ORIGINAL

<< Given the following:

- 'A' and 'C' charging pumps are RUNNING
- A-4, REGEN HX LETDOWN OUT HI TEMP 395°F, is received
- The crew initially entered AP-CVCS.1, CVCS LEAK
- EO reports the relief valves on the running charging pumps are lifting
- Charging flow indicator FI-128 has been steadily LOWERING and now reads 0 gpm
- F-4, PRESSURIZER LEVEL DEVIATION -5 NORMAL +5, is received
- PRZR level is LOWERING slowly

Which ONE of the following states ...

1) The appropriate procedure to provide mitigating actions,

AND

2) The final plant status (disregard any long-term recovery actions)?>>

- A. <<1) AP-CVCS.3, LOSS OF ALL CHARGING FLOW</li>
  2) Reactor shutdown with Tcold ~535°F, RCS pressure ~1400 psig>>
- B. <<1) AP-CVCS.3, LOSS OF ALL CHARGING FLOW</li>
  2) Reactor shutdown with Tavg ~547°F, RCS pressure ~2235 psig>>
- C. <<1) AP-RCS.1, REACTOR COOLANT LEAK</li>
  2) Reactor shutdown with Tavg ~547°F, RCS pressure ~2235 psig>>
- D. <<1) AP-RCS.1, REACTOR COOLANT LEAK</li>
  2) Reactor shutdown with Tcold ~455°F, RCS pressure ~1400 psig>>



# **Answer** Explanation

- A. <<CORRECT. The conditions provided in the question are sufficient for the candidate to recognize that normal charging flow is not available and requires a transition to AP-CVCS.3, LOSS OF ALL CHARGING. The end-point of AP-CVCS.3 is maintaining Tcold ~535°F and RCS pressure ~1400 psig.
- B. Incorrect. Plausible because the first part is correct, and the second part identifies conditions following a plant shutdown. Incorrect because the end point of AP-CVCS.3 is maintaining Tcold ~ 535°F and RCS Pressure ~1400 psig.
- C. Incorrect. Plausible because alarm F-4 is one of the symptoms of AP-RCS.1, and AP-RCS.1 directs plant shutdown per O-2.1. This would result in no-load temperature and pressure.

D. Incorrect. Plausible because alarm F-4 is one of the symptoms of AP-RCS.1. The candidate may confuse the cooldown the requirement with the one from AP-SG.1, which is Tcold at 455°F. The 1400 psig is the pressure that would be required per AP-CVCS.3. Incorrect because the correct procedure to use is AP-CVCS.3, and the end-point of AP-CVCS.3 is maintaining Tcold ~535°F and RCS pressure ~ 1400 psig.>>

# **Question Information**

Topic	< <mitigating actions="" ap-cvcs.3="" of="">&gt;</mitigating>				
User ID	<<2012 ILT NRC EXAM>>			System ID	<<1713804>>
Project	< <gn-ops>&gt;</gn-ops>				1
Status < <active>&gt; Point V</active>		Point Value	<<1.00>>	Time (min)	<<0>>

Open or Closed Reference	< <closed>&gt;</closed>
Operator Type-Cognitive Level	< <ro-high>&gt;</ro-high>
Operator Discipline	< <lo-i>&gt;</lo-i>

References Provided	None
K/A Justification	
SRO-Only Justification	Not applicable
Additional Information	

# K/A 004 2.1.23

CVCS Conduct of Operations

Ability to perform specific system and integrated plant procedures during all modes of a plant operation

#### RAP31C>>

# K/A Reference(s)

#### Question not linked to K/As

#### Learning Objective(s)

Given a set of plant and equipment conditions, evaluate the conditions to determine the applicable procedure, and from the procedure determine the appropriate EXPECTED ACTIONS or RESPONSE NOT OBTAINED instructions to implement in AP-CVCS.3, Loss of All Charging Flow. User (Sys) ID RAP31C 2.01 (1303441)

# Cross Reference Links

None