

**2021 Fermi NRC Written Examination Question #2**  
**Original Bank/Parent Question**

**Examination Outline Cross-Reference: Q02**

Level	RO
Tier #	1
Group #	1
K/A #	295003 AA1.03
Importance Rating	4.4

K/A Statement: Ability to operate and/or monitor the following as they apply to PARTIAL OR COMPLETE LOSS OF A.C. POWER: Systems necessary to assure safe plant shutdown

Proposed Question: During a loss of offsite and onsite power, the CRLNO attempts to start Combustion Turbine Generator (CTG) 11-1, but the CTG fails to start.

Which one of the following conditions will prevent a start of CTG11-1 from the Fermi 2 Main Control Room?

- A. 43P Switch selected to LOCAL
- B. 43P Switch selected to REMOTE
- C. CTG 11-1 Mark V selected to AUTO
- D. CTG 11-1 Mark V selected to REMOTE

Proposed Answer:     **C**    

Explanation (Optional): Per P&L 3.15 of 23.324

When the CTG11 Unit 1 local Mark V Controller is selected to AUTO (AUTO places CTG11 Unit 1 in the LOCAL Control Mode only and prevents remote operation from COP H11-P811 and dedicated shutdown panel H21-P623), CTG11 Unit 1 is inoperable unless an Operator remains in attendance at the CTG11 Peaker Yard.

Distractor Information: Distractors are all conditions required by the SOP to operate the CTG from the control room, so they are incorrect and plausible

Technical Reference(s): 23.324  
(Attach if not previously provided, including version/revision number.)

Proposed references to be provided to applicants during examination: None

Learning Objective:  
(as available)

Question Source: Bank #     X

**Examination Outline Cross-Reference: Q02**

Modified Bank # \_\_\_\_\_ (Note changes or attach parent)  
New \_\_\_\_\_  
Question History: Last NRC Exam NA  
Question Cognitive Level: Memory or Fundamental Knowledge \_\_\_\_\_  
Comprehension or Analysis X  
10 CFR Part 55 Content: 55.41 (b)(8)  
55.43 \_\_\_\_\_  
Comments:

**2021 Fermi NRC Written Examination Question #8  
Original Bank/Parent Question**

**Examination Outline Cross-Reference: Q08**

Level	RO
Tier #	1
Group #	1
K/A #	295019 AK3.03
Importance Rating	3.2

K/A Statement: Knowledge of the reasons for the following responses as they apply to PARTIAL OR COMPLETE LOSS OF INSTRUMENT AIR: Service air isolations: Plant-Specific

Proposed Question: The plant is operating at 100% power.

- 7D53, Station Air Header Pressure Low, Alarms.
- AOP 20.129.01, Loss of Station and Control Air AOP is entered.
- P50-R802, Station Air Header Pressure Recorder is 90 psig, lowering.
- All AOP actions have been taken for these conditions ONLY.

The following alarm is subsequently received:

- 7D57, Station Air Isolation Valve Closed.

The NEXT required action is \_\_\_(1)\_\_\_ to avoid conditions which will result in \_\_\_(2)\_\_\_ MSIVs drifting SHUT.

- (1) Start any available Station Air Compressors  
(2) Inboard
- (1) Start any available Station Air Compressors  
(2) Outboard
- (1) Start Div I and Div II Control Air Compressors  
(2) Inboard
- (1) Start Div I and Div II Control Air Compressors  
(2) Outboard

Proposed Answer:     **C**    

Explanation (Optional): 20.129.01, Loss of Station and Control Air AOP, Condition A contains the guidance for the actions that would be taken for the first set of conditions in the stem of the question, namely starting all available Station Air Compressors when Station Air Pressure drops <95 psig. The Candidate must recognize that the Station Air Compressors would have been started.

**Examination Outline Cross-Reference: Q08**

The candidate must then evaluate 7D57 and recall that it alarms when the P5000-F401, Station Air to TB Header Iso Valve, closes at 85 psig. The candidate must then recall that 20.129.01 Condition B requires verifying/starting the Division 1 and Division 2 Control Air Compressors.

Finally, the candidate must recall that Division 1 NIAS supplies air to the Division 1 containment Nitrogen isolation valves which would drift shut causing the inboard MSIVs to drift shut so starting the Control Air Compressors will limit further degradation of the Division 1 (and 2) NIAS pressures and prevent closure of the Inboard MSIVs.

Distractor Explanation:

Distractors are incorrect and plausible because:

A. The candidate could forget that Condition A of the AOP requires starting any available Station Air Compressor when Station Air Pressure lowers <95psig and determine that this action was only required when 85 psig was reached as evidenced by receipt of alarm 7D57. This is incorrect because this action would be complete by the time 7D57 was received.

B. Note: This distractor was the correct answer for a prior BANK version of this question. The candidate could forget that Condition A of the AOP requires starting any available Station Air Compressor when Station Air Pressure lowers <95psig and determine that this action was only required when 85 psig was reached as evidenced by receipt of alarm 7D57. This is incorrect because this action would be complete by the time 7D57 was received. The candidate could incorrectly recall that IAS pressure impacts the Inboard MSIVs, which is incorrect because the Outboard MSIVs are impacted by IAS.

D. The candidate could correctly determine that the Div 1 and 2 NIAS compressors need to be started for the conditions given in the stem of the question but incorrectly recall that NIAS impacts the Outboard MSIV, which is incorrect since NIAS impacts the Inboard MSIVs as described above

Technical Reference(s): 20.129.01, Loss of Station and/or Control Air  
(Attach if not previously 20.129.01 BASES, Loss of Station and/or Control Air Bases  
provided, including 7D53, Station Air Header Pressure Low, Alarms  
version/revision number.) 7D57, Station Air Isolation Valve Closed

**Examination Outline Cross-Reference: Q08**

Proposed references to be provided to applicants during examination: None

Learning Objective:  
(as available)

Question Source:	Bank #	<u>        </u>	X
	Modified Bank #	<u>        </u>	(Note changes or attach parent)
	New	<u>        </u>	
Question History:	Last NRC Exam	<u>        </u>	NA
Question Cognitive Level:	Memory or Fundamental Knowledge	<u>        </u>	
	Comprehension or Analysis	<u>        </u>	X
10 CFR Part 55 Content:	55.41	<u>        </u>	(b)(7)
	55.43	<u>        </u>	

Comments:

**2021 Fermi NRC Written Examination Question #47  
Original Bank/Parent Question**



**Examination Outline Cross-Reference: Q47**

Level	RO
Tier #	2
Group #	1
K/A #	262002 A3.01
Importance Rating	2.8

K/A Statement: Ability to monitor automatic operations of the UNINTERRUPTABLE POWER SUPPLY (A.C./D.C.) including: Transfer from preferred to alternate source. (CFR: 41.7 / 45.7)

Proposed Question: The plant is in MODE 3. UPS B is being manually transferred from the ALTERNATE power supply to the NORMAL power supply in accordance with SOP 23.308.01, Uninterruptible Power Supply System.

Which ONE of the following identifies the Main Control Room plant parameter indications impacted if improper operation results in the LOSS of UPS B?

- A. C32-R603B & D MSL Flow  
C11-J601, Rod Worth Minimizer  
C32-R605B, Div II RPV Pressure
- B. C32-R605A, Div I RPV Pressure  
C32-R607, Reactor Flow Recorder  
RPIS indications on Full Core Display
- C. B31-N028D, Recirc Pump B Discharge Pressure  
B31-N601B, Recirc Pump B Suction Temperature  
B31-N006B, Recirc Pump B Seal Cavity #1 Pressure
- D. B21-R610, RPV Core Level Recorder  
B21-R623A, Post Accident Monitoring Recorder  
B21-R604A, Wide Range Reactor Water Level Indicator

Proposed Answer:     **A**    

Explanation (Optional): C32-R603B & D MSL Flow, C11-J601, Rod Worth Minimizer, C32-R605B, Div II RPV Pressure are all affected by LOSS of UPS B.

- B. This option is incorrect because these are not UPS B powered instruments.
- C. This option is incorrect because these are not UPS B powered instruments.
- D. This option is incorrect because these are not UPS B powered instruments.

**Examination Outline Cross-Reference: Q47**

Technical Reference(s): SOP 23.308.01 Uninterruptible Power Supply  
(Attach if not previously provided, including version/revision number.)

Proposed references to be provided to applicants during examination: None

Learning Objective:  
(as available)

Question Source: Bank #           X            
Modified Bank #            (Note changes or attach parent)  
New           

Question History: Last NRC Exam           ILO 2012          

Question Cognitive Level: Memory or Fundamental Knowledge             
Comprehension or Analysis           X          

10 CFR Part 55 Content: 55.41           (b)(7)            
55.43           

Comments:

**2021 Fermi NRC Written Examination Question #66  
Original Bank/Parent Question**

## Examination Outline Cross-Reference: Q66

Level	RO
Tier #	3
Group #	NA
K/A #	G 2.1.26
Importance Rating	3.4

K/A Statement: Knowledge of industrial safety procedures (such as rotating equipment, electrical, high temperature, high pressure, caustic, chlorine, oxygen and hydrogen).

Proposed Question: There is a small leak in the Steam Tunnel. Using a camera, an isolation valve has been identified.

During the pre-job brief, this activity is identified as MODERATE. RP has determined that plastic PCs are required for entry. Dry Bulb temperature is 104°F, and no other heat stress prevention equipment will be used.

After isolating the leak, the Nuclear Operator reports the job took 10 minutes.

The EARLIEST this Nuclear Operator can be sent back to normal duties is after \_\_\_\_\_ minutes of rest time.

- A. 10
- B. 20
- C. 30
- D. 60

Proposed Answer:     **C**    

Explanation (Optional): C: Correct- Using TABLE 21-3, stay time is 20 minutes for plastic PCs for a temperature of 104°F. Using the rest time calculation on page 21.5, rest time is actual time/time limit (10/20) times 60 minutes, or 30 minutes.

A. is incorrect but plausible if chart read wrong or calculation not properly utilized.

B. is incorrect because this is the actual stay time allowed. Plausible if misinterpret stay time with rest time

D. is incorrect but plausible because this does not take the ratio of time worked vs stay time into the calculation

**Examination Outline Cross-Reference: Q66**

Technical Reference(s): Safety Handbook, Section 21, Table 21-3B  
(Attach if not previously provided, including version/revision number.)

**Proposed references to be provided to applicants during examination: Safety Handbook, Section 21, Table 21-3B**

Learning Objective:  
(as available)

Question Source: Bank # 27118     X      
Modified Bank #            (Note changes or attach parent)  
New           

Question History: Last NRC Exam     2017    

Question Cognitive Level: Memory or Fundamental Knowledge     X      
Comprehension or Analysis           

10 CFR Part 55 Content: 55.41     (b)(5)      
55.43           

Comments: