1. The plant was at 18% power preparing to synchronize the Main Generator to the grid.
An event occurs and the following conditions are noted immediately:
• All Power Range NIs indicate 0%
• IR SUR is -0.3 dpm
• The Zero percent light on the ROD POSITION INDICATION PANEL for Rod 2-2 is
not lit
• Reactor Trip Breakers A & C are closed
• Reactor Trip Breakers B & D are open
• Annunciator 1-3-D, Bus C1 VOLTAGE is in alarm
• Annunciator 1-4-H, Bus D1 VOLTAGE is in alarm
• Buses C1 and D1 indicate 0 volts
Which of the following is the FIRST action required to be taken?

1. GO TO DB-OP-02521, Loss of AC Bus Power Sources
2. Initiate Emergency Boration until adequate Shutdown Margin is restored
3. Attempt to start EDG 1 and EDG 2 from the control room
4. Momentarily de-energize 480 Volt unit Substations E2 & F2

**Answer: C**

**Explanation/Justification:**

1. Plausible because DB-OP-02521 does provide guidance for loss of C1 and D1, but OP2000 does not provide guidance to
   REFER TO DB-OP-02521 until both essential busses remain deenergized after performing attachment 28
2. Plausible because Specific Rule 1 actions would have higher priority than Specific Rule 6, however with indications
   provided that the reactor is shutdown and power is lowering in the Intermediate Range, Specific Rule 1 actions are not required (SDM
   remains adequate with one stuck rod and power lowering).
3. Per Specific Rule 6 RNO for verification that EDGs are running, any EDGs that failed to start should be attempted to start
   from the control start pushbuttons
4. Plausible because OP2000 immediate action RNO for the reactor not shutdown (power not lowering in the Intermediate
   Range) would have priority over Specific Rules, however, indications given state power range indications are 0% with Intermediate
   Range Startup Rate at -0.3 dpm which indicate the reactor is shutdown. Even though Reactor Trip Breakers A & C are closed the
   reactor tripped due to the LOOP which deenergized E2 and F2

**System:** 007 Reactor Trip Stabilization Recovery **K/A#:** EA1.04

**Category:**

**KA Statement:**

**K/A Importance: 4.7 Exam Level:** 0 **Cognitive Level:** 1

**References provided to Candidate:** None

**Technical References:** DB-OP-02000 Specific Rule 6

**10 CFR Part 55 Content:**

**Objective:** GOP-301

2. Initial conditions:
• 100% power
• #2 Makeup Pump running
The following occurs:
• Reactor trip
• Large break LOCA
Current conditions:
• RCS Pressure = 100 psig
• Incore Thermocouples = 325 °F
• Containment Pressure = 28 psia
• EDG 1 did not start
• All other safety equipment actuated as designed
• NO Operator actions have been completed
For these current plant conditions, what will be the status of the Makeup, HPI, and LPI pumps?

1. No Makeup Pumps will be running
   Both HPI Pumps will be running
   Both LPI Pumps will be running
2. Only #2 Makeup Pump will be running
   Only #2 HPI Pump will be running
   Only #2 LPI Pump will be running
3. No Makeup Pumps will be running
   Only #2 HPI Pump will be running
   Only #2 LPI Pump will be running
4. Only #2 Makeup Pump will be running
   Both HPI Pumps will be running
   Both LPI Pumps will be running

**Answer: D**

**Explanation/Justification:**

1. Plausible since running Makeup Pump trips on LOOP and SA signal to LPI pumps. LPI and HPI running due to SA
2. Plausible since EDG #1 did not start as required by SA signal but C1 is still powered by offsite power
3. Plausible since running Makeup Pump trips on LOOP and SA signal to LPI pumps and EDG #1 did not start as required by
   SA2 signal but C1 is still powered by offsite power
4. An SFAS (SA) Level 3 has actuated on low RCS pressure (<450 psig) and offsite power is supplying power to the essential
   electrical busses. SA level 2 starts the HPI Pumps and SA level 3 starts the LPI Pumps. The previous running MU pump will continue
   to run because a LOOP has not occurred

**System:** 007 Reactor Trip Stabilization Recovery **K/A#:** EA1.04

**Category:**

**KA Statement:**

**K/A Importance: 4.7 Exam Level:** 0 **Cognitive Level:** 1

**References provided to Candidate:** None

**Technical References:** DB-OP-02000 Table 2, pg 454 & 456

**10 CFR Part 55 Content:**

**Objective:** GOP-309