



REV. NO.	DESCRIPTION
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SWITCHGEAR MANUFACTURER: ITE IMPERIAL CORPORATION  
 CONTRACT NUMBER: 76RS-95793

- NOTES:
- ALL CIRCUIT BREAKERS ARE 1200 AMPS CONTINUOUS, 500 MVA INTERLOCKING, 7.2 KV, NOMINAL, 80,000 AMPS MOMENTARY, 75,000 AMPS CLOSE AND LATCH.
  - THE SWITCHGEAR MAIN BUS RATINGS IS 1200 AMPS CONTINUOUS, 80,000 AMPS MOMENTARY, AT 7.2 KV NOMINAL.
  - AUTOMATIC TRANSFER BETWEEN POWER SOURCES IS INITIATED BY BUS UNDERVOLTAGE (27U RELAYS) AND IS FROM NORMAL TO ALTERNATE OR STANDBY OR FROM ALTERNATE TO STANDBY. RELAYS 27U PREVENTS AUTOMATIC TRANSFER TO A DEAD ALTERNATE. SUPPLY AND RESIDUAL VOLTAGE RELAYS 27R PREVENT 50A AND 52E FROM CLOSING UNTIL BUS VOLTAGE IS LESS THAN 90% OF NOMINAL. RETURN TO NORMAL OR ALTERNATE IS MANUAL.
  - MANUAL TRANSFER BETWEEN NORMAL AND ALTERNATE SUPPLY AND STANDBY TO NORMAL OR ALTERNATE IS FASTEST BY CLOSING IN THE TRANSFER FROM THE STANDBY POWER SOURCE, AND PARALLELING OF THE SUPPLIES IS DONE AT THE DIESEL GENERATOR CONTROL PANEL USING SYNCHRONIZING SWITCHES. ELECTRICAL INTERLOCKS IN THE SWITCHGEAR PREVENT PARALLELING THE NORMAL AND ALTERNATE POWER SOURCES.
  - 50A RELAY ASSOCIATED WITH THE SWGR BUS, AND THE NCR, ALT, ENCR, OR STANDBY BUS IS PART OF THE 6.9KV CLASS 1E AC BUS POWER DISTRIBUTION SYSTEM WITH UNIT ANALYSIS DESIGNATION. THE DEVICE UNIT IS FORMED BY PREFIXING THE DESIGNATIONS SHOWN ON THE DWS WITH ZEG, EXCEPT AS NOTED. ALL OTHER BUS WITH THEIR ASSOCIATED DEVICES ARE PART OF THE WHICH THEY SUPPLY. THE UNIT IS FORMED BY PREFIXING THE DESIGNATIONS SHOWN ON THE DWS WITH THE UNIT AND ITS DESIGNATION SHOWN IN THE REASON SYMBOL. EXCEPT AS NOTED THE SWGR BUS NO. UNIT DESIGNATIONS ARE FORMED AS FOLLOWS USING THE BUS NO. (X), AND THE TRAIL DESIGNATION (Y) OR SR: ZEG-EMV5-001Y.
  - THIS EQUIPMENT IS CLASS 1E.
  - RELAYS SHALL BE TYPED SHOWN ON THIS DRAWING.
  - A TRIP SIGNAL WILL BE INITIATED ONLY WHEN THE NCR OR ALT BKR IS CLOSED.
  - A TRIP SIGNAL TO THE DSL GEN IS GENERATED ONLY WHEN THE DSL GEN CIRCUIT BREAKER IS CLOSED.

- SYMBOLS:
- ▲ THIS FUNCTION TO BE MONITORED BY ONE OR MORE ANNUNCIATION DEVICES.
  - BREAKERS NORMALLY IN THE TRIPPED STATE WITH 'SPRINGS' DISCHARGED AND CHARGING MOTORS SWITCHED OFF.
  - INTERFACE FOR STATUS, ENVIRONMENTAL, AND ALARM MONITORING SYSTEMS (SEAS).
  - ▽ INTERFACE FOR REMOTE CONTROL.
  - ◇ REMOTE METER CONNECTION.
  - ◇ XY INTERLOCK.
  - XXX UNIT AND SYSTEM DESIGNATION.

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AUXILIARY BUILDING  
 UNIT 2  
 SINGLE LINE DIAGRAM  
 6900V SWITCHGEAR 2E1-A  
 2EG-EMV5-06-A

BELLEFONTE NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY DIVISION OF ENGINEERING DESIGN	
APPROVED FOR ISSUE <i>R.M. Healy</i>	DESIGN PROJECT MANAGER
NOXVILLE 1-22-77	88 E 2AW2722-EG-1
45W718-1FSAR	

PRC  
 APERTURE  
 GARD

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Docket # 30-438  
 Control # 850-4050536  
 Date 3-25-83 of Docket #  
 REGISTRATION DOCKET FILE

FSAR FIG. 8.3.1-8