



- NOTES:
- 120V AC INSTRUMENT POWER DISTRIBUTION SYSTEM IS A SINGLE PHASE, 60 Hz, TWO WIRE, SINGLE-POINT GROUND SYSTEM.
  - 120V AC INSTRUMENT POWER DISTRIBUTION PANELS ARE PROVIDED ON TVA CONTRACT NO. 70K4-023703.
  - PANEL DESIGNED FOR 225 AMP SERVICE, 120V AC, 2W-1P, 100 Hz, WESTINGHOUSE TYPE COP, OR EQUAL.
  - MAIN DISCONNECT: 225 AMP FRAME, NON-AUTOMATIC BREAKER, WESTINGHOUSE TYPE JB, OR EQUAL, WITH SHORT-TIME CURRENT RATINGS AT 600V AC AS FOLLOWS:  
 4000 AMPS ..... 1.0 SECOND;  
 5000 AMPS ..... 0.166 SECONDS;  
 1E7-3 8x10<sup>6</sup> ..... 0.0083 SECONDS, OR LESS
  - BRANCH CIRCUIT BREAKERS: 100 AMP FRAME THERMAL MAGNETIC TRIP, TWO POLE WITH TRIP ALARM CONTACTS WHICH CLOSE ON BREAK TRIP. INTERRUPTING CAPACITY OF 10,000 RMS SYM AMPS AT 240V AC, WESTINGHOUSE TYPE EB, OR EQUAL.
  - TIME DELAY RELAY: 120V AC COIL, TIZING RANGE OF 0.5-5 SECONDS, DELAY ON DROPOUT, DPDT CONTACTS, AGASTAT 7022AG, OR EQUAL.
  - ALARM RELAY: WESTINGHOUSE TYPE AMB, CAT. NO. ARB40A, OR EQUAL; 4 POLE, 2NO/2NC CONTACTS, 120V AC COIL.
  - INSTRUMENT FUSES: 10A, 250V AC, NON-DETERIORATING, BUSS TYPE KVN, OR EQUAL, WITH TWO-POLE FUSE BLOCK.
  - PANELBOARD WIRING: 16 AWG, SINGLE CONDUCTOR, 60V, TFFZL, INSULATED. WIRING TO FUSES TO BE AS SHORT AS POSSIBLE, NON-TWISTED AND SEPARATED FROM OTHER WIRING.
  - TERMINAL BLOCKS: 30 PT, 300V CHANNEL MOUNT, FOR 1/8" DIA WIRING, SQUARE D TYPE BR, OR EQUAL.
  - PANEL ENERGIZED INDICATOR IS A TRANSFORMER TYPE LIGHT UNIT WITH AN AMBER LENS, CUTLER-HAMMER CATALOG NO. 10250T100, OR EQUAL.
  - PANEL DIMENSIONS: DIMENSIONS SHOWN IN PLAN VIEW ARE MAXIMUM ALLOWABLE. MOUNTING OF TERMINAL BLOCKS, FUSES AND RELAYS SHALL PERMIT A WIRING SPACE AT THE BOTTOM OF THE PANEL WITH A CROSS-SECTIONAL AREA NOT LESS THAN 36 SQUARE INCHES.

REFERENCE DWGS:  
5GM0640-EP-01, 02 ..... SCHEMATIC DIAGRAMS

Docket # 50-438  
Control # 830450536  
Date 7-25-83 of Document  
REGULATORY DOCKET FILE

PRC  
APERTURE  
CARD

PLAN VIEW  
120V AC INSTRUMENT POWER DISTRIBUTION PANEL 1E2-EP-46  
REFER TO NOTES 2-12.  
WIRING SPACE

WIRE NO	WIRE TYPE	GAUGE	COLOR
1	30A	30A	BLK
2	30A	30A	BLK
3	30A	30A	BLK
4	30A	30A	BLK
5	30A	30A	BLK
6	30A	30A	BLK
7	30A	30A	BLK
8	30A	30A	BLK
9	15A	15A	BLK
10	15A	15A	BLK
11	15A	15A	BLK
12	15A	15A	BLK
13	15A	15A	BLK
14	15A	15A	BLK
15	15A	15A	BLK
16	15A	15A	BLK
17	15A	15A	BLK
18	15A	15A	BLK
19	15A	15A	BLK
20	15A	15A	BLK
21	15A	15A	BLK
22	15A	15A	BLK
23	15A	15A	BLK
24	15A	15A	BLK
25	15A	15A	BLK
26	15A	15A	BLK
27	15A	15A	BLK
28	15A	15A	BLK
29	15A	15A	BLK
30	15A	15A	BLK
31	15A	15A	BLK
32	15A	15A	BLK
33	15A	15A	BLK
34	15A	15A	BLK
35	15A	15A	BLK
36	15A	15A	BLK

COMPANION DWGS:  
5GM0640-EP-15, 20-22

INSPECTED AND APPROVED FOR ISSUE

2	1140	5531	10/11/83	REVISED LOADS, REMOVED LOCATIONS
1	81	10/11/83	10/11/83	REVISION
REVISION: ADDRESS LOADS, CABLE CHANGES, MONITORING POINT.				
NO.	REV.	DATE	BY	DESCRIPTION
1	1	10/11/83	W.A. STOVNER	ISSUED FOR CONSTRUCTION
SCALE: NTS GENERAL UNITS 1 & 2 EXCEPT AS NOTED				
Schematic Diagram 250V NORMAL DC POWER DISTRIBUTION SYSTEM				
BELLEFONTE NUCLEAR PLANT TENNESSEE VALLEY AUTHORITY DIVISION OF ENGINEERING DESIGN				
SUBMITTED		RECOMMENDED		APPROVED
M. J. [Signature]		[Signature]		R.M. [Signature]
KNOXVILLE 7/27/77 88 E 5GM0640-EP-19 R2				

THIS DRAWING HAS BEEN REDRAWN  
ORIGINAL DESTROYED  
7-27-77