



- NOTES:
- 120V AC INSTRUMENT POWER DISTRIBUTION SYSTEM IS A SINGLE PHASE, 60 Hz, TWO WIRE, SINGLE-POINT GROUNDING SYSTEM.
  - 120V AC INSTRUMENT POWER DISTRIBUTION PANELS ARE PROVIDED ON TVA CONTRACT NO. 70K4-023703.
  - PANEL DESIGNED FOR 225 AMP SERVICE, 120V AC, 2W-1Ø, 90 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, TUNING 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 KVM, OR EQUAL, WITH TWO-POLE FUSE BLOCK.
  - PANELBOARD WIRING: 16 AWG, SINGLE CONDUCTOR, 60V, TFFZE, 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" Ø WIRING, SQUARE D TYPE BR, OR EQUAL.
  - PANEL ENERGIZED INDICATOR IS A TRANSFORMER TYPE LIGHT UNIT WITH AN AMBER LENS, CUTLER-HAMMER CATALOG NO. 102S0180C, 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.  
 SGM0640-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-40  
 REFER TO NOTES 2-12  
 NOT TO SCALE

250V N/A	BLANK
1	30A
2	30A
3	30A
4	30A
5	30A
6	30A
7	30A
8	30A
9	15A
10	15A
11	15A
12	15A
13	15A
14	15A
15	15A
16	15A
17	15A
18	15A
19	15A
20	15A
21	15A
22	15A
23	15A
24	15A
25	15A
26	15A
27	15A
28	15A
29	15A
30	15A
31	15A
32	15A
33	15A
34	15A
35	15A
36	15A

COMPANION DWGS:  
 SGM0640-EP-15, 20-22

INSPECTED AND APPROVED FOR ISSUE

2	1140	5531	REVISED LOADS, REMOVED LOCATIONS
1	51		
REVISION, ADDER LOADS, CABLE CHANGES, MONITORING POINT.			
NO.	CHG NO.	DATE	BY
1			
DRAWN: C. S. PETERSON		CHECKED: J. L. HARRIS	
APP'D: C. S. PETERSON		APP'D: J. L. HARRIS	
DATE: 7-25-83		SCALE: NTS	
GENERAL		EXCEPT AS NOTED	
UNITS 1 & 2			
SCHEMATIC DIAGRAM			
250V NORMAL DC POWER			
DISTRIBUTION SYSTEM			
BELLEFONTE NUCLEAR PLANT			
TENNESSEE VALLEY AUTHORITY			
DIVISION OF ENGINEERING DESIGN			
SUBMITTED: M. J. [Signature]		RECOMMENDED: [Signature]	
APPROVED: R. M. [Signature]		APPROVED: [Signature]	
KNOXVILLE 7/27/83		88 E 5GM0640-EP-19 R2	