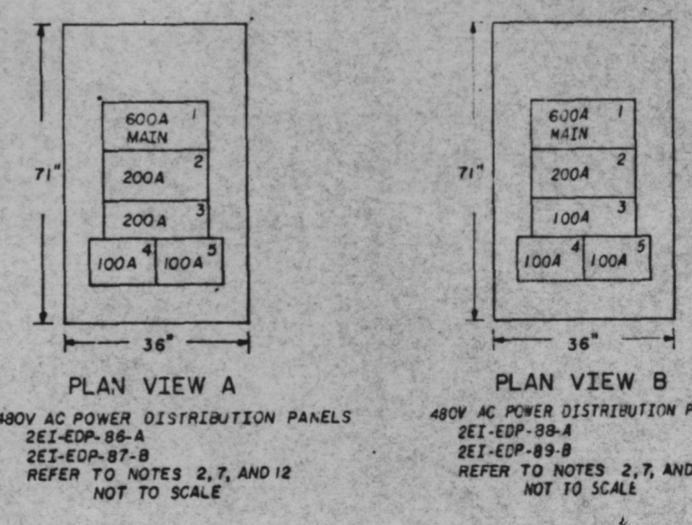


- NOTES:
- SYSTEMS EJ AND EK SHOWN ON THE 50W2640-EU SCHEMATIC SERIES ARE CONSIDERED SUBSYSTEMS OF SYSTEM EU.
  - ALL DEVICES SHOWN ON THIS DRAWING ARE CLASS 1E.
  - 120V CLASS 1E AC VITAL UNINTERRUPTIBLE POWER SUPPLIES AND AUXILIARY TRANSFORMERS HAVE COMMON GROUNDING POINT IN THEIR RESPECTIVE TRAINED BATTERY BOARD AREA.
  - INDICATION LIGHT WIRING IS NO. 16 AWG, SINGLE CONDUCTOR, TEFLOX COATED.
  - INDICATION LIGHTS ARE OILTIGHT UNITS COMPLETE WITH LAMP BASE, AMBER LENS, 6-V LAMP AND TRANSFORMER FOR 480V AC OPERATION, CUTLER HAMMER TYPE 10250T184C3.
  - INSTRUMENT FUSES ARE CURRENT LIMITING-CLASS J.
  - 480V POWER DISTRIBUTION PANELS:
    - PANELS ARE PROVIDED ON CONTRACT NO. 77K5-820237.
    - PANELS ARE DESIGNED FOR 600 AMP SERVICE, WESTINGHOUSE TYPE POP OR EQUAL.
  - 600 AMP FRAME BREAKER IS NON-AUTOMATIC USED AS MAIN BREAKER, WESTINGHOUSE TYPE LA, THREE POLE, OR EQUAL.
  - 200 AMP FUSIBLE SWITCHES HAVE INTERRUPTING CAPACITY OF 100,000 RMS SYMMETRICAL AMPS, FUSES SIZED AS SHOWN, WESTINGHOUSE 200 AMP SINGLE UNIT FUSIBLE SWITCH, CLASS RK5 FUSES (SEE NOTE 16), TWO POLE, OR EQUAL.
  - 100 AMP FUSIBLE SWITCHES HAVE INTERRUPTING CAPACITY OF 100,000 RMS SYMMETRICAL AMPS, FUSES SIZED AS SHOWN, WESTINGHOUSE 100 AMP SINGLE UNIT FUSIBLE SWITCH, CLASS RK5 FUSES, THREE POLE, OR EQUAL.
  - 100 AMP FUSIBLE SWITCHES HAVE INTERRUPTING CAPACITY OF 100,000 RMS SYMMETRICAL AMPS, FUSES SIZED AS SHOWN, WESTINGHOUSE 100 AMP TWIN UNIT FUSIBLE SWITCH, CLASS J FUSES, THREE POLE, OR EQUAL.
  - 480V CLASS 1E SPARE BATTERY CHARGER TRANSFER SWITCH:
    - SWITCH IS PROVIDED ON CONTRACT NO. 77K5-820984.
    - 400 AMP FRAME BREAKERS ARE NON-AUTOMATIC WITH MECHANICAL INTERLOCK FOR MAKE-BEFORE-BREAK TRANSFER, WESTINGHOUSE TYPE LA (WITH WALKING BEAM INTERLOCK), THREE POLE.
  - 125V SPARE CLASS 1E DC BATTERY CHARGER TRANSFER SWITCH:
    - SWITCH IS PROVIDED ON CONTRACT NO. 77K5-820964.
    - 400 AMP FRAME BREAKERS ARE NON-AUTOMATIC WITH MECHANICAL INTERLOCK FOR MAKE-BEFORE-BREAK TRANSFER, WESTINGHOUSE TYPE LA (WITH WALKING BEAM INTERLOCK), TWO POLE.
  - 120V CLASS 1E AC AUXILIARY POWER TRANSFORMER TRANSFER SWITCH:
    - SWITCH IS PROVIDED ON CONTRACT NO. 77K5-820764.
    - 225 AMP FRAME BREAKERS ARE NON-AUTOMATIC WITH MECHANICAL INTERLOCK FOR MAKE-BEFORE-BREAK TRANSFER, WESTINGHOUSE TYPE JA (WITH WALKING BEAM INTERLOCK), TWO POLE.
  - 120V CLASS 1E AC AUXILIARY POWER TRANSFORMER:
    - TRANSFORMER IS PROVIDED ON CONTRACT NO. 77K5-820551.
    - DRY TYPE TRANSFORMER, 240X480-120/240, 1%, 60HZ, 50 KVA, 80°C TEMPERATURE RISE, WITH TWO, 2 1/2% FULL-CAPACITY-ABOVE-NORMAL TAPS AND TWO, 2 1/2% FULL-CAPACITY-BELOW-NORMAL TAPS. HEVI-DUTY TYPE 55H50.
  - 400A AND 600A NON-AUTOMATIC BREAKERS HAVE MINIMUM SHORT-TIME CURRENT RATINGS AT 600V AC AS FOLLOWS:
 

| CURRENT | DURATION | 1 SECOND | SECONDS |
|---------|----------|----------|---------|
| 10,000A | -----    | 0.166    | SECONDS |
| 28,000A | -----    | 0.066    | SECONDS |
| 35,000A | -----    | 0.0083   | SECONDS |
  - 120VAC CLASS 1E VITAL UPS ARE SUPPLIED ON CONTRACT 77K5-8690-1.
  - 125VDC CLASS 1E BATTERY CHARGERS ARE SUPPLIED ON CONTRACT 76K6-86843.
  - 480V SWITCHGEAR IS SUPPLIED ON CONTRACT 76K3-85526.
  - CLASS RK5 FUSES FOR TRANSFORMER FEEDS ARE PROVIDED ON CONTRACT 80K13-826663.
  - CLASS RK5 FUSES FOR 7.5 KVA UPS FEEDS PROVIDED BY IFIELD.



PRC APERTURE CARD

COMPANION DRAWINGS:  
 50W2640-EU-01-02 SCHEMATICS  
 50W2640-EU-02 SCHEMATICS  
 REFERENCE DRAWINGS:  
 50W2625-EU-01-04 SINGLE LINES  
 50W2625-EU-01-04 KEY DIAGRAM  
 50W2620-EU-01 KEY DIAGRAM  
 50W2620-RU-03 EQUIP LAYOUT

Doc # 58-478  
 Cont # 8304050536  
 Date 5-25-83  
 of Documents  
 REGULATORY DOCKET FILE

|                                  |     |
|----------------------------------|-----|
| REVIEWED                         |     |
| RC(CIVIL)                        | N/A |
| RE(ELEC)                         | N/A |
| RM(MECH)                         | N/A |
| INSPECTED AND APPROVED FOR ISSUE |     |

|   |         |         |     |     |     |     |     |     |     |
|---|---------|---------|-----|-----|-----|-----|-----|-----|-----|
| 4 | SI      | 7-7-72  | ... | ... | ... | ... | ... | ... | ... |
| 3 | 1240    | 1-17-81 | ... | ... | ... | ... | ... | ... | ... |
| 2 | 1139    | 3-13-81 | ... | ... | ... | ... | ... | ... | ... |
| 1 | SI, 748 | 1-17-79 | ... | ... | ... | ... | ... | ... | ... |

GENERAL UNIT 2

SCHEMATIC DIAGRAM

125V CLASS 1E DC POWER DISTRIBUTION SYSTEM

BELLEFONTE NUCLEAR PLANT  
 TENNESSEE VALLEY AUTHORITY  
 DIVISION OF ENGINEERING DESIGN

Submitted: [Signature]  
 Recommended: [Signature]  
 Approved: [Signature]

INSPECTED AND APPROVED FOR ISSUE

KNOXVILLE 3-9-76 88 E 50W2640-EU-01